NEW EUROPEAN BAUHAUS

# INVESTMENT GUIDELINES

The Guidelines set the basis for how and why investments in built environment projects can be aligned with the New European Bauhaus. They provide guidance on how to put NEB values and principles in practice in the various aspects of investment and project preparation, and concrete recommendations.

The NEB Investment Guidelines are the outcome of close cooperation between the European Commission and JASPERS (Joint Assistance to Support Projects in European Regions), an advisory programme funded by the European Commission and the European Investment Bank.

New European Bauhaus

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# New European Bauhaus Investment Guidelines

# Executive summary

The **New European Bauhaus (NEB)** is a **creative and transdisciplinary initiative** of the European Commission that aims to promote aesthetics, sustainability, and inclusiveness in the built environment and beyond. In line with the groundbreaking ideas of the original Bauhaus, the goal is the creation of sustainable, inclusive and beautiful living environments by integrating design, culture, art, science and technology.

This transformative goal is directly linked to – and leverages on – the large amount of investment, public and private, which will have to be carried out until 2050 to realise a **climate neutral and socially inclusive European Union**. Moreover, all Member States in the European Union are expected to go through large rounds of investments in the built environment to cope with **growing, complex challenges**, including rapid urbanisation, adaptation to climate change, and response to humanitarian crises.

These Guidelines, therefore, set the basis for **how and why** investments can be made consistent with NEB values and principles. In order to implement the NEB path towards a sustainable and inclusive future, **investments, and financial flows in general, must be redirected** towards actual projects and activities that are able to back the transformation of societies and enable a positive change. Although this document is neither a systematic review of existing practice nor a study on "NEB market building", it will hopefully prove of value for **investors and other stakeholders** interested to explore how their projects and investments can be aligned to this vision.

The Guidelines target investments in **buildings, open spaces, and neighbourhoods** and provide a contribution through:

- **General advice** helping investors, developers, and project owners better understand the NEB and its connection to various aspects and stages of investment and project development.
- **Concrete recommendations** (called "NEB Investment Recommendations"), including planning and design solutions, technological solutions, public engagement approaches and alternative operation models, that help shape high-quality projects in line with the NEB values and principles.

The Guidelines explore how the NEB links to and builds upon a broad range of **concepts, tools, frameworks and practices** in the construction ecosystem and real estate investment industry. It is of paramount relevance to anchor the **NEB into such context**, leveraging where possible on existing trends with regard to environmental and climate sustainability and social responsibility.

Moreover, the NEB can manifest through and be pursued by a broad range of strategies, principles, solutions and techniques. While it is not possible to systematise and cover comprehensively such richness, it is fundamental to provide investors, developers and other stakeholders with advice consisting of **best practice, examples and references for inspiration**.

Although NEB builds upon existing concepts, standards and practices, it adds a **distinctive quality** to projects, which results from the **integration** between aesthetical aspiration, commitment to sustainability and thorough affirmation of social values. Such distinctiveness is difficult to capture, as it is not equivalent to excellence along the individual dimensions. Still, from a marketing perspective, it has the potential to become a "unique selling point" for NEB aligned projects, eventually providing the actual trigger for investors to embrace the NEB.

On the procedural side, investors and developers need to understand how their **processes can align with NEB** values and principles. This is a key step in translating the NEB into practice and enabling its broad implementation. Although it is not possible to be prescriptive due to the unique characteristics of each project and the ambitions and capacities of each investor, it can certainly be claimed that the NEB core values and principles are most effectively deployed during the **early preparatory and design stages** of projects and **later during their use**. In this sense, the general rule that early decisions must be well founded, as later changes are constrained and costly, is more relevant than ever.

Finally, it is critical for all involved parties to achieve clarity on the **benefits and impacts** that NEB can bring, and the related additional costs and efforts that it can cause. Any investment decision, despite inevitable uncertainties and biases, is fundamentally based on the **balance between risk and returns**. While investors are used to deal with financial returns and the underlying cost and revenue streams, as well as conventional project risks, there can be significant uncertainty on how to handle non-financial (i.e., societal and socio-economic) benefits and related efforts. However, such **non-financial benefits and wide impacts** are likely to be a key decision driver, eventually making the case for investors to go beyond purely financial considerations and embrace in their activities the NEB core values and principles.

# Contents

# 1 Introduction

These Guidelines will develop across **different levels and along multiple tiers**, reflecting the multidisciplinarity of the NEB, the complexity of possible investment channels, and the large variety of the built environment.

This chapter first presents **the scope, the limits and the goals** of these Guidelines, which are, in short, to show where, how and why NEB can be a beneficial approach and create value to investors and the society at large.

The chapter then goes on to present the **audience and the structure** of the document, which is not necessarily intended as a linear reading but offers many "entry points", in order to facilitate its use by different types of readers with their specific interests and purposes.

Finally, the chapter provides a brief overview of the **NEB policy context and relevant NEB activities**, referring the reader to existing comprehensive sources of information by the European Commission for more details.

## 1.1 Why this Guide?

### 1.1.1 Rationale

This guide deals with the **practical application** of the New European Bauhaus (NEB) core values and working principles in **built environment** projects, and in particular **buildings, open spaces, and neighbourhoods**. It aims at supporting the NEB vision of a more **beautiful, sustainable and inclusive** built environment in Europe, while showing how NEB practically links to public and private investments.

Accordingly, the document has **two main goals**:

- First, this guide should help **investors, developers and project owners** to understand better what the NEB is and how it concretely links to the different aspects and stages of **investment and project development**. This will show why aligning to NEB values and principles adds value to investors and society, how it relates to different types of built environment investors, and how the NEB impacts different types of built environment projects.
- Second, this guide provides concrete **recommendations** about design solutions, practices and processes that help shape high-quality projects in line with the NEB values and principles. The recommendations also show how such actions can provide immediate **benefits** to investors, as well as drawing attention to **challenges** and ways to **mitigate** them.

The **additionality** of this guide consists in bridging the NEB conceptual framework with **practical and procedural aspects** of investment and project preparation.

Starting from the NEB Compass[1] with the description and exemplifications of the NEB core values and working principles, this guide aims at **operationalising** the NEB from an investment perspective. It does not specify criteria or thresholds for projects to become NEB aligned, as this will be provided in other tools,[2] but rather explains and provides recommendations on how and why to align investments with the NEB.

Moreover, this guide addresses larger scale projects, which could help **mainstream** the NEB in large public investment activities and in the commercial real estate industry. The participative dimension of NEB is also considered from an investment perspective, complementing, and expanding on the existing NEB Toolbox.[3]

[1] COM(2023) 24 final – The New European Bauhaus Progress Report – Annex II – New European Bauhaus Compass. Available at: https://new-european-bauhaus.europa.eu/system/files/2023-01/NEB_Compass_V_4.pdf.

[2] In particular, the upcoming NEB Handbook and the NEB Self-assessment online tool.

[3] European Commission, New European Bauhaus Toolbox, 2024. Available at: https://new-european-bauhaus.europa.eu/system/files/2024-01/NEB%20toolbox.pdf

### 1.1.2 What investors can expect from the New European Bauhaus

The New European Bauhaus aims at transforming the built environment, leading to holistically thought and designed buildings, open spaces and neighbourhoods that are aesthetically appealing, sustainable and inclusive. While the NEB does not address directly economic and financial matters, **aligning projects to the NEB does have far-reaching economic and financial implications**.

As for any investment, identifying the best balance between costs and benefits is a crucial step in making investment decisions, which investors must carry out considering their specific goals, ambitions, and constraints. This guide supports investors in making better informed decisions. It offers an overview to understand **how and why NEB can add value** to them and to their share- and stakeholders.

The "**investment case**" for NEB aligned projects will be presented at the last chapter of this guide (see Ch. 5), relying on and summing up the explanations presented throughout the entire document. It is, however, important to set the scene at the beginning of this document, making investors immediately aware of what they can expect from the NEB.

Projects which align to the NEB in the built environment can fundamentally provide **impacts and benefits along two dimensions**: the **financial** one and the **socio-economic** one. Investors from all sectors can benefit in terms of both:

| | Public sector investors | Private sector investors | Third sector investors |
|---|---|---|---|
| **Financial dimension** | - Public investors are eager to take systematic advantage of any financial gain to **expand their budgetary space**. Therefore, any financial benefit – mainly in terms of cost savings – is extremely valuable to them.<br>- While the NEB does not introduce any new material solutions, it helps to take a **holistic view** and reconcile and balance efficiency, cost-effectiveness and even cost-cutting with beauty, inclusion and long-term sustainability. | - Financial considerations – in terms of risk-adjusted returns – are the primary and fundamental decision-making drivers of private investors. The NEB covers a series of dimensions which have **immediate positive impact on return and risk**.<br>- Such dimensions mainly stem from the core value "**sustainable**" in the form of operating cost savings, but **also from other principles and values**, e.g., beautiful and more inclusive buildings enhance demand and asset value; NEB aligned projects may also bring better overall process quality, improved project acceptance, flexibility of use and reconversion, etc. | - **Cost-effectiveness and sound financial performance** are key elements for third sector investors, as they fundamentally operate under market terms and are exposed to the same **constraints and challenges** of other market participants.<br>- Aligning with NEB can help to combine the financial dimension with the **investors' missions** in terms of inducing permanent social impacts, acting as role models and contributing in general to societal transformations which are **financially sustainable**. |
| **Socio-economic dimension** | - Public investors are naturally mandated to maximise socio-economic impacts. NEB goes however **beyond "primary" welfare benefits** (e.g., efficiency gains in service provision, reduction of externalities, etc.) and helps induce **lasting societal changes**.<br>- This includes for example high aesthetic quality, effective social | - While private investors do not typically directly target socio-economic benefits, there is widespread consensus that the private sector carries a fundamental **responsibility towards society**.<br>- At the same time, private actors do materially and directly benefit in the long term from providing positive socio-economic impacts. | - Third sector investors, similarly to public sector investors, do not pursue financial profit but are committed to **maximising the social impacts** of their activities, according to their mission.<br>- The variety of dimensions through which NEB operates and produces impacts can fit a broad range of investors' specific **sectors, mandates, and projects**. |

| | | | |
|---|---|---|---|
| | inclusion and fundamental social justice.<br>- NEB can therefore help reap the benefits of **long-term value creation**, which may be important for strategic reasons, although they may also be subject to budget constraints or lack of resources. | - The NEB therefore provides to private investors a **conceptual framework** to enlarge and structure their horizon. This goes hand in hand with the general and fundamental developments on **ESG and social responsibility** which are unfolding in the real estate and construction industries. | - Moreover, NEB encourages and supports **networking and dialogue** between investors, within and across sectors and disciplines. This helps investors project their individual initiatives into a broader societal context. |

## 1.2 How to use this Guide?

### 1.2.1 Structure and logic

This document is structured in 6 chapters and two annexes.

Chapter 1 – **Introduction** presents the scope and goals of the Guidelines. It reviews the NEB EU policy context and explains how the Guidelines are structured and can be used by different user groups.

Each of the following 4 chapters explores one aspect of the integration of NEB values and principles in built environment projects (see also diagram below).

Chapter 2 – **Mapping the NEB**:

- How is NEB positioned in the context of other existing concepts and frameworks?
- How do main investor typologies interface to the NEB, what are their investment strategies, drivers, and challenges?
- How do main categories of projects in the built environment link to NEB and how can they benefit from NEB?

Chapter 3 – **Implementing the NEB**:

- What practical solutions ("NEB Investment Recommendations") can be applied to projects in the built environment to implement NEB values and principles?
- What concrete benefits do these solutions provide to investors? What challenges can arise and how can they be mitigated?
- The fiches describing each NEB Investment Recommendation in detail are reported in **Annex I**.

Chapter 4 – **Delivering the NEB**:

- How does the NEB link to the various steps of the project development process?
- What competences are needed for the preparation of NEB aligned projects?
- How does NEB inform other relevant processes, such as procurement?
- Can the NEB help mitigate project risks?
- What are they key stakeholders from a NEB perspective and what is their role?

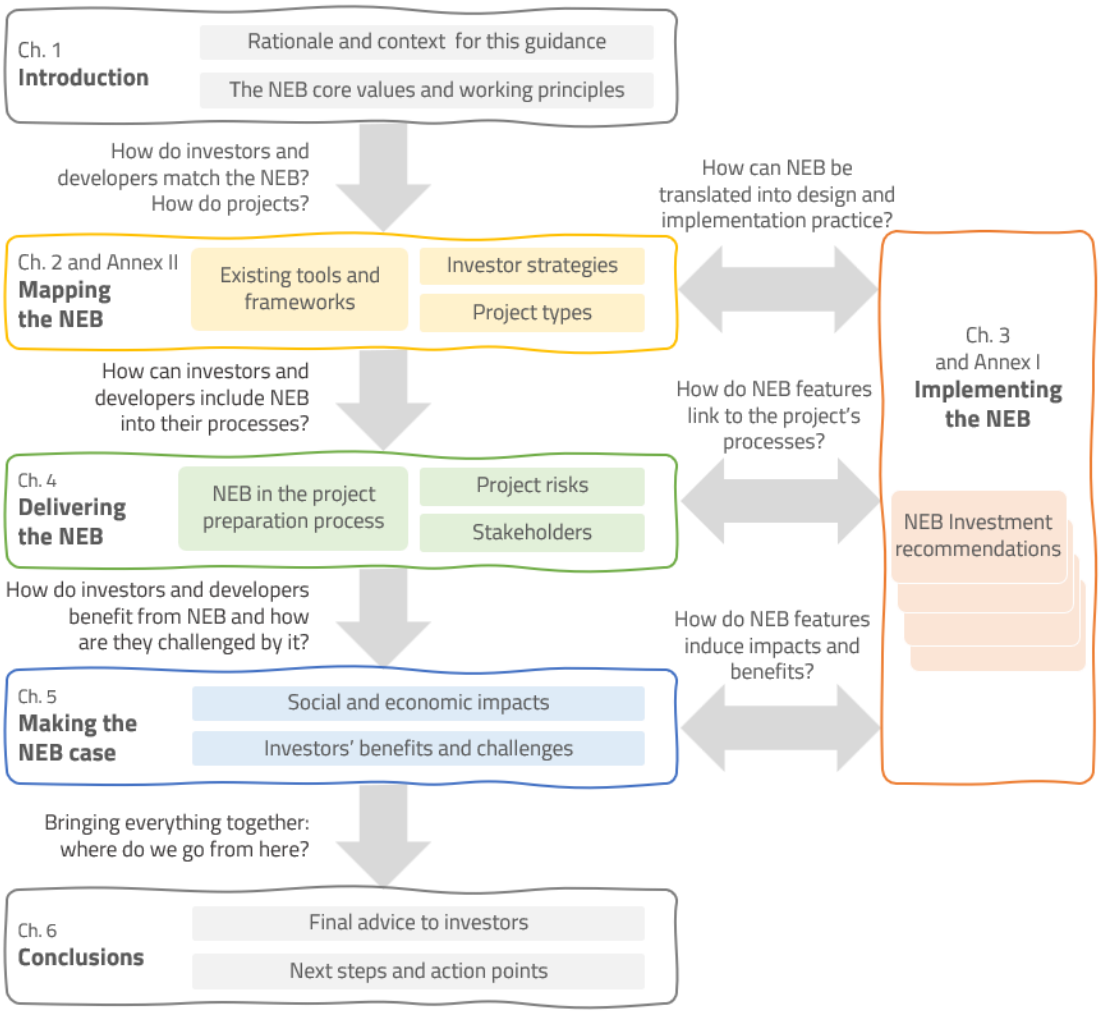
Chapter 5 – **Making the NEB case**:

- What are the social impacts and wider economic benefits of integrating NEB into built environment projects?
- What are potential direct and indirect benefits to the investors?
- What are the challenges for investors of integrating NEB into built environment projects and how can these be mitigated?

Finally, Chapter 6 – **Conclusions** presents final considerations on the integration of NEB into built environment projects and proposes some next steps and action points for the different readers addressed by the guide.

The document has two Annexes:

- **Annex I** contains the detailed fiches of the NEB Investment Recommendations.
- **Annex II** reports some details on the background of each of the three NEB core values and working principles.




## 1.2.2 Audience

This section presents the Guidelines' audience groups and explains which chapters can be of main interest for each group. This guide targets the following audience groups:

**Primary audience:**

- **Investors**, from profit-driven private investors to public bodies, authorities, donors and non-profit organisations. This user group includes investors that are active across a varying scale of built environment projects. The Guidelines aim at helping investors:
  - build a better general understanding on NEB (Ch. 1 and 2, and Annex II for more details);
  - understand how different types of built environment investments link to the NEB (Ch. 2);
  - review concrete solutions (NEB Investment Recommendations) that help align projects to the NEB (Ch. 3 and Annex I);
  - understand how to align their processes to NEB (Ch. 4);
  - gain an overview on benefits, challenges and mitigants from aligning projects to NEB (in general, Ch. 5; by Investment Recommendation in Annex I).
- **Developers**, from smaller ones operating in local markets to large international ones creating very large assets with high visibility and impact. The Guidelines aim at helping developers:

  - build a better general understanding on NEB (Ch. 1 and 2 and Annex II for more details);
  - understand which technical and public participation solutions can help prepare NEB-aligned projects (Ch. 3 and Annex I);
  - understand how processes can be aligned to NEB values and principles (Ch. 4);
  - learn about the benefits, challenges and mitigants from aligning projects to NEB (in general, Ch. 5; by Investment Recommendation in Annex I).
- **Decision makers**, such as politicians, government officials or policymakers, interested to learn more about NEB and the added value from supporting investments in NEB-aligned projects. The Guidelines aim at helping decision makers:
  - build a better general understanding on NEB (Ch. 1);
  - learn about what NEB means in terms of practical design solutions and features (Ch. 3 and Annex I);
  - gain an overview of the benefits and challenges of aligning projects to NEB (in general, Ch. 5; by Investment Recommendation, Annex I).

**Secondary audience:**

- **Design teams**, including architects, urban designers and planners, engineers, environmental experts, social experts, public participation experts, project managers, and other professionals that are involved in project preparation. The Guidelines aim at helping design teams:
  - build a better general understanding on NEB (Ch. 1 and 2, and Annex II for more details);
  - understand how NEB links to technical solutions (Ch. 3 and Annex I);
  - learn how project development processes can align to NEB (Ch. 4).
- **Public administrations**, interested to learn more on NEB and on how to align their processes to NEB. The Guidelines aim at helping public administrations:
  - build a better general understanding on NEB (Ch. 1 and 2, and Annex II for more details);
  - understand how NEB links to design and project development solutions (Ch. 3 and Annex I);
  - learn how their processes can align to NEB (Ch. 4 ).
- **Communities, citizens and other parties**, without previous knowledge on NEB, but interested to better understand NEB, its added value for their community, and how they can contribute to creating NEB-aligned projects. The Guidelines aim at helping communities and citizens:
  - build a better general understanding on NEB (Ch. 1);
  - learn how to be actively engaged and contribute to the creation of NEB-aligned projects (Ch. 3 and Annex I);
  - get informed about the benefits to communities from NEB (Ch. 5; by Investment Recommendation, Annex I).

| | Ch. 1 Introduction | Ch. 2 and Annex II Mapping the NEB | Ch. 3 and Annex I Implementing the NEB* | Ch. 4 Delivering the NEB | Ch. 5 Making the NEB case | Ch. 6 Conclusions |
|---|---|---|---|---|---|---|
| Investors | ■ | ■ | ■ | ■ | ■ | ■ |
| Developers | ■ | ■ | ■ | ■ | ■ | ■ |
| Decision makers | ■ | | ■ | | ■ | ■ |
| Design teams | ■ | ■ | ■ | ■ | | ■ |
| Public administrations | ■ | ■ | ■ | ■ | | ■ |
| Communities / individuals | ■ | | ■ | | ■ | ■ |

** NEB investment recommendations*

## 1.3 The New European Bauhaus

### 1.3.1 The NEB policy context

The New European Bauhaus (NEB) was launched by the European Commission in 2021 as a creative and interdisciplinary initiative that expresses the EU's ambition of creating **beautiful, sustainable, and inclusive places, products, and ways of living**.[4,5] The start of the initiative had been preceded by a six-month co-design phase and other preparatory activities.[6,7]

By referring to the historical Bauhaus created in 1919, the NEB has put from the very beginning a particular focus on the role of the **built environment** and **high-quality architecture**, also including architectural and archaeological heritage, landscapes, and tangible and intangible cultural heritage.[8]

With its transdisciplinary and transversal approach to sustainability, aesthetics, quality of experience and social inclusion, the NEB builds upon the **broader policy context** of the European Union. It aims to maximise the impact of existing policies and promote their synergy through integrated approaches.

Above all, the NEB aims at bringing a cultural and creative dimension to the **European Green Deal** and all its components, by the integration of sustainability with social inclusion, aesthetics and high quality of experience.[9] The Green Deal addresses directly a series of areas of immediate relevance to the built environment: the Renovation Wave,[10] the Circular Economy Action Plan,[11] the Sustainable and Smart Mobility Strategy[12] and others.[13]

While the Green Deal mainly refers to the sustainable dimension of the NEB, other **EU policy areas** are equally relevant to the other dimensions: territorial policies, cohesion policies, policies in the cultural and creative sectors, policies addressing the social dimension, digital transformation, and so on.[14] Particularly relevant are the interlinkages and synergies between the NEB initiative and the Horizon Europe programme, as an instrument to fill knowledge gaps and support the creation and development of new ideas and solutions across sectoral boundaries.[15]

In order to further refine the concepts behind the NEB, the Commission has produced supporting documents, and in particular the **NEB Compass**.[16] This document sets out an assessment framework based on the NEB core values and working principles and indicates possible directions for change, with three growing levels of ambition. The content of the NEB Compass is addressed in detail below, see Sec. 2.1.2.

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[4] COM(2021) 573 final. New European Bauhaus Beautiful, Sustainable, Together. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2021:573:FIN

[5] For an overview, see: https://new-european-bauhaus.europa.eu/index_en

[6] COM(2021) 573 final. ANNEX 1 – Report on the Co-Design phase. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2021:573:FIN

[7] New European Bauhaus Concept Paper prepared by NEB High-Level Round Table, 30 June 2021 (including the underlying "Initial visions"). Available at: https://new-european-bauhaus.europa.eu/system/files/2021-07/2021-06-30_New_European_Bauhaus_Concept_Paper_HLRT_FINAL.pdf

[8] 2021/C 501 I/03. Council conclusions on culture, high-quality architecture and built environment as key elements of the New European Bauhaus initiative. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021XG1213(03)

[9] COM(2019) 640 final – The European Green Deal. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2019:640:FIN

[10] COM(2020) 662 final – A Renovation Wave for Europe - greening our buildings, creating jobs, improving lives. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0662

[11] COM(2020) 98 final – A new Circular Economy Action Plan for a cleaner and more competitive Europe. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2020:98:FIN

[12] COM(2020) 789 final – Sustainable and Smart Mobility Strategy – putting European transport on track for the future. https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0789

[13] Among others, the priority topic "Green buildings" in the European Climate Pact, see: https://climate-pact.europa.eu/priority-topics/green-buildings_en.

[14] For an overview of the policy dimension addressed by NEB, see COM(2021) 573 final ANNEX 3. The New European Bauhaus policy ecosystem. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM:2021:573:FIN

[15] Directorate-General for Research and Innovation, Schellnhuber, H., Widera, B., Kutnar, A. et al., Horizon Europe and new European Bauhaus NEXUS report, 2022. Available at: https://data.europa.eu/doi/10.2777/49925

[16] COM(2023) 24 final – The New European Bauhaus Progress Report – Annex II – New European Bauhaus Compass. Available at: https://new-european-bauhaus.europa.eu/system/files/2023-01/NEB_Compass_V_4.pdf.

A further key supporting document is the **NEB toolbox**.[17] It aims at supporting the interaction and engagement of the project team and the project stakeholders through co-creative activities to shape NEB projects. To this aim, it introduces a three-phase methodology (Identification, Exploration, Refinement). The toolbox is based on experience collected during a Technical Assistance programme provided to 20 municipalities and is tailored for public bodies and formally established entities that deliver public services.

The NEB framework explicitly refers to and builds upon the **Davos Baukultur Quality System**.[18] This system, which is part of the ongoing Davos process,[19] aims at supporting a systematic assessment of the quality of projects in the built environment. It puts a strong accent on social, emotional and cultural aspects, beyond the conventional technical and functional ones. The Davos Baukultur is addressed in more detail below, see Sec. 2.1.1.

While the Davos Baukultur addresses under the principle "Economy" the economic and financial aspects of built environment projects, the NEB framework does not directly tackle the investment dimension. A number of EU-funded NEB investment programmes have however already been put in place, demonstrating how NEB-aligned investments can be realised in practice, although on projects of relatively small scale. A further notable link between NEB and investments comes from the **"New European Bauhaus territorial development model (NEB TDM) financial instrument**", which is addressed in the box below.

The New European Bauhaus territorial development model (NEB TDM) financial instrument[20]

The NEB Communication proposed a **model financial instrument (FI) for territorial development** to support NEB projects in Member States and to leverage public and private investment. The New European Bauhaus territorial development model (NEB TDM) financial instrument was eventually published in 2022.

The instrument targets **managing authorities (MAs)** implementing EU cohesion policy programmes and provides them with the building blocks which they could use to set up and implement the financial instrument supporting NEB projects. In general, Financial Instruments under EU cohesion policy provide repayable financial support towards investments in **revenue-generating and cost-saving activities**, with the aim to maximise private investment with minimum public support.

Beyond this specific audience and focus, the NEB TDM therefore provides a **blueprint** of how the NEB core values can be brought from idea through implementation to outcome in concrete investments with private sector participation.

In particular, the NEB TDM includes a section on "**Guiding principles for assessing projects' compliance with the NEB**" which contains sets of indicative guiding questions for each NEB core value and working principle that a private investor (or fund manager or any entity with a similar responsibility) would apply when executing due diligence on a project that claims to be NEB-aligned.

A further important aspect for the uptake of the NEB in the public and private sectors is its integration into existing and perspective **urban and regional policies** and other activities. Local and regional authorities can play a key role in designing, implementing, and disseminating the NEB. As they have clear responsibilities for sustainable and inclusive local and regional policies, they are responsible for large stocks of public spaces and buildings and play an important regulatory and funding role in their renovation and regeneration processes.[21]

Finally, some national governments and authorities have provided further guidance on NEB related topics and have initiated diverse activities to spread the NEB in the member states and support the implementation of NEB aligned projects.[22] For the coordination of NEB activities, the member states have been requested to create National Contact Points (NCP).[23]

[17] European Commission, New European Bauhaus Toolbox, 2024. Available at: https://new-european-bauhaus.europa.eu/system/files/2024-01/NEB%20toolbox.pdf

[18] https://www.bak.admin.ch/bak/de/home/baukultur/qualitaet/davos-qualitaetssystem-baukultur.html

[19] https://www.bak.admin.ch/bak/en/home/baukultur/konzept-baukultur/erklaerung-von-davos-und-davos-prozess.html

[20] SWD(2022) 172 final – New European Bauhaus territorial development model (NEB TDM) financial instrument. Available at: https://ec.europa.eu/regional_policy/sources/communication/bauhaus/neb-financial-instrument-2022.pdf

[21] European Committee of the Regions, Commission for Social Policy, Education, Employment, Research and Culture, Errico, B., Bisogni, F., Levi, T., The New European Bauhaus at the local and regional level, 2023. Available at: https://data.europa.eu/doi/10.2863/327283

[22] See for example: https://initiative-bauhaus.at/

[23] https://new-european-bauhaus.europa.eu/about/national-contact-points_en

### 1.3.2 The NEB Core Values and Working Principles

The essence of the NEB is summarised in the three core values Beautiful, Sustainable and Together and complemented by the three working principles (Participatory process, Multi-level engagement and Transdisciplinary approach). An overview of each NEB core value and working principle can be found in Annex II .

The NEB core values and working principles emphasise the collaborative effort required to achieve the ambitious goals set by the European Green Deal, as follows:

- **Beautiful**: To (re)activate the qualities of a given context while contributing to our physical and mental well-being; to connect different places and people and foster a sense of belonging through meaningful collective experiences; and to integrate new enduring cultural and social values through creation. A beautiful project emerges when its authors invest in collective sensitivity, intelligence, and competencies into creating a positive and enriching experience for people, beyond functionality. A project that is genuinely attentive to its context and users encourages mutual care and can be a powerful driver for change. See also Sec. Beautiful in Annex II .
- **Sustainable**: The NEB keeps the definition used in the European GreenComp framework,[24] which is: "Sustainability means prioritising the needs of all life forms and of the planet by ensuring that human activity does not exceed planetary boundaries". The basic sustainability ambition is concerned with conventional features like the ability to preserve or prolong usability, and the next level considers the entire system of a project. The highest ambition is to regenerate and reconnect to nature. See also Sec. Sustainable in Annex II .
- **Together**: The ambition of NEB is to keep the focus on the essential idea of granting and securing equal access to opportunities and resources for all and encouraging exchanges across cultures, genders and ages. Faithful to the spirit of togetherness, the NEB Compass maintains a positive, open, inclusive, and non-discriminatory approach that goes beyond the exercise of listing or categorising social groups based on their differences. See also Sec. Together in Annex II .
- **Working Principles**: A NEB project should embrace three working principles: participatory process, multi-level engagement and transdisciplinary approach. These principles describe the process through which a project should operate and work to achieve the highest level of ambition in the three values. By working across disciplines, sectors, and levels of governance and by involving everyone in an open and equal manner, a project should ensure that it promotes a fair transformational outcome which is not only accepted, but also beneficial for everyone and mindful of the systemic and close relationships between complex social, environmental and structural factors. See also Sec. Working Principles in Annex II

The NEB acknowledges that the path to sustainability, inclusiveness and beauty necessitates changes at multiple levels, economic frameworks, societal structures, and individual behaviours. It also recognises the interplay of environmental, cultural, and social transitions, positioning itself as a catalyst for this **multi-faceted transformation**. The NEB initiative encapsulates a broader vision that extends beyond ready-made solutions. It fosters dialogue, collaboration, and creativity, bringing together different disciplines and different stakeholders.

In order to achieve such goals, the NEB relies on **thematic axes** which emerged during the preparatory co-design phase of the NEB and link the initiative to the people and their interests, needs and motivations. These are:

- **Reconnecting with nature**: going beyond a human-centred to a life-centred perspective. This reflects widespread awareness and willingness to address climate change (mitigation and adaptation) and to reduce exposure to pollution. In this context, education and culture play a key role in the shift of paradigm towards new behaviours and values.
- **Regaining a sense of belonging**: magnifying and linking collective and private experiences and building bridges between people. This path ranges from intergenerational solidarity over cultural heritage to proximity economy.
- **Prioritising the places and people that need it the most**: ensuring that beauty and sustainability are affordable and accessible to all. Exclusion, segregation, or poverty are real threats in cities, villages and regions, which the NEB must encounter and help to overcome.
- **The need for long-term, lifecycle thinking in the industrial ecosystem**: tackling unsustainable use of resources, including obsolete buildings or infrastructures, and waste. NEB projects promote a thorough circular economy mind-set and address these challenges in terms of design, materials, technologies, processes and behaviours.

[24] European Commission, Joint Research Centre, GreenComp, the European sustainability competence framework, 2022. Available at: https://publications.jrc.ec.europa.eu/repository/handle/JRC128040

# 2 Mapping the NEB

The NEB relies on and builds upon a broad and varied range of **concepts, tools, frameworks and practices**. Similarly, the construction ecosystem and the real estate investment industry are extremely broad, complex and ramified fields. The aim of this chapter is therefore to **link and anchor the NEB into such context**, focusing on the most relevant aspects and reducing the complexity to highlight the fundamental traits.

The chapter starts by identifying how NEB links to existing frameworks aimed to promote **quality in the built environment** and by interpreting the **three level of ambition of the NEB Compass** from a built environment investment perspective. It also discusses how the NEB values and principles can fit in existing sustainable finance frameworks, as well as the relevance of NEB for **the social and philanthropy ecosystems**. A short overview of the **enabling environment** needed to bring NEB aligned investments to life is also presented.

The chapter then goes on to identify how **investment strategies** can relate the NEB in terms of drivers and benefits. To this aim, instead of relying on conventional classifications of investors, broad **key categories of "investors"** are defined from a NEB perspective. "Investor" is meant here in a broad and non-strictly financial sense and refers to any entity able to have a driving role in implementing NEB aligned project.

In a similar way, main categories of built environment **projects** relevant for NEB and more prone to be aligned to NEB are identified, exemplifying how they can benefit from alignment to NEB values and principles.

## 2.1 The context for NEB aligned investments

### 2.1.1 Quality in the built environment

The **built environment** is the complex system of human-made resources and infrastructures that provide the places in which people live, work, and carry out most of their social and recreational activities. It is fundamental for individuals to fulfil their needs and aspirations and for societies to function properly and has therefore an immediate impact on the well-being of people.

The built environment is also one of the **largest economic sectors**, consuming a vast volume of resources and having among the highest impacts on environment and climate change. At the same time, the sector is experiencing widespread pressure in terms of demand for new assets or modification of existing assets, resulting among others from population growth and continuously increasing levels of urbanisation, or from urban shrinkage.

Large efforts are therefore underway on the side of asset providers, authorities, and regulators to bring the sector on a **long-term sustainable path**. This encompasses a broad range of dimensions, mainly climate neutrality, circularity, environmental compatibility. Moreover, social and governance issues are becoming equally prominent, also in line with overall developments in the financial sector.

At the same time, a discourse on the **quality of human-made environments** has flourished. This can be seen within the broader debate on the future of cities, following the continuous expansion of the built environment and the fundamental changes brought about by rapidly changing behavioural patterns, the de-industrialisation of many European cities, the digitalisation of many services, and other megatrends.

"Quality", in a very broad and cross-sectoral meaning, can be seen as the overarching horizontal concept behind the NEB core values and working principles. In Europe, the strive for quality in the built environment is mainly associated with the **Baukultur** initiative.[25] Baukultur defines the principle of shaping the built environment and the handling of it (in terms of planning, designing, building, using, maintaining) in line with the specific human and cultural context. It refers in general also to all the initiatives and activities that aim at fostering and implementing such ambition.

> *"Baukultur" (literally "building culture") is a German term for a concept describing all human activity that changes spaces and the living environment in a positive way. It includes existing buildings, including monuments and other elements of*

[25] See for example the Swiss Strategy for Baukultur, https://www.bak.admin.ch/bak/en/home/baukultur/konzept-baukultur/strategie-baukultur.html or the German Bundesstiftung Baukultur (Federal Foundation for Baukultur), https://www.bundesstiftung-baukultur.de/.

> *built heritage, as well as the design and construction of contemporary buildings, infrastructure, public spaces and landscapes embedded in and relating to the natural environment. Baukultur also refers to planning procedures for building projects, infrastructures, cities, villages and open landscapes, and to traditional and innovative building techniques and methods. There is a broad implicit societal understanding of quality as well as tools, procedures and practices, hence the selective use of the word 'culture' in the term.* [26]

The **Davos Baukultur,** as initiated by the Davos Declaration of 2018, takes a particular prominent role when framing the NEB values and principles into existing concepts and frameworks.[27] The Davos initiative introduces a comprehensive Quality System based on eight principles, see box below. The aim is to enable, promote and foster **high-quality** Baukultur, which refers to "well-designed places that change in line with societal needs while preserving their historical characteristics. It focuses on social needs and sustainable use of resources and adds economic value."[28]

The NEB can therefore rely on a solid foundation of principles and frameworks. Such basis is complemented by a broader set of practical and operational instruments and rules of immediate practical relevance. Their application by owners, developers, and property users can be instrumental in promoting high-quality architecture in investments.[29]

The eight Davos Baukultur Principles[30]

The Davos Baukultur makes use of a slightly different approach than the NEB. It does not refer to high-level core values and working principles but to a set of more specific thematic areas and related **principles of quality assurance**. They are intended as the basis for introducing instruments that enable the definition and assessment of "Baukultur" qualities in places incorporating and weighing up social, emotional and cultural values equally to technical and functional aspects. The Davos Baukultur Principles, while being universal, have an immediate and pragmatic meaning for investors: [31]

**1) Governance: High-quality Baukultur follows good Governance**. Form an investment perspective, this principle links immediately to the third dimension of ESG and can be reconciled with existing ESG frameworks. However, the Davos ambition includes public engagement and contributes to transparent and inclusive participatory governance, therefore going well beyond common industry practice. From a NEB perspective, it links directly to the NEB working principles.

**2) Functionality: High-quality Baukultur fits the purpose**. This principle refers mainly to the concepts of design-for-all, accessibility, comfort, and safety. Functionality is a key aspect in real estate projects as it ensures that the assets can be effectively used and enjoyed by the largest possible audience and are flexible by adapting to different existing and changing uses and purposes. It refers mainly to the NEB core values "Together" and "Beautiful".

**3) Environment: High-quality Baukultur protects the environment**. The commitment to protect the environment (including climate change issues) and create assets which are sustainable across all dimensions (energy efficiency, use of sustainable practices and materials, protection of biodiversity, etc.) is the cornerstone of the ESG pledge of investors in the built environment. This principle addresses also responsible land use and spatial development. It corresponds mainly to the NEB core vale "Sustainable".

**4) Economy: High-quality Baukultur adds economic value**. This principle is particularly relevant from an investment perspective, as investments intrinsically aim at producing economic value, either to the investor or the society or, ideally, both. In particular, it

[26] Council conclusions on culture, high-quality architecture and built environment as key elements of the New European Bauhaus initiative (2021/C 501 I/03), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021XG1213(03)

[27] See https://davosdeclaration2018.ch/en/

[28] Swiss Federal Office of Culture, The Davos Baukultur Quality System – Eight criteria for a high-quality Baukultur, 2021. Available at: https://davosdeclaration2018.ch/wp-content/uploads/sites/2/2023/06/2022-06-17-174034-dbqs-en.pdf

[29] There are also examples of voluntary commitments, for example the "Code for Baukultur", see https://www.bundesstiftung-baukultur.de/publikationen/der-kodex-fuer-baukultur. It introduces a set of Baukultur-related rules for the responsible performance of tasks by companies in the real estate industry.

[30] Swiss Federal Office of Culture, The Davos Baukultur Quality System – Eight criteria for a high-quality Baukultur, 2021. Available at: https://davosdeclaration2018.ch/wp-content/uploads/sites/2/2023/06/2022-06-17-174034-dbqs-en.pdf

[31] The eight Davos Baukultur Principles are also thoroughly referred to in: European Commission, Directorate-General for Education, Youth, Sport and Culture. Towards a shared culture of architecture – Investing in a high-quality living environment for everyone, 2021. Available at: https://data.europa.eu/doi/10.2766/98888

calls for prioritising long-term investments over short-term economic gain. Notably, this principle links horizontally to all NEB core values and working principles.

**5) Diversity: High-quality Baukultur connects people**. By putting people first, this principle asks for investments which are inclusive and support social cohesion, for example by encouraging mixed and balanced uses. While this requires appropriate planning from the side of public authorities, investors can benefit largely in the long-term from a balanced and therefore prosperous development of built areas, especially in the urban context, as reflected in the NEB core value "Together".

**6) Context: High-quality Baukultur results in spatial coherence**. As for the previous one, this principle is strongly interlinked with the planning activities of competent authorities. Investment decisions are however strongly influenced by the ability of any project to enter into dialogue with its context, both in terms of corresponding to local features and existing heritage as well as introducing new elements. This links immediately to the NEB core value "Beautiful".

**7) Sense of place: High-quality Baukultur improves the Sense of place**. The emotional response of people and their attachment to the place where they live and work is a fundamental marketing dimension which investors have to take carefully into account. The identity and distinctiveness are central aspects of the NEB core values "Beautiful" and "Together".

**8) Beauty: A place of high-quality Baukultur is beautiful**. The aesthetic properties of a project and the way they are perceived and understood in relation to their surroundings are key quality aspects of any investment. Above all, this links the project to the people using it and improves their quality of life, therefore creating value. This principle reflects immediately the NEB core value "Beautiful".

### 2.1.2 The NEB ambitions from an investment perspective

The **NEB Compass** introduces the three core values (Beautiful, Sustainable and Together) and working principles (Participatory process, Multi-level engagement and Transdisciplinary approach) that guide NEB. Annex II provides a comprehensive overview of each core value and working principle, developing on the aspects covered and identifying linkages to relevant existing policies, concepts, tools and frameworks.

Moreover, the NEB Compass describes **three growing levels of ambition** per core value and working principles, tracing the path for a project to become truly "NEB". It serves therefore as a guiding framework for decision and project-makers wishing to apply NEB principles and criteria to their activities.

The levels of ambition reflect the different capacities and opportunities of project investors and developers as well as the very diverse contexts in which the NEB can be applied.

In general, the first ambition defines the basic features of a NEB project, as needed for a project to be defined as NEB-aligned. The second and third levels refer to the deeper implementation of the NEB values and principles and have therefore increasingly broader and more substantial project impacts. In particular, the third and highest level of ambition reflects projects which are **transformative** and fully implement and integrate the NEB to induce fundamental societal changes in terms of behaviours, worldviews, and paradigms.

The following table aims at interpreting the NEB Compass and its three level of ambition from a built environment **investment perspective**.

Core Values

| **Beautiful** | **NEB Compass** | **Investment perspective** |
|---|---|---|
| **Ambition I** | **To activate**<br>physical and mental well-being / senses and emotions, on top of needs / cultural, social, and natural qualities of a place / experiences / awareness of place and heritage / own aesthetic | From an investment perspective, this ambition calls for **non-standard** approaches, tailored design and solutions, deep **integration** of the project with its **context**, as it is now and as it historically was. The investor is required to follow a **holistic approach** and involve in deep analysis, reflection, and absorption of all **characteristics of the place** when preparing and implementing the project. |
| **Ambition II** | **To connect**<br>meaningful social interactions / collective experiences / sense of belonging / connecting different places and people / openness and mutual care | From an investment perspective, this ambition puts the **people** in the foreground, implementing projects that are not only beautiful physical assets, but also create enriching experiences to the benefit of the community. It requires thinking out of the box and expanding the project scope **beyond the technical/building** horizon. The project must be able to establish an enduring **bound** with the community and the individuals. |
| **Ambition III** | **To integrate**<br>creation / collective re-invention of the places, lifestyles, and communities / integrate new cultural and social values / experience of a broader 'us' / anticipate future transformations / long-lasting movement | From an investment perspective, this ambition means implementing **outstanding and transformative projects**, backed by a broad **consensus**, both from the top (decision makers) and from the bottom (communities). This ambition can only be achieved by exceptional **dedication and efforts** by all parties involved in the project. The project is probable to gain **lighthouse** character and give very **high visibility** to the investor. |

| **Sustainable** | **NEB Compass** | **Investment perspective** |
|---|---|---|
| **Ambition I** | **To repurpose**<br>repurpose / durability, adaptability, recyclability / rethinking services, products and places / reduce pollution and carbon impacts / minimum use of resources, materials and energy / products' lifecycle / reduce environmental footprint | From an investment perspective, this ambition calls for projects that apply **solutions that minimise the consumption of resources**, including non-physical ones (e.g., maintenance services). The projects are therefore dependent on an existing **ecosystem** (material banks, etc.) and at the same time contribute to the establishment and mainstreaming of such ecosystems, locally and globally. This ambition includes also questioning the need for new assets, especially when **pre-existing** ones are available for **repair or upgrade**. |
| **Ambition II** | **To close the loop**<br>close the loop / reduce linear processes / transform them into circular processes / zero pollution / (industrial) system/ actively involve actors / cycle of the design, production, use and discarding | From an investment perspective, this ambition calls for **non-conventional circular design solutions** and choice of construction techniques. This makes a **lifecycle approach** mandatory and includes also looking upwards along the **supply chain** of construction materials and components, with the aim of achieving **zero waste and zero pollution**. To do so, all **actors** (users, suppliers, contractors, etc.) need to be systematically involved. **Indirect and remote impacts** of the projects must be taken into account as well. |
| **Ambition III** | **To regenerate**<br>to give back more than it takes / biodiversity / restoration and expansion of nature / regenerative sustainability / contexts and environments / worldviews, | From an investment perspective, this ambition means going **beyond not doing harm** and **undoing pre-existing damages**. To achieve such a paradigm shift, design and technological solutions are not sufficient. The project must be able to make an impact **beyond its boundaries**, reaching out to the society and decision |

| | | |
|---|---|---|
| | paradigms, and behaviours / complete ecosystem / project's impact over time and space / natural resources | makers. This exceptional level of vision can only be realised by fully committed investors with **sufficient capacities** and by projects with **explicit focus on nature** restoration. |

| Together | NEB Compass | Investment perspective |
|---|---|---|
| **Ambition I** | **To include** accessibility (physical, cognitive, psychological, etc.) / affordability regardless of gender, racial or ethnic origin, religion or belief, ability, age or sexual orientation / equality of treatment and opportunities / prioritise less represented individuals, groups and communities | From an investment perspective, this ambition means going **beyond legal requirements** for physical inclusion and developing projects which are inclusive**, socially and physically**, in the way they are conceived and designed. Inevitably, this also asks from the investors to add **inclusion and care** for disadvantaged people to their priorities. For the developers, to consider thoroughly **how the project will be used and by whom**, ensuring that it is **affordable** and particularly **receptive** towards less affluent citizens. |
| **Ambition II** | **To consolidate** relations between users and/or communities / equal treatment and social justice / inclusion and open access to services / formal, structural mechanisms / funding instruments, business models, planning, policies, regulations | From an investment perspective, this ambition compels looking beyond the individual project and putting it into the **context of the community and the immediate society**. The investor shall put its activity in relation to the **institutional mechanisms and rules** that organise the society and the industry, leveraging on them to produce impacts of **social cohesion and stability** which go far beyond the immediate environment of the project. |
| **Ambition III** | **To transform** new ways of living together / solidarity and cooperation / awareness of discrimination and injustice / exemplary and replicable / break obsolete social models / create value / transformative benefits / influencing worldviews, paradigms and social behaviours | From an investment perspective, this ambition corresponds to the **highest level of social commitment** of the investor, who must be willing to interpret his projects as a real contribution to **overcoming the social status-quo**. For the investor, this means leaving the realm of conventional business and rethinking fundamentally his way of deploying capital and **trading-off financial profit with social impacts**. |

Working Principles

| Participatory process | NEB Compass | Investment perspective |
|---|---|---|
| **Ambition I** | **To consult** already-established communication channels and stakeholder participation / information-sharing / consultation / feeding into decision-making / static and one-sided information flow | From an investment perspective, this ambition reflects **good practice** of sharing information about new projects, often following **legal requirements** of transparency and freedom of information. However, it also requires **input from stakeholders** to be collected and included in the **decision making**, especially in early project stages, when sufficient design flexibility is still available. This ensures that the project is fit for purpose and, ultimately, successful. |
| **Ambition II** | **To co-develop** stakeholders as key partners and advisers / defining and/or co-creating the rules and objectives / ideas developed collaboratively / dynamic information | From an investment perspective, this ambition goes **well beyond legal requirements** and common practice and asks for a **real participatory process** including the fundamental project objectives. The investor must be open and receptive and willing to see the process as an **opportunity**, not a burden. Due to high level |

| | | |
|---|---|---|
| | flow / exchanges on an equal foot / information co-designed | of interaction, the process needs to be assisted by **experts with specific knowledge** in public participation. |
| **Ambition III** | **To self-govern**<br>negotiate and engage / trade-offs with powerholders / all stages of the project's lifecycle / empowers the community / govern | From an investment perspective, this ambition is particularly appealing for **public or donor-funded projects** which are suitable for the community to take agency and possibly **co-ownership**. It maximises the impact of projects with **very high social value added**, where the investor steps back and explicitly empowers the community to take over, not only formally. |

| **Multi-level engagement** | **NEB Compass** | **Investment perspective** |
|---|---|---|
| **Ambition I** | **To work locally**<br>connects horizontally / informal networks / formal institutions / influence the local living environment / place-based approach | From an investment perspective, this ambition calls for investors and project developers to engage with the **local civil society and local institutions**. **Informal stakeholders** can be addressed within participatory approaches (see above), focussing also on local organised networks. **Formal stakeholders** can be addressed through different channels: interaction with administration (e.g., as arising from the planning and permitting process); cooperation with local institutional initiatives (e.g., social and cultural ones); and so on. This reinforces the **standing of the investor** and create **reciprocal trust**. |
| **Ambition II** | **To work across levels**<br>connects vertically / informal networks / formal institutions / across various scales / push single-scale initiatives beyond their own dimension | From an investment perspective, this ambition corresponds to "promote" the project in formal initiatives with wide reach (**knowledge sharing events and networks, partnerships, research programmes, etc**.). This serves both as a learning experience to benefit of the project, its stakeholders and the investor; and to **share experiences** from the project and **replicate its achievements**, contributing to the **investor's visibility and business reach**. |
| **Ambition III** | **To work globally**<br>global level / wider, transformational impact / beyond its initial, local scale / connects networks and/or (inter-)governmental institutions / across various levels / similar purposes / future of the entire ecosystem | From an investment perspective, this ambition applies to **transformative projects** which manage to reach unconventional achievements and impacts. Compared to the previous ambitions, the project must be able to act as a **demonstrator** globally and be of relevance to **different fields**, technical and non-technical ones. Such projects with extremely **high innovation and forerunner character** may serve as a blueprint and are pivotal in enabling and accelerating progress. This ambition ensures very **high visibility** and establishes a **long-lasting reputation**. |

| **Trans-disciplinary approach** | **NEB Compass** | **Investment perspective** |
|---|---|---|
| **Ambition I** | **To be multidisciplinary**<br>address a common problem / one field of knowledge / working independently alongside other disciplines that engage in similar topics | From an investment perspective, thinking multidisciplinary is a strong **competitive advantage** as it allows for solutions which would otherwise be out of reach. This requires involving **additional competences** and **coordinating across disciplines**, therefore strongly affecting the project management. |

| | | |
|---|---|---|
| **Ambition II** | **To be interdisciplinary**<br>address a common problem or issue / two or more academic disciplines or fields of knowledge / collaborating with other disciplines | From an investment perspective, this implies working towards solutions and opportunities that would not occur without targeted efforts towards **collaboration and cross-fertilisation across disciplines**. This ambition is linked to **procedural, technological, and scientific innovativeness**, with the related upside potential and risks. It typically requires the deployment of **experts** and systematic approaches of **innovation management**, potentially including academia. |
| **Ambition III** | **To be beyond-disciplinary**<br>integrate formal and non-formal knowledge / bring together people from political, social and economic fields with members of the public / new narratives / local and traditional knowledge and cultural norms and values / supplement and transform scientific insights | From an investment perspective, this level of ambition takes **technological and scientific innovation and excellence** for granted and brings it **back to the social and cultural context**. This level is characterised by highest **innovativeness and multi-disciplinarity**; profound understanding of **local traditions, cultural values, historical and socio-economic background**; excellent design and functionality; and, finally, **co-operative, active engagement** with communities and stakeholders. |

### 2.1.3 Sustainable finance

As presented at the beginning of this guide (see Sec. 1.1.2), the **NEB impact logic** develops along two strands, which are distinct but closely interlinked: the **financial** and **socio-economic** one.[32] The interdependency between the two manifests both with a 'positive' connotation, in terms of financial investments producing financial returns and positive socio-economic impacts; and with a more 'defensive' connotation, in terms of financial investments producing financial return and minimising as far as possible undesired negative side effects (or "externalities", in economic language). This aspect will be further addressed in Sec. 5.2 when dealing with NEB benefits and impacts.

From an investor perspective, the NEB therefore links into this broad understanding of finance which is typically labelled as "**Sustainable finance**" or, more in general as "**ESG**" (Environmental, Social, Governance). Other terms are often used as well, especially "Responsible finance", see box below for a review of common terminology. The original strict dichotomy between "conventional" and "sustainable" investments has disappeared and all actors in the investment industry deal with the socio-economic implications of their activities – although to very different degrees.[33]

The most universal approach to responsible investment comes from the UN, which has introduced the **Principles for Responsible Investment (PRI)** as an overarching initiative to encourage and support investors to incorporate ESG standards into their investment and ownership decisions. This Initiative consists of six principles that guide investors in making responsible investment decisions using ESG standards and provides a framework that makes it easier to determine if their investments are sustainable and if their financial decisions are responsible.[34]

In practical although general terms, this situation is reflected in a **continuous spectrum of behaviours and strategies**, which investors can follow based on their fundamental preferences and mandates, but also reacting and adapting to the specific circumstances and opportunities of each investment. The simplest strategies focus on minimising negative side effects, whereas increasing ambitions correspond to stronger commitments to produce positive impacts, in line with the two strands indicated above. The following table presents a schematic overview.

[32] The term "socio-economic" is used in this document in a broad sense, covering all non-financial dimensions: economic, social and environmental/climate ones.

[33] "Responsible investment involves considering environmental, social and governance (ESG) issues when making investment decisions and influencing companies or assets … Responsible investors can have different objectives. Some focus exclusively on financial returns and consider ESG issues that could impact these. Others aim to generate financial returns and to achieve positive outcomes for people and the planet, while avoiding negative ones", see https://www.unpri.org/introductory-guides-to-responsible-investment/what-is-responsible-investment/4780.article

[34] See https://www.unpri.org/

| Investor attitude | Driver of investment decision | NEB Values | Interest and relevance for NEB |
|---|---|---|---|
| **Traditional investor** | Financial return only | **Beautiful**: as far as able to increase returns (e.g., through higher attractiveness of assets) | Traditional investors can find NEB attractive in terms of immediate financial benefits and possibly visibility.<br>However, they can be discouraged by potential higher costs, increased complexity etc., despite the potential financial benefits, which might be difficult to assess and price in. |
| | | **Sustainable**: as far as able to reduce immediately risks level (e.g., climate risks) and possibly also increase return (e.g., through higher attractiveness, lower operating costs, etc.) | |
| | | **Together**: This aspect is mainly relevant only through direct legal requirements (e.g., accessibility for persons with disabilities) or other local policies or constraints. | |
| **ESG/ Sustainable/ Responsible investor** | Financial return + ESG considerations[35] | **Beautiful**: Relevant, especially if synergetic with other characteristics (e.g., sustainability, functionality). | ESG investment strategies have many analogies with NEB. Therefore, ESG investors can significantly benefit from it. The added value from NEB typically goes beyond standard ESG and needs to be tangible (although not necessarily quantifiable) in order to be appreciated and justify the extra effort. |
| | | **Sustainable**: Core aspect of ESG investors, main driver in ESG investment decision along all sustainability aspects. | |
| | | **Together**: Relevant, especially if the investor focuses on social issues. | |
| **Impact investor** | ESG impact and value creation, financial return as secondary target (accepting below market return) | **Beautiful**: Aesthetic value can be important as it has a strong signalling effect and supports the visibility of the investor. However, some investors may focus exclusively on measurable socio-economic impacts. | Impact investors will immediately be able to link their strategies to the NEB ambitions. The NEB will be particularly relevant for investors with thematic focus compatible with the NEB objectives. However, impact investors need to quantify, measure and track their impacts. In some cases, the impacts of NEB projects might not be material enough or might be too long-term compared to conventional ESG impact indicators. |
| | | **Sustainable**: This is a core dimension for Impact investors, who may choose a specific sustainability sector to focus on (e.g., climate, biodiversity or circularity). | |
| | | **Together**: This is also a key dimension for impact investors, who often pursue specific social objectives (e.g., fight against poverty, education, health, inclusion of persons with disabilities). | |
| **Philanthropic investor/ donor** | Exclusively ESG impact and value creation (accepting capital losses) | **Beautiful**: Aesthetic quality, paired with high visibility and recognisability, can be key values for philanthropies and other donors, for example when providing large buildings of social interest. Moreover, investors may focus on cultural heritage etc., where aesthetics plays an important role. | Philanthropic investors may be attracted to the holistic NEB approach and its high social and cultural ambition.<br>The high political and institutional relevance of NEB as a key initiative of the European Commission could further motivate this type of investors.<br>Moreover, some types of philanthropic investors and donors may be less sensitive to the need to quantify impacts (e.g., high-net-worth-individuals and their foundations). |
| | | **Sustainable**: This is a core dimension, as for all ESG and impact investors. | |
| | | **Together**: Philanthropies and donors often have a strong social orientation, for example in terms of inclusion of disadvantaged groups, affordability, provision of social services, etc. | |

[35] This is often referred to as "ESG integration", meaning that ESG informs the investment decision making.

The category denoted as "**ESG investors**" in the above table corresponds in practice to a continuous range of investment strategies and behaviours. This starts from "negative screen" approaches, in which ESG are risks mainly avoided and mitigated to protect value, which is only slightly different from the approach of traditional investors. Increasing ambitions lead to "positive screen" approaches, in which ESG opportunities are progressively and explicitly sought after to create value. All these strategies are often denoted as "financial-first".[36,37]

Similarly, the category denoted as "**impact investing**" starts where the investors commit to systematically produce measurable positive impacts by tackling societal challenges. While in some cases the earned financial returns can still be competitive, higher levels of ambition necessarily require that the investors accept returns that are below market level. These strategies are denoted as "impact-first" and eventually mutate into the "impact-only" strategies of philanthropic investors, who select investments which cannot implicitly provide financial returns (i.e., donations etc.). [38]

In line with overall developments, sustainability and ESG issues in general have gained a growing relevance also in the **built environment**. Although the major macroeconomic challenges and disruptions following the Covid crisis and the current geopolitical uncertainties have put pressure on such priorities, the ESG commitment remains at the top of the agenda of real estate investors.[39]

Beyond the trends towards ESG and sustainability, significant institutional efforts have been made recently to **initiate systemic changes** in the real estate industry and establish impact investment thinking. A key aspect in the development of impact investing frameworks is the necessity for investors to have clarity on the targeted impacts and measurements of outputs and outcomes. At the same time, the investment approach needs market norms and fiduciary standards.[40]

Sustainable finance is currently a key EU policy area and an "EU sustainable finance framework" consisting of several instruments has been put in place.[41] While all instruments are indirectly relevant for NEB investments, the **EU Taxonomy** is more directly relevant in defining how a NEB project in the built environment can be formally labelled as "sustainable".[42]

It follows that investors creating NEB aligned projects can significantly benefit from **framing** such investments into existing Sustainable/ESG pledges and commitments. In this way, the implicit investment rationale in terms of financial returns can be aligned and merged to the fundamental goal of the NEB, which is to induce positive social impacts and create social value.[43]

There is indeed a significant **overlapping and alignment** between the NEB core values and established practice of ESG investing, although ESG is focussed on sustainability (and governance, to a lesser extent) and is continuously moving towards covering social aspects, but still misses aesthetics. The following table maps how the NEB core values and working principles link to the ESG factors.

[36] For an overview of definitions, see https://assets.kpmg.com/content/dam/kpmg/xx/pdf/2017/11/impacting-investment-lexicon.pdf

[37] The concept of "triple-bottom-line" is also used in this context, see for example https://www.eib.org/en/stories/triple-bottom-line-environment

[38] For an overview on impact investing, see: IFC, Creating Impact - The Promise of Impact Investing, 2019 and https://www.impactprinciples.org/

[39] PWC, Emerging Trends in Real Estate – Europe – In the eye of the storm, 2023. Available at: https://www.pwc.com/gx/en/asset-management/emerging-trends-real-estate/assets/Emerging%20Trends%20in%20Real%20Estate%20Europe%202023%20Report.pdf

[40] UNEP FI, Positive Impact Real Estate Investment Framework, 2018. Available at: https://www.unepfi.org/wordpress/wp-content/uploads/2018/11/Positive-Impact-Initiative_Real-Estate-Investment-Framework_Nov-2018.pdf

[41] See https://finance.ec.europa.eu/sustainable-finance/overview-sustainable-finance_en. The main instruments are: 1) Corporate disclosure of climate-related information; 2) EU labels for benchmarks (climate, ESG) and benchmarks' ESG disclosures; 3) Sustainability-related disclosure in the financial services sector; 4) EU taxonomy for sustainable activities; 5) European green bond standard; 6) Recommendation on Transition finance; 7) International engagement including in the International Platform on Sustainable Finance.

[42] See https://ec.europa.eu/sustainable-finance-taxonomy/

[43] See NEB Compass: "[NEB] aims at transforming different sectors of economy, especially the built environment, making them contribute to our climate goals and to an improvement of the quality of life of all citizens."

| NEB values and principles | Link to ESG factors (Environmental \| Social \| Governance) | |
|---|---|---|
| **Beautiful** | ■ | This NEB core value does not have a direct correspondence in ESG frameworks.<br>There is indirectly a link to the Social factor, as the NEB value "Beautiful" addresses people experiences and the value that people gain from beauty. Moreover, it has a Governance dimension related to the way decisions with aesthetic implications are made.<br>Finally, aesthetics in the meaning of cultural value is linked to the Environmental factor, as the assessment of the cultural dimension is typically part of the environmental assessment of projects and could be relevant to some extent in this context. |
| **Sustainable** | ■■■ | This NEB core value corresponds to the ESG factor Environmental.<br>The understanding of "Environment" under ESG typically covers a broad range of sustainability issues, well beyond the original term in a strict sense. In particular, ESG's Environment covers also climate change mitigation and adaptation.<br>Moreover, sustainability in the broad meaning adopted by NEB can also address topics that are covered in ESG under Social. |
| **Together** | ■■ | This NEB core value corresponds to the ESG factor Social.<br>The alignment with NEB is in general strong (accessibility, inclusion and diversity, community development, well-being of occupants and community in general, etc.)<br>Moreover, this NEB value is also related to the ESG Governance factor, for example in terms of protecting the rights of all groups and setting up the necessary governance structures to this aim. |
| **Working Principles** | ■■ | The NEB working principles correspond to the ESG factors Social and Governance.<br>Through the participatory approach, NEB promotes community and stakeholder engagement, in line with the ESG Social factor. The highest ambition of the participatory approach (self-govern) links to the ESG Governance factor.<br>Similarly, the multi-level engagement supported by NEB links to the ESG factor Governance, as it calls for governance models that are based on formal and informal cooperation, horizontal and vertical networks, and cross-sectoral action. |
| | ■ = weaker link, ■■ = medium link, ■■■ = stronger link | |

A fundamental aspect of Sustainable finance is the **quantification of socio-economic impacts**, both ex-ante, in order to assess the characteristics of investment alternatives, and ex-post, in order to monitor the actual effectiveness of the investment. In general, the higher the ambition, the larger the need to measure and communicate to shareholders the impacts that the investment has achieved.[44]

From a NEB perspective, the ability to quantify and measure the expected impacts can be a key argument for investors willing to invest in NEB-aligned projects and integrate them into their existing goals and reporting frameworks. The strong focus of NEB on impacts which are not easily quantifiable (for example, aesthetic quality), can however undermine this approach. The fundamental aspect of outputs, outcomes and impacts is addressed in more detail in Ch. 5.

Sustainable finance – Many names for one concept

There is a significant lack of standardisation about **terminology** related to sustainable finance.

Concerns on the wider impacts of investments (mainly social impacts) date back to the 1950s or even earlier. Sustainable finance became mainstream in the **1990s**, under different denominations.[45] The term "**Sustainable Finance**" gradually evolved during

[44] According to IFC, "Impact investing is an approach that aims to contribute to the achievement of measured positive social and environmental impacts. It has emerged as a significant opportunity to mobilise capital into investments that target measurable positive social, economic, or environmental impact alongside financial returns. A growing number of investors are incorporating impact investments into their portfolios.", see https://www.ifc.org/en/our-impact/impact-investing-at-ifc

[45] For example, the "Domini 400 Social Index" was launched in 1990, see https://www.msci.com/eqb/methodology/meth_docs/MSCI_KLD_400_Social_Index_Methodology_Nov2021.pdf

the **2000s** in line with the diffusion of the "**ESG**" (Environmental, Social, and Corporate governance) concept[46], also driven by the introduction of the UN Millennium Development Goals (MDGs) in 2000 and then the UN Sustainable Development Goals (SDGs) in 2015.

In general, while the term "**sustainable finance**" is very broad, it tends to be associated with the policy and regulatory side. From a corporate/investor perspective, the term "**ESG investing**" (and related ones, like "ESG reporting", "ESG benchmark", etc.) are more commonly used as they put a strong emphasis on the (corporate) governance dimension.[47] In some cases, the term ESG has been explicitly enlarged to cover and give visibility to additional dimensions.[48]

Therefore, the term "**ESG investor**" is typically used to refer to investors who screen ESG dimensions of the entities behind their investments, which are in turn denoted as "ESG investments". However, the terms "ESG" and "sustainable" are nowadays **interchangeable**. In fact, according to EC, "*sustainable finance refers to the process of taking environmental, social and governance (ESG) considerations into account when making investment decisions in the financial sector*".[49] Similarly, the EIB states "*Sustainable finance is about including environmental, social and governance considerations in investment decisions.*"[50]

From an investor perspective, the term "**socially responsible investment**" (SRI) is also often used. However, this term tends to be associated with positive social impacts/social change (including those related to environment, climate etc.) beyond financial return, sometimes more explicitly indicated as "impact investment".[51]

In more recent times and especially after the adoption of the Paris Agreement in 2015, the term "sustainable finance" has expanded to include, with high relevance, the **climate** dimension. Therefore, the term covers nowadays a broad range of investment activities and goals. It encompasses more specific and sectoral terms like "climate finance", "green/environmental finance", "socially responsible finance", etc.[52]

[46] The term "ESG" was first used in 2004 in the UN Global Compact Initiative's report "Who Cares Wins", see https://www.unepfi.org/fileadmin/events/2004/stocks/who_cares_wins_global_compact_2004.pdf

[47] For a discussion on the terms "sustainability" and "ESG", see for example https://www.businessgo.hsbc.com/en/article/demystifying-sustainability-and-esg

[48] For example, the term "ESG+R", with "R" referring to "resilience", is used by JP Morgan, see https://www.jpmorgan.com/investment-banking/esg-at-j-p-morgan and https://www.weforum.org/agenda/2021/06/esg-resilience-investment-environment-social-governance/

[49] See https://finance.ec.europa.eu/sustainable-finance/overview-sustainable-finance_en

[50] See https://www.eib.org/en/stories/what-is-sustainable-finance

[51] See, for example: https://www.spglobal.com/en/research-insights/articles/what-is-the-difference-between-esg-investing-and-socially-responsible-investing

[52] For example, the term "green bond" is broadly used to refer to any fixed-income product for investors targeting ESG goals. Notably, the European Investment Bank (EIB) issued in 2007 the first green bond labelled however as "Climate Awareness Bond" (CAB), see https://www.eib.org/en/investor-relations/cab/index.htm. In 2018, the EIB then issued a new product labelled as "Sustainability Awareness Bond" (SAB, explicitly tackling "environmental sustainability - other than climate change mitigation - and social sustainability"), see https://www.eib.org/en/investor-relations/sab/index.htm.

### 2.1.4 The social and philanthropy ecosystems

The previous section touched upon the links between NEB and the overall "sustainability" and "responsibility" trends in the capital markets. It showed that NEB-aligned investments can become important components of sustainable finance strategies and contribute to investors' commitments and pledges. The way in which different types of public and private investors practically link to the NEB is further discussed below, see Sec. 2.2.

There is however a possibly very significant space for NEB projects arising in the **social and philanthropy ecosystems**. While both are eventually also linked to – and dependent on – the capital markets, they have peculiar characteristics which make them particularly receptive to NEB values and principles. Above all, these ecosystems are composed by actors with very different size, scope and goals but unified by the free commitment to serve the society at large, beyond profit considerations (as private investors) and without being statutorily bound to do so (as public investors).

Both social enterprises and philanthropic organisations can have very different legal definitions, also based on national law. **Social enterprises** are mainly characterised by three dimensions: they run commercial activities (entrepreneurial/economic dimension) in order to achieve a social or societal common good (social dimension) and have an organisation or ownership system that reflects their mission (inclusive governance-ownership dimension).[53] In practice, social enterprises are the entities which immediately put NEB core values and principles into practice. In the built environment, broadly based on the duality investor-developer, this would be close to a "developer" role.

**Philanthropies**, on the other hand, are more strategically acting entities, which focus on addressing the root causes of societal issues and creating lasting impact through activities such as grant making, research and policy advocacy. This refers in particular to *institutional* philanthropies (typically, foundations), as compared to individual ones. Institutional philanthropies can afford a structured approach to their activities, strategic grantmaking, diverse funding mechanisms, emphasis on collaboration, independence, long-term perspective, and a strong focus on evidence-based approaches, ensuring that initiatives are supported by rigorous research and evaluation.[54] From a NEB perspective, their role is therefore closer to "investor".

Accordingly, the social and philanthropic ecosystems are **closely interrelated**: **philanthropies** are key actors of the social economy in Europe as they necessarily rely on social enterprises, which provide the type of social services targeted by philanthropies and, at the same time, have operational goals and governance models which reflect the philanthropies' attitudes. In turn, **social enterprises**, while acting on commercial terms, are typically reliant on additional sources of funding, including, beyond grants from government and other institutions, those from philanthropies.

Therefore, while social enterprises can benefit from implementing NEB values and principles on a **small and pervasive scale**, philanthropies, which often carry out investments of significant size, can find in the NEB a framework supporting their efforts at a **strategic level**. This can happen along the different dimensions and sectors addressed by the NEB values and principles, and at different levels, from strategic and more abstract considerations to concrete and specific investment decisions.

With regard to the two fundamental **uses of funds** of philanthropic organisations, grants and investments, they can be both strictly related to NEB, although through different mechanisms:[55]

- **Grants** (and non-repayable financing in general) are the most direct channel through which philanthropies can freely allocate funds to specific projects and initiatives. While philanthropic organisations can typically rely on high level of know-how, specialisation and resulting deep understanding of needs and challenges in the targeted sectors and geographies, the alignment of NEB values and principles can offer additional incentives towards good practice, as well as visibility, benefits from integration in the NEB community, and so on.
- **Investments** (mainly from the organisation's endowment) do not aim solely to generate a financial return, but also – or exclusively – to generate a positive societal impact aligned with the organisation's missions and values and can therefore be

[53] COM(2011) 682 final, Social Business Initiative (SBI), https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52011DC0682.

[54] Philea, A Brief Glossary of Philanthropy Terms, 2024. Available at: https://philea.issuelab.org/resource/a-brief-glossary-of-philanthropy-terms.html.

[55] It is noted that this reflects – but it is not equivalent to – the two main *sources* of funds of philanthropies: donations and returns from investments. It is also noted that philanthropies still face significant barriers (for example, fragmentation of legislation and fundamental lack of a "philanthropic single market" in EU), which are however not addressed here.

seen as impact investments with particularly high level of ambition and commitment. [56] As further discussed in Ch. 5, there is a strong link between NEB and impact investing, so that philanthropies can sensibly link their high expectations from investing to NEB-aligned projects. It is also noted that philanthropies' investments are often related to the built environment (directly or through funds), for example in social housing, further strengthening the link and the affinity to NEB.[57]

Finally, it is worth mentioning that philanthropic organisations and social enterprises typically and intrinsically have **a very high level of commitment and highly innovative attitudes**, also as a result of the societal and environmental challenges they aim to tackle. This further suggests that they could find particular synergies with the NEB as a means to mainstream and scale up societal systemic change.

### 2.1.5 The enabling environment for NEB aligned investments

The uptake and success of the New European Bauhaus in the built environment will be fundamentally dependent on the ability to **attract funding and financing** for projects that implement the NEB core values and working principles. For the NEB to produce significant and lasting changes, the types of projects will necessarily have to range from large-sized, highly visible and highly individual projects, able to have a "lighthouse" effect and gain attention also from non-experts, to small, common and widespread interventions, ensuring a capillary dissemination of NEB principles across large parts of the urban fabric.

At the same time, there are **different ways and degrees** in which the "NEB alignment" can manifest, reflecting the NEB's distinct multidisciplinary and holistic approach. Paired with the intrinsic heterogeneity of the built environment and, therefore, the large variety of projects which can be inspired by NEB (in terms of segment, use, size, location, etc.), this complexity represents both an opportunity and a challenge to investors and all actors in the finance industry which can be interested in adhering to NEB core values and principles.

The **opportunities** are mainly linked to the very different entry points and paths through which investors can decide to implement the NEB core values and principles, in line with their preferences and goals. The **challenges** arise mainly from the ability to identify the unique features and capture the added value of NEB against existing trends and good practice in the relevant industries.

It follows that the redirection of financial flows towards NEB aligned projects acts along **two paths**:

- First, alignment to NEB can **attract investments ("pull")**, as NEB includes measures and features for which an **investment case** already exists or is developing (energy efficiency, circularity, sustainability in general, etc.). There are, moreover, large areas of social and environmental impact for which the investment case (for private investors) is still developing. These are nonetheless **desirable and beneficial**, both by public and non-profit investors mandated to induce positive socio-economic impacts, as well as by profit-oriented investors, for example on the grounds of reputational and other long-term gains, as discussed in Ch. 5.

- Second, public bodies and financial institutions are increasingly willing to allocate public funding and financing and create financial and regulatory incentives for **crowding in private investment towards NEB aligned projects ("push")**, as NEB bundles, supports and builds upon a broad range of environmental and social policy fields of utmost relevance for central and local governments (climate neutrality, resource efficiency, inclusion, social and spatial cohesion, equity, etc.). This corresponds to the intervention logic already successfully implemented by different **EU instruments**, although the NEB aims at applying such logic more widely and holistically in the built environment ecosystem.[58]

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[56] See, for example: Rockefeller Philanthropy Advisors, Impact Investing Handbook, 2022. Available at: https://www.rockpa.org/wp-content/uploads/2020/10/RPA-Impact-Investing-Handbook-1.pdf and Solutions for Impact Investors: From Strategy to Implementation, 2009. Available at: https://www.rockpa.org/wp-content/uploads/2016/02/MONO-SolutionForImpactInvestors2.pdf

[57] For a detailed analysis of philanthropies' investment activities, see: European Commission, Directorate-General for Economic and Financial Affairs, European Investment Bank, Venon, T., The philanthropic capital study – Final report, 2023. Available at: https://data.europa.eu/doi/10.2765/71537

[58] The most notable and sizeable example of an EU initiative mobilising private financing alongside public funding is InvestEU, which was created to boost the EU economy through strategic investments in the aftermath of the global financial crisis, see https://investeu.europa.eu/index_en. More in general, "blended finance" mechanisms and structures have been developed and applied to incentivise private investment in cases where

In both cases, however, the financing of NEB aligned projects relies on a series of **actions and prerequisites** – both on the side of the financial industry and that of the policy makers – which need to be developed and put in place to allow and facilitate the redirection of financial flows. These are briefly summarised in the table below.

| | Private sector | Public sector |
|---|---|---|
| **Understanding the benefits** | A clear understanding of **financial and non-financial benefits** is a key prerequisite for private investors to identify investment opportunities in NEB aligned projects. Clarity on the **mechanisms and channels** through which the benefits materialise is essential to deal with driving factors, obstacles, stakeholders and to assess risk. Beyond the purely **financial risk/return** characteristics, the understanding of the key characteristics of NEB aligned investments and the related **non-financial benefits (social, environmental, etc.)** is essential for the inclusion of NEB aligned projects in investment portfolios. | Like private investors, public investors and grant providers need to have a clear understanding of realistically **achievable benefits**. Moreover, they need to understand what actual **needs and gaps** they can address and how, especially where a business case for private investors is lacking.<br>Policy makers and regulators need to understand the benefits of NEB alignment to leverage on them when designing measures and incentives for the private sector. |
| **Understanding the challenges** | Reciprocally to the understanding of benefits, achieving **clarity on the challenges** related to investing in NEB aligned projects is essential. Understanding challenges is a key component in developing viable investment strategies and can directly influence risk levels. Moreover, investors need to develop **competencies** and have sufficient **capacities** and appropriate to deal with specific challenges. | Public sector investors need as well to understand the **challenges** related to investing in NEB aligned projects, especially in light of the high visibility, public scrutiny and political sensitivity they are exposed to.<br>Public funding providers, policy makers, regulators etc. need to understand the challenges in order to provide the right **supporting instruments and incentives**. |
| **Capturing the value** | Private investors need ways to capture the **added value** created from aligning projects to NEB. This can consist of straightforward **financial value**, corresponding for example to higher book values, lower projected operational costs, longer lifetime and resulting depreciation rates, etc. It can however also consist of – possibly, to the largest extent – **economic value** resulting from long-term socio-economic impacts. This requires appropriate frameworks, as applied for example in the context of "impact investment". | Public sector investors may be less compelled by the need to capture value. However, this varies largely depending on the nature of the public investor (e.g., public statutory body vs. independent corporate with public participation).<br>**Lawmakers, regulators** and other coordinating bodies and entities (including industry ones) are called to facilitate the capture of value by appropriate **rules and standards**. |
| **Removing barriers** | While private investors are mostly challenged by barriers, they can also contribute indirectly to their lowering. Investment decisions are also driven by investors' voluntary goals and commitments and, eventually, attitudes and convictions. By **favouring investment strategies that progressively address NEB** values and principles, investors create momentum and put | Most governments target actively the development of the real estate market in general, which is currently constrained in many member states.[59] In this context, NEB can play a strong role in supporting the **environmentally and socially sustainable development** of the sector. At the same time, the financing of NEB aligned projects can be constrained by specific barriers, similar for example to those faced by innovative sustainable |

returns are not competitive or (perceived) risk levels are too high (or other mismatches occur between investors' expectations and investment characteristics), see for example https://www.eib.org/en/products/mandates-partnerships/eu-blending-facilities/index.

[59] For example, the construction costs for new residential buildings have increased on average by 63% in the EU between 2000 and 2020, see https://ec.europa.eu/eurostat/cache/htmlpub/key-figures-on-european-business-2022/construction.html. House prices have increased on average by 47% in the EU between 2010 and 2022, see https://ec.europa.eu/eurostat/web/interactive-publications/housing-2023.

| | | |
|---|---|---|
| | pressure on the market to lower the barriers towards such investments.<br>Moreover, industry associations can significantly contribute with their expertise and influence to remove barriers, although they need to have full clarity about the benefits that this can bring to the industry. | and circular buildings (lack of understanding on benefits, lack of standards, lack of track record and reliable valuations, etc.). It is therefore pivotal that **governmental policies and stimuli** aim at removing barriers to a sustainable, equitable and inclusive development of the built environment. |
| **Creating opportunities** | A key enabling element for private investors to raise their ambitions and take over new approaches – even if there is a clear positive outlook in the long term – is the availability of a **reliable track record of comparable investments**. Such gap, typical of any new approach, technology, etc., is typically filled by **public intervention**, which helps reduce the risk of early adopters and accelerate the market development. In the case of NEB, the public support is particularly needed for aspects which may **not offer an immediate business case**, like inclusion. At the same time, other aspects of NEB, like the focus on overall quality (i.e., long term value creation and retention) and aesthetic value (with its immediate repercussions on visibility and attractivity) offer immediate and relatively **well-established entry points** for private investors. | **Public entities** are pivotal in creating investment opportunities and supporting the uptake of NEB values and principles at its early stages. They can directly foster alignment to NEB in public investments under their control. Moreover, they can also **push NEB alignment in private investment** with public participation, for example by setting NEB core values and principles as **eligibility conditions** for the public component of the financing package. However, this may not go without **additional costs**, especially in the early stages, and needs to be put in practice cautiously, without overwhelming the capacities of the market. |
| **Facilitating flow of information** | A key element for the efficient functioning of all markets is transparency and the **availability of reliable information**. This can represent a significant challenge to private investments in NEB aligned projects, because of the many dimensions addressed and because even the best-established aspects (like environmental sustainability) are not yet unequivocally standardised. Private investors are therefore called to **collect and disseminate** information on their projects, particate actively on knowledge sharing platforms and contribute, individually and through industry associations, to the adoption of appropriate **measurement and reporting tools** and frameworks. | Public sector investors, by being early adopters and mobilising large amount of capitals, can be **role models** when it comes to collect and share information on good practice, costs benchmarking, impacts measurements etc. of NEB aligned projects.<br>Lawmakers and regulators can significantly facilitate the flow of information by establishing reliable **sharing mechanisms and channels**. Moreover, they can contribute to the definition and establishment of **standards and frameworks**. This has, however, to happen in close interaction with the industry and all the stakeholders. |

The previous considerations show that the **private and public sectors** do not act independently but are, at a systemic level, intrinsically **interlinked and interdependent**. Moreover, at the level of individual investments with social and environmental character, the private and public sector often join efforts and rely on each other for the achievement of the respective goals. As mentioned above, the interaction between the two sectors can take different forms, reflecting a whole spectrum of risk allocation between the public and private sectors, such as for example:

- **public grants and other forms of public financial support** to the private sector (e.g., guarantees, financing subsidies, etc.);
- **non-financial public support**, e.g., the free use of public assets, resources and services by the private sector and the provision to the private entity of technical assistance and other opportunities under public control;
- **public service contracts**, through which the public authority entrusts the private operator with the provision of social and economic services of general interests against financial compensation linked to performance;

- **investment oriented Public-Private Partnerships (PPP)**, which may take various forms of risk sharing, including where the public and private entities agree a contract through which they create an entity (typically through a "special purpose vehicle") to carry out exclusively a specific task (e.g., constructing and operating a building and providing a related service).

In the **PPP model**, the private entity assumes responsibility for the construction and efficient provision of the service requested by the public sector on the basis of an availability payment, service payments or the right to collect risk-based user charges. The public entity assumes responsibility for ensuring that the cooperation is oriented towards the specific public policy goals and the common good in general. Therefore, while the PPP is more a **procurement approach** or **delivery mechanism** than an investment strategy, it can offer advantages to both sides.

With specific regard to NEB, PPP intrinsically tends to favour a **life-cycle approach** to investment which optimises investment across the life of the PPP contract, rather than focusing on short term returns. This would immediately help bridge the gap between the potential higher costs of NEB aligned projects in the short term and the long-term materialisation of the benefits. It may also encourage private sector innovation which could help deliver NEB alignment in ways which had not been previously considered by the public sector. By covering long-term maintenance and operation as well as construction, it can also assure NEB benefits through the maintenance and operation phase of a project, as well as in its design and construction.

At the same time, PPP models can present many **challenges**. For example, they are reliant on contractual agreements which specify **up-front** and very **precisely and objectively** the nature, quality and level of the service provided or activities and works carried out. With regard to NEB, some of the elements of NEB alignment, such as "beauty", may be difficult to specify up front in contractual terms, and the rigidity of the contract could make it difficult to adjust during implementation or operation, for example to take advantage of new technologies or approaches which were not foreseen at the time of the PPP contract.

## 2.2 Built environment investors

### 2.2.1 Overview

The built environment is the target of **enormous volumes of investments**, both in terms of direct and indirect investments in marketable assets (and financial products derived from them) as well as in public assets that remain in the ownership of the public authorities or other public bodies.[60]

NEB values and principles can find sensible application in practically all types of investments and therefore be of interest for very **different categories of asset providers**, although with different focuses, preferences and ambitions.

This guide does not refer to conventional investor classifications from a financial perspective. It rather addresses **main typologies** of actors at a very aggregated level who, from different angles and with different goals, can be best placed to put the NEB into practice by **initiating and driving the implementation of projects** aligned to NEB.

In the following sections six general types of investors are identified with regard to their investment strategies and benefits from investing in NEB-aligned projects. The list is **not exhaustive** and many actors in the built environment may combine characteristics and behaviours **across different types**. Nonetheless, this categorisation can help map the broad and varied range of project owners against the NEB.

| | Nature | Sector | Buildings | Open Space | Neighbourhood | Short description |
|---|---|---|---|---|---|---|
| **Small real estate investors** | **For profit** | **Private** | ■ | | | Smaller scale entities developing real estate objects for their own benefit (direct use), or for commercial exploitation. |
| **Large real estate investors** | | | ■ | ■ | ■ | Larger scale commercial entities participating directly or indirectly in the development or redevelopment of large assets (large individual buildings, complexes, entire neighbourhoods). |
| **Municipalities and authorities** | **Not-for-profit** | **Public** | ■ | ■ | ■ | Public entities having the statutory responsibility to provide different public buildings and all public open spaces, to steer the development of neighbourhoods. |
| **Public enterprise and other institutions** | | | ■ | ■ | | Enterprises owned or at least controlled by a public entity as well as public institutions responsible for activities and services of general economic or social interest, including research. |
| **Third-sector investor** | | **Third sector** | ■ | | | Entities belonging to the nonprofit "third sector", in particular social enterprises providing social services, but also cooperatives and similar initiatives. |
| **Philanthropies and donors** | | | ■ | ■ | | Philanthropies, foundations, large individual donors, charities, etc. which fund and carry out, directly or indirectly, activities for the public benefit. |

[60] The Gross Value Added (GVA) of the construction sector in the EU in 2023 was approx. 5.7% of total GVA, corresponding to approx. EUR 1 trillion, see Eurostat, https://doi.org/10.2908/NAMA_10_AN6. The investment volume in the real estate market in Europe in 2023 was approx. EUR 150 billion (down from pre-crisis approx. EUR 350 billion in 2021), see CBRE Research, Market Outlook Intelligent Investment, EUROPE REAL ESTATE, 2024. Available at: https://mediaassets.cbre.com/-/media/project/cbre/shared-site/insights/books/european-outlook-report-2024/european-real-estate-market-outlook-2024.pdf

### 2.2.2 Small real estate investors

| | **Small real estate investors** |
|---|---|
| **Description of investor** | It refers to any smaller scale entity who is willing to develop a real estate object for its own benefit (direct use), or on commercial terms.[61]<br>These can be:<br>- individuals responsible for their own homes, individually or collectively within a housing complex or similar;<br>- small real estate developing companies creating buildings and small complexes to be sold or rented out;<br>- SMEs and local business creating assets for direct use (offices, premises, retail spaces, production sites, etc.). |
| **Project examples** | - residential buildings (individual or small complexes)<br>- small/medium sized commercial and industrial buildings |
| **Investment strategy** | - Small investors are generally driven by **own beliefs, economic viability/profit, reputation and regulatory compliance**.<br>- They can be constrained by **tight budgets** and need therefore to make careful investment decisions.<br>- However, they often have **large flexibility and discretion** about design and can therefore shape their assets in line with their preferences and beliefs but also considering the specific local context.<br>- Small investors can have both short time horizons (e.g., "build and sell") or long ones (e.g., when building for own use).<br>- Due to the **proximity to communities** and their implicit **local knowledge**, both in terms of challenges and opportunities, small investors can often provide quicker and targeted benefits at the local scale. At the same time, they can be more easily and directly exposed to criticism or even opposition by the communities.<br>- Small investors typically rely on **own resources and bank debt** to finance their investments, often from local banks and on the basis of established, long-lasting ties. In any case, they have very large discretion in the use of capital.<br>- Finally, individuals and SMEs can very often benefit from **public financial support** for investments, especially if linked to sustainability. |
| **Benefits from applying NEB** | - Fulfilment of investor's beliefs, ambitions, voluntary social and environmental commitments<br>- Acceptance of project by the responsible authorities (e.g., building permitting)<br>- Reputation, acceptance and strengthening of the bonds with the community<br>- Visibility beyond the local context<br>- For small investors: distinctiveness and attractiveness for buyers (however strongly dependent on local real estate market conditions)<br>- For SMEs: attractiveness for local workforce<br>- With regard to sustainability: access to grants and other benefits |

[61] Whilst strict definitions of "small" are not so relevant here, it is noted that for EU purposes, small businesses have fewer than 50 staff and a turnover or balance sheet total up to EUR 10m, see https://eur-lex.europa.eu/EN/legal-content/glossary/small-and-medium-sized-enterprises.html

### 2.2.3 Large real estate investors

| | Large real estate investors |
|---|---|
| **Description of investor** | It refers to any larger scale commercial entity participating directly or indirectly in the development or redevelopment of large assets (large individual buildings, complexes, entire neighbourhoods).<br>Large real estate investors can be:<br>- real estate asset managers, managing portfolios of projects, often acting on mandate for groups of private or institutional investors;<br>- large real estate developers creating and marketing large projects. |
| **Project examples** | - residential buildings (large blocks and complexes)<br>- medium/large sized commercial and industrial buildings and districts<br>- neighbourhoods |
| **Investment strategy** | - Large investors are fundamentally bound to **strict profit and growth targets**, which immediately drive any investment decision. This significantly limits in general the acceptance for any additional efforts and costs going beyond market standards.<br>- Moreover, large investors typically operate within **complex financing structures** with many financiers involved. While real estate investments are typically highly leveraged, in which the debt providers are not directly involved in shaping the projects, the flexibility in the decision making can still be constrained.<br>- Moreover, large investors operate in **different areas and regions**, although typically focussing on assets with homogeneous characteristics. It follows that they may miss local knowledge. At the same time, they rely on large experience of similar projects and therefore rely on very good expertise and understanding of challenges and opportunities.<br>- The **time horizon** of large investors can be **very different**. While real estate is generally considered as a long-term (indirect) investment, direct investors and developers often have a short-term horizon. Therefore, the affinity to NEB, which intrinsically has a long-term perspective, can vary significantly.<br>- Depending on the individual risk/return strategy and the resulting business models and market segments targeted, large investors can have **very different attitudes**. At one extreme, investors can focus exclusively on financial return in a very narrow and traditional fashion. On the other extreme, investors may be fully committed to align their business to environmental and societal needs. In between, there is a continuous spectrum of consciousness and commitments and, therefore, of ability and willingness to engage with projects aligned to NEB.<br>- Finally, large investors, can have a **strong influence on decisions** at the level of urban planning and, in general, political decision-making related to the built environment. Therefore, they also have the ability to positively influence the promotion of NEB values and principles. |
| **Benefits from applying NEB** | - Following NEB values and principles can help give coherence and back investors' ambitions and efforts in terms of aesthetic quality and sustainability.<br>- Adhering to NEB can offer a framework and provide a further layer of credibility in terms of social commitments and engagement with communities.<br>- Participating actively in the NEB initiative can provide visibility and recognition by local and national authorities, as well as facilitate the creation of new business relationships and the identification of business opportunities. |

### 2.2.4 Municipalities and authorities

| | **Authority** |
|---|---|
| **Description of investor** | It refers to any **public body** relying on public budget which has the **statutory responsibility** to provide different public buildings, as well as all public open spaces. Authorities, at different levels and extents, are also responsible for planning, permitting and also regulation of the built environment, but they are considered here in their function **as investors/project owners**, i.e., providers of assets.<br>Examples of authorities are:<br>- municipalities;<br>- local and regional governments;<br>- central governments. |
| **Project examples** | - schools<br>- administration buildings<br>- theatres, museums, libraries, cultural/social centres<br>- all types of public open spaces, including streets<br>- neighbourhoods |
| **Investment strategy** | - Municipalities and other authorities are fundamentally and directly responsible for the provision of **public buildings with high visibility and social value**.<br>- Moreover, municipalities are also directly responsible for **public open spaces** as well as for the fundamental conception of **neighbourhoods and cities**, therefore being in the best position to implement NEB and encourage the private sector to follow.<br>- Beyond their formal responsibilities, authorities have an **implicit mandate** to develop assets of high quality over a **long-time horizon** and shape the built environment responding to the current and future needs of the communities in terms of functionality and aesthetic value.<br>- However, municipalities must also align to other interests, in particular those resulting from the **private economy** (local commercial activities, tourism, etc.).<br>- At the same time, **public budgets** are often constrained, therefore imposing high **cost effectiveness** and shifting the focus on compliance with legal requirements more than fulfilment of high ambitions.<br>- Finally, decision making is strongly interlinked with **political interests** and therefore often **biased** by political considerations, short-termism, "ribbon cutting" (i.e., focus on initiation of projects instead of completion), etc. |
| **Benefits from applying NEB** | - NEB provides a natural framework for municipalities and authorities in terms of linking aesthetical/cultural value with sustainability requirements and strong involvement of citizens.<br>- Following the NEB core values and principles can guide the authorities to implement systematically and coherently best practice in the different fields: aesthetic quality (especially with link to heritage), sustainability (beyond minimal legal requirements) and social/procedural innovation.<br>- Aligning to NEB can also guide the authorities to act holistically across all core values, overcoming siloed thinking which often characterises public administrations.<br>- NEB also offers high opportunities for networking and access to channels that can lead to cooperations, projects, funding and other opportunities, at national and EU level.<br>- Increased ownership by the local community and citizens, which helps to strengthen trust between civil society and local/regional governments. |

### 2.2.5 Public enterprises and institutions

| | **Public enterprise / Institution** |
|---|---|
| **Description of investor** | It refers to enterprises owned or at least controlled by a public entity (municipality, state, etc.) as well as any public institutions which are entrusted with activities and services of general economic or social interest. Their activities include or require the provision of buildings and other interventions in the built environment.<br>For example:<br>- municipal enterprises<br>- universities<br>- research centres<br>- institutions |
| **Project examples** | - social/affordable housing<br>- hospitals<br>- university campuses<br>- research centres<br>- public transport stations |
| **Investment strategy** | - Public enterprises and institutions are entrusted or otherwise responsible for **providing services and carry out all the investments which are needed to that aim**.<br>- When investing, they therefore aim at making the **best possible use of their resources by maximising amount and quality** of service provision for a **given budget**.<br>- Despite the imperative attention towards cost effectiveness, public enterprises and institutions have a strong **responsibility for high-quality and long-lasting interventions** in the built environment, in line with the NEB core values and principles.<br>- In the case of projects with public character and to be directly used and fruited by citizens, the same considerations apply as in the case of **authorities** in terms of ambitions on aesthetics, sustainability, inclusion and interaction with affected communities.<br>- For projects which are not directly or only partially accessible to the public (e.g., hospitals, research centres, administration buildings, etc.), the public nature of the institution and the fact that public money is involved puts the projects under public scrutiny. This raises **expectations on the quality** of the projects and their **provision of benefits** to the communities in which they are located.<br>- Finally, such projects can **suffer under political influence and resulting biases** due to the public control, although this is strongly dependent on the specific governance mechanism in place.<br>- Public enterprises and institutions, by being dedicated to the provision of specific services or execution of specific tasks of public interest, often make use of **Public-Private-Partnerships (PPP)** arrangements. The aim is to leverage on private sector expertise and financial capacity as well as to allocate risk optimally among the parties.[62] |
| **Benefits from applying NEB** | - The strong public and social character of most projects of public enterprises can immediately benefit from the NEB values and principles, especially in terms of higher aesthetic quality and involvement with communities.<br>- As public enterprises are often strictly focussed on cost-effectiveness and functionality, aligning to NEB can offer them new angles towards considering further dimensions and qualities in their projects.<br>- The strong social orientation and holistic approach of NEB can also help public enterprises follow as far as possible non-technical paths and include new, even unconventional elements in their projects.<br>- As mentioned in Sec. 2.1.5, PPP structures and similar long-term contractual agreements could be considered for NEB projects, which are strongly reliant on an integrated life-cycle treatment in order to capture future benefits. Private partners can also bring innovation, for example through the design or use of materials, which could increase NEB alignment in ways not previously considered. PPP structures are |

[62] A further key potential benefit is alleviating the burden on public balance sheets. The allocation of asset and liabilities to the private partner's balance sheet is however conditional upon a sufficiently large transfer of risk and control from the public to the private side.

effectively applied to projects in the built environment, although more often in non-EU jurisdictions.[63] The drawbacks are mainly, from a technical point of view, the need to specify very precisely the NEB "requirements" (including their monitoring etc.) and, from the point of view of governance and acceptance, the prominent role given to the private partner in matters which have a strong social – and therefore intrinsically "public" – character.

- Finally, NEB can provide to public enterprises and institutions an overall framework of ambitions and recognition which is consistent with their high visibility and institutional role in the society.

[63] See, for example: Friedman, Stephen B., editor. Successful Public/Private Partnerships: From Principles to Practices. Washington, DC: Urban Land Institute, 2016. Available at: https://uli.org/wp-content/uploads/ULI-Documents/Successful-Public-Private-Partnerships.pdf.

### 2.2.6 "Third sector" investors

| | **"Third sector" investor** |
|---|---|
| **Description of investor** | It refers to any entity belonging to the nonprofit "third sector", in particular social enterprises. Often, they are associated with the provision of social services. The size and reach of these entities can vary largely, from very small local cooperatives to very large country-wide welfare associations.<br>These can be, among others:<br>- social enterprises, public benefit companies;<br>- community organisations (e.g., entrusted with the management of public areas or buildings);<br>- cooperatives and associations (responsible for their own premises).<br>Donors are not included in this category but addressed separately below. |
| **Project examples** | - cooperative residential buildings<br>- social housing<br>- non-profit welfare care centres<br>- social enterprises own facilities<br>- self-organised cultural/social/sport centres<br>- community shops<br>- collaborative neighbourhood facilities |
| **Investor strategy** | - Social enterprises fundamentally operate under **market conditions**, which is a fundamental difference compared to philanthropies. They are therefore compelled to be **financially sustainable**, while they must take a **significant level of economic and entrepreneurial risk**.<br>- However, unlike conventional enterprises, social enterprises rely on a mix of resources: **donations, grants and also voluntary work**, in addition to formal incomes, which are either generated by the sale of goods and services to private clients or by the provision of general interest services on contractual bases with public authorities.<br>- For these reasons, third sector investors must strike **a balance between a conservative, low-risk approach**, as they do not strive for financial returns but for sustainability, continuity and quality of goods or service provided; **and a business-oriented**, risk-seeking and even (social) innovation-driven approach in order to compete and be successful in the market.<br>- Similarly, the time horizon can vary based on the specific field and business model. While third-sector investors have a fundamentally **long time-horizon** in line with their social commitments, they must also be able to **react quickly** to changing needs in the society and even to very short-term emergencies.<br>- Due to the two-sided nature of their business – operating on markets while driving positive social change – third sector investors can benefit from **visibility** in terms of market positioning and recognisable social impact.<br>- Finally, social enterprises are often bottom-up, resulting from the formalisation of civic engagement. Therefore, their **decision making is typically highly participatory and democratic**. This can however not apply to larger, established entities, which may apply business models which are more corporate-oriented.<br>- For these reasons, from a NEB perspective, third sector investors, by being committed to driving positive social change, are **intrinsically well aligned to NEB** values. |
| **Benefits from applying NEB** | - Third-sector investors are intrinsically called to invest in high quality, durable assets and give outmost relevance to inclusion and participatory approaches in project preparation and use.<br>- Following best practice in line with the NEB values and principles can help maximise the impacts of their projects on communities, in terms of quality, reach and permanence.<br>- Moreover, third sector investors often operate in fields linked to education, reintegration etc., which has particular affinity to the NEB working principles and the overall NEB approach.<br>- Aligning to NEB values and principles can provide high opportunities in terms of visibility and networking. It can as well underpin the commitment of the investors, supporting their credibility and also attractiveness to donors and other providers of capital. |

### 2.2.7 Philanthropies and donors

| | **Philanthropies and donors** |
|---|---|
| **Description of investor** | It refers to philanthropies, foundations, large individual donors, charities, etc. which fund and carry out, directly or indirectly, activities for the public benefit. These can consist of providing direct aid to people in need, in order to alleviate or resolve specific situations of distress (e.g., homelessness). Or it can relate to aspects that improve the quality of life but are not urgently needed to satisfy basic needs (e.g., cultural centres). |
| **Project examples** | - social housing<br>- cultural centres, museums<br>- healthcare buildings<br>- educational centres<br>- parks, recreational and social public areas |
| **Investor strategy** | - Philanthropies and donors are fundamentally **committed towards values and targets of social relevance**. Their investment decisions are therefore driven by the aim to induce permanent positive impacts and long-lasting system change.<br>- Accordingly, their strategies are naturally oriented towards **filling investment gaps**, especially where the public sector fails to intervene because of lack of resources or insufficient reach.<br>- They are highly **independent in their decision making**. This applies both to the choice of investments and, with particular relevance for NEB, to the modalities of the investment. In practice, they can set ambitions at levels beyond those justified by financial and budgetary considerations.<br>- Nonetheless, they can be constrained in their decision making from the **lack of investment opportunities and appropriate pipelines**.<br>- In line with their long-term impact objectives, philanthropies have a **long-term investment horizon**. This translates also in a long-term commitment to **follow and monitor the impacts** of their projects.<br>- With regard to risk, philanthropies are **very risk adverse** when it comes to financial investments (i.e., in terms of financial management of endowments etc.). When it comes however to the use of funds for investing in physical projects, the financial risk of the project is of secondary relevance, as there is no return target.<br>- However, **non-financial risks can be very important** decision drivers, as far as they can for example **compromise the impacts** of the projects or lead to a **reputational damage**.<br>- Philanthropies can resort to **Public-Private Partnerships** (PPP), also called "Public-Private-Philanthropic Partnerships" (PPPP or 4P) as useful models to leverage on the strengths of each of the partners involved in providing the service. However, such partnerships can be complex and require considerable effort and commitment (both at initiation and during implementation) to deliver successful impact. Moreover, they are used mainly for the delivery of well-defined and measurable technical solutions (e.g, in sectors like energy, infrastructure, health and education, etc. ).[64]<br>- Finally, philanthropies and donors can rely on a significant amount of **know-how and expertise**, often specific to **particular geographies or sectors**. This puts them in the position to make informed investment decisions and implement projects that are particularly focussed and responsive to the specific needs of communities. |
| **Benefits from applying NEB** | - The goals and guiding ideas of philanthropies and donors are very consistent and congruous with the NEB core values and principles, starting from the fundamental aim to induce long-lasting societal changes.<br>- The NEB core values can provide these investors with a comprehensive guiding framework for their activities. Similarly, the NEB working principles can serve as a golden thread for ambitious processes and comprehensive interaction with communities. |

[64] See, for example: The Partnering Initiative, Systems Change Activation: Empowering philanthropy's catalytic role in transformational PPPPs, 2023. Available at: https://thepartneringinitiative.org/knowledge-centre/research-and-policy/systems-change-activation/ and: World Economic Forum, McKinsey, The role of public-private-philanthropic partnerships in driving climate and nature transitions, 2023. Available at: https://www.mckinsey.com/capabilities/sustainability/our-insights/the-role-of-public-private-philanthropic-partnerships-in-driving-climate-and-nature-transitions

- Aligning to NEB and participating in NEB initiatives can be a key element in providing high visibility and trustworthiness to projects, with respect to political decision makers, authorities and the communities.
- Active participation in the NEB movement can offer wide opportunities for networking and for the identification of synergies with other actors. In general, it can contribute to establish and develop a climate favourable to philanthropic activities and other charitable activities.

## 2.3 Project types

### 2.3.1 Overview

Following the approach used in the previous section for mapping the "investor types", this guide makes use of an aggregated and schematic categorisation of "**project types**". Potential built environment projects are grouped in categories which have **common characteristics** from the perspective of implementing NEB values and principles. These project types have an **exemplary and inspirational character** aiming to make the application of NEB more concrete and tangible.

While any project can benefit from being informed by the NEB principles, some project types are naturally **more suited** to take advantage from a NEB approach, reach higher ambitions and eventually provide accordingly large benefits. The selected project types cover **all three built environment sectors** (buildings, open spaces and neighbourhoods) and are summarised in the below table, also with regard to their affinity to NEB. They are then analytically developed in the following sections with regard to their potential to align to NEB values and principles.

| Project types | | | Affinity to NEB * |
|---|---|---|---|
| **Buildings** | Residential buildings | Collective housing | ■■ |
| | | Single-household private housing | ■ |
| | | Affordable and social housing | ■■■ |
| | | Temporary residential structures | ■■ |
| | Social, cultural and service buildings | Education buildings | ■■ |
| | | Healthcare buildings | ■■ |
| | | Cultural buildings | ■■■ |
| | | Social service buildings | ■■■ |
| | | Other buildings | ■■ |
| | Commercial buildings | Office buildings | ■■ |
| | | Other buildings | ■ |
| **Open spaces** | Streets | | ■■■ |
| | Squares, parks and other types of open spaces | | ■■■ |
| **Neighbourhoods** | New neighbourhood | | ■■■ |
| | Existing neighbourhood | | ■■■ |

* This indicates the extent to which, in general terms, the different project types are suited to implement NEB values and principles and benefit from them: ■ = lower, ■■ = medium, ■■■ = higher
See the following sections for a detailed description.

### 2.3.2 Buildings

#### Residential buildings

The following table summarises horizontal considerations on residential buildings and how they link to the NEB core values and working principles.

| Residential buildings | Beautiful | Sustainable | Together |
|---|---|---|---|
| NEB Core Values | - Residential buildings, by satisfying the fundamental need of individuals for a place in which to stay and live, should be associated to the **specific aesthetic demands** of their occupants and users.<br>- At the same time, residential buildings collectively shape the **image of the place** in which people live.<br>- The **enormous demand** of residential buildings poses challenges to the provision of high-quality residential buildings.<br>- In parallel, in Europe there is a general need to upgrade and **refurbish the housing stock**. In the case of shrinking cities, villages or regions, there is also a need to **repurpose vacant properties**. There is a high potential of aligning to NEB during both reconversions and refurbishments. | - Residential buildings, by their sheer predominance in the built environment and the related **enormous quantity of resources** consumed both during their construction and operation are key to the achievement of sustainability goals. The sustainability of residential buildings is key in minimising **operational costs** in the short and long term.<br>- In particular, climate neutrality goals of cities are strongly reliant on a systematic **decarbonisation** of the existing and future stock of residential buildings.<br>- In Europe, the existing housing stock is to an important extent energy inefficient, which often also leads to **energy poverty** and unhealthy indoor environments. Its upgrade offers opportunities for high quality interventions that should address inclusiveness and aesthetics.<br>- Residential buildings often include **outdoor spaces**, such as courtyards, roof gardens, verandas, balconies etc. Such spaces have a great potential to integrate greenery and support biodiversity. | - By their very nature, most residential buildings bring people together. Going **beyond physical proximity** and creating social proximity, relationships, networks, and eventually communities, remains however a challenge.<br>- This is even more relevant when it comes to bringing together people with **diverse backgrounds** and needs, such as for example in the case of social housing.<br>- Although the inclusiveness of buildings and their linkages to the surrounding community are strongly dependent on the **individual attitudes and preferences** of the people living in the buildings or otherwise using them, high-quality building design can increase social interactions.<br>- Ensuring **accessibility for all** is fundamental for residential buildings, addressing the needs of people with disabilities or older people (allowing for example ageing-in-place). |
| NEB Working Principles | - The ability to follow and implement the NEB working principles in residential buildings **varies significantly** depending on the specific type of project.<br>- In developments **driven by the private sector** and targeting the general real estate market, public participation has traditionally received limited attention. Accordingly, the deployment of the NEB working principles is mainly subordinated to the voluntary commitment of the investor.<br>- The application of the working principles can however be **very valuable to investors**, for example for larger projects with high impacts on communities (participatory process); for projects in challenging social or urban | | |

contexts (multi-level engagement); for projects with particularly high ambitions or unconventional characteristics (transdisciplinarity).

- In residential buildings with **social character** (social housing etc.), the public nature of the projects makes the application of **strong participatory practices** highly desirable from different perspectives: helping to increase the acceptance of the project by the neighbourhood; identifying and addressing the unique needs of the future occupants or the surrounding neighbourhood; helping to integrate the project in its urban and social context; etc.
- Finally, **cooperative buildings** or similar projects with **strongly collective nature**, intrinsically benefit from following the NEB principles, e.g., in terms of extensive participation and self-governance, in order to fulfil their own goals.

The following table addresses types of residential buildings which are particularly relevant to NEB and presents what NEB means for each project type.

| Residential buildings | Affinity to NEB | What does NEB mean for this category? | What can NEB add as a value? |
|---|---|---|---|
| **Collective housing** | ■■ | - By being the most common typology of residential building, collective private housing offers the **highest leverage** of inducing fundamental changes advocated by the NEB.<br>- The balance between private and public in collective private housing can be **shifted towards stronger interactions**, shared resources and opportunities and a fundamentally common understanding of living as a community.<br>- Collective housing might also include **co-living**, such as student housing or multigenerational housing schemes, or **housing cooperatives**, where residents collectively own and manage the property. In these cases, there is a much greater potential for collaborative action. | - The collective nature of larger residential buildings offers many **opportunities**, e.g., cooperative operation of shared spaces, either indoor (recreational areas for indoor sports, playing or cultural activities) or outdoor (rooftop gardens, urban allotments, playing areas etc.).<br>- **Circular practices** and other sustainable solutions are also highly suitable for large scale residential buildings.<br>- Collective private housing can target a **mix of housing units,** supporting the accommodation of diverse types of households and incomes next to each other.<br>- In case of housing cooperatives or co-living schemes there is a high potential for the asset's **collective design, operation and maintenance**. |
| **Single-household private housing** | ■ | - Single-family housing typically puts a strong accent on **individuality and personalisation**, reflecting personal choices.<br>- Due to their nature, detached housing intrinsically has to deal with high challenges in terms of **sustainability**.<br>- The **"social" dimension** is however often limited to the external appearance of the building and its visual impact to the neighbourhood. | - Single-family housing offers a very high degree of **discretion and flexibility** in design and choice of technological solutions, opening opportunities.<br>- It can also serve as a **demonstrator** for applying **innovative solutions**, e.g., combining sustainability, functionality and aesthetic ambitions which can be replicated elsewhere.<br>- Following a NEB approach can also help **rethinking** the use of single-family housing after major changes in the occupants' structure (e.g., after a generation change). |
| **Affordable and social housing** | ■■■ | - **High aesthetic quality** is key for social and affordable housing schemes, | - High-aesthetic quality shall be combined with **economy and sufficiency,** helping to rethink |

| | | | |
|---|---|---|---|
| | | helping to create a sense of **belonging and pride**. However, it is often neglected due to financial constraints.<br>- As many housing estates are challenged by exclusion, lack of accessibility, deprived open spaces and others, addressing **inclusiveness** is highly relevant.<br>- On sustainability, **re-use, circular economy and improved energy efficiency** are relevant dimensions, as an important part of the existing social and affordable housing stock is in need of retrofitting. | aesthetics in innovative and socially responsible ways.<br>- Social and affordable housing often addresses **vulnerable groups**. It is, thus, fundamental to prioritise inclusiveness in its diverse manifestations (ensuring safety and increased accessibility, tackling transport poverty, etc.).<br>- **Active community engagement** is also critical, helping to better identify social challenges and bring the community together.<br>- In view of transdisciplinary working, it is key to bring **designers, social experts and public participation experts** together. |
| **Temporary residential structures** | ■■ | - Temporary residential structures usually aim at **providing housing rapidly**, for example in case of humanitarian crises.<br>- Such structures provide opportunities for **circularity** and integration of **new technologies** that reduce construction time, without ignoring **aesthetics and functionality**. | - **Circular practices** (designing for re-use, flexibility, adaptability, and disassembly) are highly relevant to temporary housing structures.<br>- **Quick and low-waste construction methods**, such as modular offsite construction techniques or 3D printing, can also be useful.<br>- **Functionality and aesthetics** should be equally prioritised, aiming for efficiently designed residential spaces that are comfortable and enjoyable, helping people feel at home.<br>- **Designing for DIY and personalisation** helps tenants adapt the housing units to their unique needs and preferences. |

## Social, cultural and service buildings

The following table summarises horizontal considerations on how the NEB core values and working principles link to social, cultural and service buildings.

| Social, cultural, service buildings | Beautiful | Sustainable | Together |
|---|---|---|---|
| NEB Core Values | - Social, cultural and service buildings, in their role as providers of **fundamental services to the society**, have an outstanding role for communities, which calls for an adequate level of aesthetic quality.<br>- Moreover, they typically have **high visual impact** and can shape with their presence entire neighbourhoods.<br>- For these reasons, the **aesthetic ambition** and the link to the social and physical environment, also as a means to reinforce the building's **functionality**, is fundamental. | - Social, cultural and service buildings, by being often of large size and constrained by the need to deliver services with **peculiar and inflexible characteristics**, are subject to challenging demands in terms of sustainability performance.<br>- More compelling is however their public character. This implies that such buildings inevitably act as **role models** and are expected by the society to act as **forerunners** on sustainability matters. | - Beyond being fit-for purpose, social, cultural and service buildings are intrinsically places of **encounters and social aggregation**.<br>- The inclusiveness of public buildings goes well **beyond legal requirements** of physical accessibility and equal and indiscriminatory treatment of all members of the society.<br>- From a NEB perspective, public buildings are best placed to act as **vehicles of promotion** of social values, collective growth and community development. |
| NEB Working Principles | - Social, cultural and service buildings provide **high room** for integration of the NEB working principles, which however differs based on the specific project type, ownership, size etc.<br>- Due to their public character, such buildings can benefit greatly from **inclusive community engagement processes**, that can help identify the needs and preferences of the community and future users, in order to inform the design and help communities embrace projects.<br>- The creation of **partnerships** with other institutions and the participation in broader **national or international initiatives** can support continuous access to expertise and exchange of ideas, and foster innovation.<br>- The creation of **multidisciplinary teams** of experts can help create **ambitious and holistically designed** social, cultural and service buildings that equally address all NEB core values. | | |

The following table addresses types of social, cultural and service buildings which are particularly relevant to NEB and presents what NEB means for each project type.

| Social, cultural, service buildings | Affinity to NEB | What does NEB mean for this category? | What can NEB add as a value? |
|---|---|---|---|
| Education buildings | ■■ | - Education buildings range from nurseries and kindergartens to universities and have a high potential to address **all NEB core values and working principles** | - **Co-creation and transdisciplinarity** during the design process is key, and can be achieved by engaging teachers, students, parents and designers in the preparation of projects. |

| | | | |
|---|---|---|---|
| | | throughout both their **design and operation**.<br>- The spatial layout and design of education buildings can support **innovative pedagogical methods**.<br>- Inclusiveness is highly significant because education buildings address users of **diverse ages, backgrounds, interests, and abilities**.<br>- Innovatively designed education buildings can act as **demonstrators**, helping students of all ages to learn by doing.<br>- **Aesthetic quality** is highly important in educational buildings which should provide **comfortable and inspiring** environments that promote learning. | - During the project's operation, co-creation and transdisciplinarity can be achieved by foreseeing spaces for **collaborative and multidisciplinary** activities.<br>- **Flexible spatial layouts** and the use of flexible furniture can serve diverse needs and activities, including community activities during evenings or weekends.<br>- **Outdoors spaces** are highly important and foster a strong **connection to nature**, for example by encouraging outdoors activities, by including gardens, allotments, or composting areas with educational character. |
| **Healthcare buildings** | ■■ | - Aesthetics is key in healthcare buildings, such as hospitals, community health care centres, retirement homes, and others. The focus should be on creating **relaxing and healing environments**, that reduce patient stress levels and improve well-being.<br>- **Inclusiveness** is also key in healthcare buildings, which shall accommodate the needs of diverse users.<br>- **Sustainability** is highly relevant to healthcare buildings, which are some of the **top energy consumers**. | - The design of relaxing and healing healthcare buildings can be achieved by providing increased opportunities to **connect to nature**, providing access to **high quality outdoor spaces**, by integrating **art**, and by creating flexible spaces that allow **personalisation** and help patients feel at home.<br>- **Physical and cognitive accessibility** should reach high levels of ambition in healthcare buildings, which shall accommodate people of diverse ages, backgrounds and with diverse disabilities.<br>- Increased **social interaction** also has significant healing effects and can be achieved by including flexible communal spaces that can host small events, communal gardens and others. |
| **Cultural buildings** | ■■■ | - Inclusiveness is key for cultural buildings, such as museums, theatres, libraries, cultural centres and others, which have a **strong public character** and should be used and enjoyed by all.<br>- Due to their **high visibility**, cultural buildings often act as **landmarks** and have the potential to transform the image of their broader context. In this respect they often aim for the highest levels of **aesthetic quality**.<br>- Depending on their size, cultural building projects might be the result of **architectural design competitions**, which provide further opportunities for alignment to NEB. | - Due to their high visibility, cultural buildings offer great opportunities to promote **innovative aesthetic approaches** that are socially and environmentally responsible.<br>- Cultural buildings shall prioritise **physical and cognitive accessibility** that allow all people to enjoy them.<br>- The creation of **partnerships** with other institutions provides access to knowledge and expertise, supporting the projects' innovative design and operation.<br>- The **engagement** of citizens and other stakeholders during the design and operation of cultural buildings helps create projects that are embraced by the local communities.<br>- **Circular practices** are highly relevant to cultural buildings, which should be designed flexibly in order to accommodate diverse events and changing needs. |

| | | | |
|---|---|---|---|
| **Social service buildings** | ■■■ | - **Inclusiveness** is highly significant for social service buildings, such as centres for older people, multipurpose community centres and others, ensuring highest levels of accessibility and social interactions.<br>- **Aesthetics shall not be overlooked** in social service buildings, which should create welcoming and enjoyable environments.<br>- **Collaborative and transdisciplinary working** can help identify and address the unique needs of end users and the local communities. | - **Physical and cognitive accessibility** shall reach high levels of ambition, as social service buildings often address vulnerable individuals, including migrants, older persons, people with disabilities etc.<br>- Social service buildings have major potential for the application of **socially innovative concepts** (e.g., multi-age concepts, community gardens etc.).<br>- **Circular practices** can help design flexible social service buildings that can accommodate diverse social events and changing needs.<br>- The **collaboration of designers, social experts and the community** can help prepare highly impactful and innovative solutions. |
| **Other buildings** | ■■ | - Other types of service buildings that are of interest to the NEB include **sports buildings** or **transport buildings**, such as train stations, bus terminal, airports, and others.<br>- Due to the **strong public character** of the above types of projects, **inclusiveness** shall be prioritised.<br>- **Environmental sustainability** shall also be prioritised, as transport or sports related buildings are often large-scale buildings with high energy demand.<br>- Transport buildings have the potential to act as **demonstrators**, due to their high visibility.<br>- The **integration** of transport related buildings to their **surrounding context** is also critical. Such projects often include public open space components and have a high potential to **transform their broader area**. | - Depending on their type and scale, sports and especially transport buildings can be quite complex. In this respect ensuring **physical and cognitive accessibility** (e.g., ensuring easy wayfinding for all) is key.<br>- Designing for the **unique needs of each social group** is also highly important, especially for transport buildings that should be easily used by all, including families with small children, aged people, etc.<br>- Promoting **safety** through design is critical in complex large-scale buildings, such as train stations or bus terminals, and can be achieved by ensuring high levels of passive surveillance, ample lighting, long sight lines etc.<br>- As transport buildings are often part of broader regeneration schemes, the **engagement of the local community** in the design process can significantly improve the efficiency and quality of the proposed solutions. |

## Commercial buildings

The following table summarises horizontal considerations on commercial buildings and how these link to NEB core values and working principles.

| Commercial and industrial buildings | Beautiful | Sustainable | Together |
|---|---|---|---|
| NEB Core Values | - Aesthetically appealing buildings promote the **well-being** and satisfaction of employees, help **attract and retain talents**, and enhance **productivity**.<br>- At the same time, well designed commercial buildings help improve the organisation's **brand and reputation**, helping attract clients and partners. | - Commercial buildings are more sensitive to **changing market trends**. As a result, they can benefit from circular practices that promote **flexibility and adaptability**.<br>- Commercial buildings have inherently a **public character** and are characterised by **increased visibility**. In this respect they have a high potential to act as **role models** and forerunners in sustainability matters, while promoting behavioural change. | - Depending on the type of the commercial building, **inclusiveness** can be addressed in diverse ways.<br>- Physical and cognitive **accessibility** is key in all types of commercial buildings, ensuring **equal access** for both employees and clients.<br>- Some types of commercial and industrial buildings have a high potential to promote **social interaction** among employees, as well as **integration with the local communities**. |
| NEB Working Principles | - The potential of commercial buildings to align with the NEB working principles differs based on the specific project's type, context, ownership, size etc.<br>- Office buildings can benefit greatly from **transdisciplinary design** approaches, as well as from the engagement of employees and the local community in the design process.<br>- **Multi-level engagement** can be beneficial to all types of commercial buildings, which can benefit from **partnering** with other organisations, increasing their **access to knowledge and expertise**, as well as facilitating **market expansion**.<br>- Specific types of commercial buildings can integrate spaces dedicated to public events, workshops, seminars and other activities of educational character that promote **knowledge exchange** in formal and informal ways. | | |

The following table addresses types of commercial buildings which are particularly relevant to NEB and presents what NEB means for each project type and what it can add as a value.

| Commercial and industrial buildings | Affinity to NEB | What does NEB mean for this category? | What can NEB add as a value? |
|---|---|---|---|
| Office buildings | ■■ | - Office buildings, from conventional office spaces to co-working spaces, R&D centres, and start-up incubators, can significantly benefit from high quality architectural design. Aesthetically appealing and inclusive office environments impact employees' **well-** | - Thoughtfully designed spatial layouts support **teamworking and collaboration**, while protecting **privacy**, reducing distractions and increasing concentration.<br>- The creation of **shared spaces** promotes social interactions among employees. |

| | | | |
|---|---|---|---|
| | | **being and job satisfaction**, enhance productivity, and foster **innovation**.<br>- Aesthetically appealing office spaces can enhance an employer's **brand** and help **attract talent**.<br>- A well-designed and inclusive space can foster a sense of **pride** and belonging among employees, promote **teamwork**, while creating a positive impression on clients and visitors, enhancing the organisation's **reputation**.<br>- Depending on the type of the organisation, office buildings might also include **special types of spaces**, such as multipurpose halls, laboratories, lounges and others, which have unique potential for alignment to NEB values and principles.<br>- If properly designed, office buildings can act as **demonstrators** of innovative solutions, while actively supporting **knowledge exchange**, for example by hosting networking events, discussions, seminars or workshops, that can also be open to the public. | - Aesthetically pleasant working spaces can **reduce stress** and improve employees' **well-being**.<br>- **Circular practices**, including flexible spatial layouts, help adapt to changing needs.<br>- The promotion of recycling and composting practices in the workplace, or the support of cycling (e.g., by providing bike parking spaces, recharging points for e-bikes, etc.) supports **behavioural change**.<br>- Ensuring increased physical and cognitive **accessibility** and caring for the **unique needs of all employees** creates inclusive and fair working environments.<br>- Aiming for increased **interactions with the local community** can be achieved in diverse ways, such as by including active uses at the ground floors that are also accessible to the public, or by creating high-quality open spaces, also to be used by the community.<br>- The **collaboration** of design experts, employees and the local community during the design of office buildings can help to efficiently address the needs of diverse stakeholders. |
| **Other commercial buildings** | ■ | - Other commercial buildings include retail buildings (from single retail units to shopping centres), hotels, catering buildings, and others. Depending on their type, context and size, such buildings have **diverse potential to align to NEB** values and principles.<br>- All types of commercial projects can benefit for aesthetically appealing design, which helps **attract clients** while supporting the **well-being** of employees.<br>- Inclusiveness, with a focus on physical and cognitive **accessibility**, can help ensure that everyone can benefit for the services provided. | - All commercial buildings shall aim for **integration** into their surrounding context.<br>- Especially tourism-related buildings shall aim at promoting the area's cultural and natural assets. They can also be linked to activities that have **educational potential**, promoting social and environmental awareness.<br>- In all types of commercial buildings **sustainable practices** can be promoted during all project development phases, from design and construction to operation.<br>- Designing for flexibility and adaptability is highly relevant to commercial buildings that should be able to **adapt to changes** in use and capacity. |

### 2.3.3 Open spaces

The following table summarises horizontal considerations on open spaces and how they link to the NEB core values and working principles.

| Open spaces | Beautiful | Sustainable | Together |
|---|---|---|---|
| NEB Core Values | - Open spaces are at the same time **binding elements** across the urban fabric and key places of **social aggregation and interaction**.<br>- Therefore, the aesthetic quality of open spaces relates to a significant extent to the degree that such spaces succeed to **attract and get animated by citizens**.<br>- Well-structured open spaces also complement buildings with **transition areas** between outdoor and indoor living, creating unified complexes and attractive user-friendly nodes in the urban fabric.<br>- Open spaces can play a key role in **requalifying** areas, by upgrading aesthetically and functionally **challenging contexts**. | - Compared to buildings, open spaces make typically a **smaller use of resources**, both during construction and operation, therefore limiting the room for impacts on sustainability.<br>- On the other hand, open spaces can cover **large surfaces** and have a **significant impact** on the environment.<br>- This impact can be explicitly positive, for example in the case of green areas and parks which contribute to the **restoration of ecosystems**.<br>- In general, the inclusion of **Nature-based Solutions** in open spaces is straightforward, also in the case of small areas.<br>- At the same time, open spaces are intrinsically **sensitive to climate change** and the resulting weather events. Resilience plays therefore an important role in their design. | - The very nature of open spaces is to bring communities together and to facilitate **social life**. Therefore, open spaces need to fulfil high expectations in terms of **physical and cognitive accessibility** for all groups.<br>- This also means that open spaces can be key elements in **overcoming social barriers and segregation**.<br>- In order to be effective, open spaces need, however, to be **integrated and complementary** to their surroundings.<br>- In particular, the integration of **commercial activities** can play an important role in the attractiveness of open spaces, while ensuring a good balance between public and private interests.<br>- Finally, open spaces also offer the natural stage for **formal and informal community activities**. |
| NEB Working Principles | - Due to their nature as shared, common, and mainly public environments, open spaces are intrinsically suited to **participatory processes** with the engagement of local communities.<br>- The **heterogeneous use** of most open spaces (for mobility, leisure, encounters, commerce, etc.) requires, however, that the interests and concerns of different stakeholders are considered, leading automatically to multi-level engagement approaches.<br>- Moreover, open spaces can include use models and activities under the direct responsibility of the community, which requires **self-organisation and self-government**.<br>- With regard to transdisciplinarity, open spaces put a particular accent on the **design, planning and social dimensions**, addressing also **local traditions, customs** and other non-formal ways of understanding the public realm.<br>- Finally, open spaces are the places where the **urban, human and natural worlds** meet. This requires dedicated, collective efforts for the design and use of such spaces, across all NEB working principles. | | |

The following table addresses types of open spaces which are particularly relevant to NEB and presents what NEB means for each project type.

| Open spaces | Affinity to NEB | What does NEB mean for this category? | What can NEB add as a value? |
|---|---|---|---|
| **Streets** | ■■■ | - Streets are the **fundamental urban space units** through which a person experiences a city.<br>- From a NEB perspective, streets can be seen as multi-functional and multi-dimensional spaces in which **communities are built**.<br>- Streets vary significantly in terms of their design characteristics, functions, character and traffic patterns, ranging from boulevards and high streets to woonerfs, pedestrian streets and alleys. Each category has a unique and **differentiated potential** in aligning to NEB. | - Streets play a significant role in **shaping the image of the city**, therefore offering very high leverage for impacts through NEB.<br>- Sustainability can be addressed by street design in diverse ways, such us through **passive design**, the integration of **Nature-based Solutions**, the use of **vegetation** to improve the local microclimate while providing benefits for **biodiversity**, and others.<br>- Physical and cognitive **accessibility** and **caring for the needs and preferences of all social groups** are highly important and relevant to street design.<br>- Street design should support **safety**, aiming for high levels of **passive surveillance** and **social interaction**. Active ground floor uses and efficient design of the interface between buildings and streets can be instrumental in helping people feel safe and comfortable in their neighbourhood.<br>- Streets offer great opportunities for the exhibition of **public artworks** of high visibility, including murals, sculptures, integrated landscape works and others.<br>- There is a great potential to actively engage citizens during both the **preparation and operation** of street projects, for example by organising temporary street events, such as play streets, or tactical urbanism initiatives. |
| **Squares, parks and other types of open spaces** | ■■■ | - This category includes squares, parks, and other types of open spaces as designated areas dedicated to **public recreation, social interaction and enjoyment**.<br>- Such projects have a very high potential of aligning to NEB because of their **public character**.<br>- Seen through the lens of NEB, open spaces, such as parks, squares and others, should be the result of **creative transdisciplinary and participatory processes**, that simultaneously transform the image of the built environment, improve the experience of everyday life, while increasing climate resilience and overall environmental performance. | - With regard to aesthetics there is great potential for **creative and innovative architectural composition**, that considers terrain morphology, vegetation, water features, materials, lighting, seasonal changes and others.<br>- Green open spaces play the significant role of **connecting people to nature** and providing sensory experiences as part of everyday urban life.<br>- Open spaces such as parks and squares offer great opportunities for **public art** that can be enjoyed by all.<br>- The contribution of open spaces to **sustainability** is key, especially in the case of softly landscaped green spaces that provide opportunities for Nature-based Solutions, the protection and restoration of biodiversity, and the increase of resilience. All the above can be combined to **educational initiatives**.<br>- **Universal design**, the **equitable distribution of green spaces** in the urban fabric and their increased walking, cycling and public transport **accessibility** are key requirements for inclusiveness.<br>- Inclusive open spaces shall also provide opportunities for **activities that can be enjoyed by all social groups**.<br>- There is a high potential for **active public participation and co-creation** during the preparation of open space projects, as well as for their collective **operation and management**, for example through urban agriculture initiatives, park adoption programmes and others. |

### 2.3.4 Neighbourhoods

For the purposes of this guide "neighbourhoods" refer to districts of varying size that have a strong residential or mixed-use character. Apart from the physical assets that comprise neighbourhoods, such as buildings and open spaces, the neighbourhood scale also encompasses factors such as local identity, sense of belonging, diversity, social interaction and democratic participation.

The following table summarises horizontal considerations on how the NEB core values and working principles link to neighbourhood projects.

| Neighbour-hoods | Beautiful | Sustainable | Together |
|---|---|---|---|
| NEB Core Values | - Projects at the level of neighbourhood offer the opportunity to intervene in the urban fabric through **coordinated and integrated design processes**, aiming at the highest ambitions of aesthetic quality.<br>- The aesthetic value of new neighbourhoods is mainly forward-looking, which poses **risks and opportunities**.<br>- (Re-)Creating neighbourhoods also means fulfilling highest ambitions in terms of **functionality, sustainability and social integration**, which have to be contained in the aesthetic dimension. | - **Highest sustainable ambitions** in the built environment start with the individual buildings but can only be completed at neighbourhood level, through shared use of resources, circularity models, integrated services, smart solutions, etc.<br>- In particular, new neighbourhoods can achieve the highest ambitions of sustainability by the very way they are **planned and designed**: compact urban development with optimal use of land, proximity, balanced relationship between built and unbuilt areas, etc.<br>- New or renewed neighbourhoods also offer the opportunity of acting as models for **new sustainable ways of living**. | - New neighbourhoods can also be **laboratories** for introducing and exploring fundamentally new ways of living together based on inclusion, representation, and collective governance.<br>- Whether starting from "scratch" or not, it is possible to create neighbourhoods which are **fully accessible and enjoyable** for all users, foster social justice and equality through an appropriate mix of offers and possibilities, and encourage cooperation and collaborative behaviours.<br>- However, the creation of a completely new social environment or the modification of an existing one can take time and requires **active efforts** from all stakeholders involved. |
| NEB Working Principles | - The creation or transformation of a neighbourhood is a unique opportunity for implementing **participatory processes** at all stages, starting from the preliminary design, through the progressive development of initiatives and eventually the shared governance of the place by the community. Such opportunities are even bigger in the case of **existing neighbourhoods**.<br>- Moreover, any intervention at the level of neighbourhoods offers the **biggest opportunities in terms of working transdisciplinary**, by requiring the collaboration of urban planners and designers, architects, engineers, social and environmental experts, public engagement experts, and others.<br>- Because of their larger scale, neighbourhood projects have a great potential for **multi-level engagement**, which can be achieved by connecting local community groups and initiatives to formal institutions (academic, cultural or others) and by encouraging collaboration and knowledge exchange with other districts, including the adjacent neighbourhoods, or other cities. | | |

The following table presents how NEB relates to new neighbourhood projects and to interventions in existing neighbourhoods.

| Neighbour-hoods | Affinity to NEB | What does NEB mean for this category? | What can NEB add as a value? |
|---|---|---|---|
| **New neighbour-hoods** | ■■■ | - Making the best possible use of **urban brownfield areas** and optimising the consumption of **new land** when unavoidable, are key challenges and opportunities for new neighbourhoods.<br>- The responsibility of making best use of such resources calls for a holistic and thorough approach from the **earliest planning and design phases**, addressing and integrating all three NEB core values in a transdisciplinary way.<br>- Shaping a completely **new neighbourhood** "from scratch" is an enormous **challenge and opportunity** in terms of actively involving citizens, introducing innovative models of partnership and self-governance and empowering all stakeholders. | - New neighbourhoods offer **large room** for ambitious design and aesthetic solutions.<br>- In a new neighbourhood, **unconventional and ambitious** sustainable technical, natural and procedural solutions can be **easily implemented**.<br>- A **co-creative approach** that foresees many opportunities for interaction and exchange of ideas, in particular between experts and non-experts, helps citizens take **ownership** of the new environment.<br>- Following the NEB working principles helps making new neighbourhoods, which often tend to appear sterile, **socially inclusive and cohesive** places. |
| **Existing neighbour-hoods** | ■■■ | - Coordinated interventions in existing neighbourhoods usually target the aesthetic, environmental, and functional upgrade of buildings and open spaces. NEB brings a strong **social dimension** in conventional neighbourhood regeneration projects, by putting emphasis on inclusion and public engagement.<br>- For the most part, the residents and other users of the district can be **actively involved** in the project preparation.<br>- Existing neighbourhoods present **diverse opportunities and challenges** for NEB, as they range from densely built urban areas with strong communities but degraded building stock and lack of public spaces, to sparsely built suburban areas that lack densification and identity. | - NEB can **build on the existing identity** of neighbourhoods, on their history and cultural heritage, and on their economic and social life.<br>- The extensive involvement of residents helps to identify the most **pressing challenges** and create solutions that are welcomed by the local community, creating a sense of **ownership**.<br>- Careful design and planning must ensure that appropriate measures have been adopted in order to **avoid the displacement** of current residents or businesses.<br>- Local **art and culture initiatives** can help transform the image of existing degraded buildings or open spaces in low-tech and low-cost ways.<br>- Inactive open spaces can be reactivated to improve the **image of the neighbourhood**, increase **resilience** and address the unique needs of the local community. |

# 3 Implementing the NEB

The **practical implementation of NEB** values and principles is based on a fundamental, comprehensive commitment by the investor but practically goes through the very concrete choice of strategies, the application of techniques and principles, the realisation of design features, and the implementation of procedures and processes.

This chapter introduces the "**NEB Investment Recommendations**" as **practical solutions** that can be applied to built environment projects to improve their alignment to the NEB and thereby contribute to the achievement of the investors' goals.

Due to the extent of the recommendations, only a brief **summary** of each one is reported in what follows, including the relevance to investors. **The full recommendations are reported in detail in Annex I.**

## 3.1 Overview

The New European Bauhaus seeks to transform the European Green Deal into a cultural project, going beyond its technological and economic dimensions. It recognises the **built environment** as a **main driver** of the transformation it aims to instil, due to its **multidimensionality** and potential to intrinsically link the NEB core values and working principles, bringing together aesthetics and quality of experience, sustainability and inclusiveness.

The built environment plays a key role in changing behavioural and aesthetic norms, promoting cultural development and sustainability, and addressing social disparities. Firstly, the built environment has a profound impact on the way we live and behave. It is intertwined with our **history, culture and society**, communicating our values and reflecting our identity.

Additionally, the built environment has to play an important role in combating **climate change**. Buildings are responsible for a significant portion of global energy consumption and greenhouse gas emissions. New design and construction approaches are needed that prioritise circularity, the use of sustainable materials and construction techniques, resilience and the protection and restoration of biodiversity and ecosystems.

Finally, the built environment impacts **social equity**. For example, inefficiently designed public spaces exclude people with mobility constraints, or non-walkable car-oriented environments exclude those that do not have access to a private car. Architects and planners must address these issues by designing inclusive and accessible spaces for all. Another striking example is energy affordability, as low-income households may be more likely to live in lower quality buildings and be therefore exposed to poor energy efficiency.

Moreover, NEB puts **equal significance** on the built environment production **"processes"** and the final **"products"**, prioritising participatory approaches, collaboration and communication, and transdisciplinarity.

Although the NEB initiative has noted significant achievements since its launch, the NEB values and principles remain to a significant extent **abstract** for project developers and investors. This presents a challenge for the NEB scaling up and for its broader implementation in the built environment sector.

The following section aims at addressing this gap by presenting how to practically prepare and design projects that align with NEB. This is achieved by translating and **operationalising** the three NEB values and the working principles into concrete "NEB Investment Recommendations" applicable to the built environment sector.

## 3.2 Summary of the NEB Investment Recommendations

This section introduces practical tools that support the alignment of built environment projects to the NEB core values and working principles. These tools, referred as "**NEB Investment Recommendations**", include planning and design solutions, technological solutions, public engagement and collaborative working approaches, alternative organisation and operation models, and others. To ensure alignment to NEB it is suggested that as many recommendations as possible are addressed during the preparation of a project, covering at least all NEB core values and working principles. The recommendations and solutions applicable to each project depend on and can be adapted to its unique nature, characteristics and context, as well as the challenges and potential offered by each site. Each recommendation can also be applied separately in order to address specific aspects of the project preparation and design.

Each recommendation:

- includes a **description** of the proposed solutions;
- indicates the **key competences** needed for their implementation (see also Sec. 4.2). The competences are indicative and must be adapted to the unique characteristics of each project;
- indicates to which **project development stages** the solutions apply (see also Sec. 4.1);
- presents the solutions' **impacts and benefits for the society** and the **benefits for investors**, as well as potential **challenges** and measures to **mitigate** them (see also Sec. 5.2 & 5.3);
- and provides references to **useful sources** that can further support the application of the solutions.

The following tables summarise the scope of the NEB investment recommendations, as well as their relevance to investors. The full recommendations are then presented in detail in **Annex I**.

### 3.2.1 Beautiful

| | NEB Investment Recommendation | Description | Relevance to investors |
|---|---|---|---|
| | **Beautiful** | | |
| 1 | **Employ place-based design approaches** | - Place-based design aims at activating the place's **unique cultural, natural and aesthetic qualities**.<br>- This recommendation proposes ways to support **place-based project preparation**, for example through community engagement, by learning from vernacular architecture and by preserving and promoting local heritage. | - Buildings and open spaces that respect and build on the place's distinct qualities are perceived as **valuable and attractive**.<br>- Developments that take advantage of their surroundings initiate a virtuous circle which creates **value in the long-term,** to the investors and the local community. |
| 2 | **Connect to nature** | - Bringing nature in everyday urban life improves people's well-being and quality of experience and encourages them to **understand and value** their natural environment.<br>- This recommendation proposes ways to foster **connection to nature**, from simple greening measures to urban scale interventions. | - Connecting to nature provides direct benefits to the users and it immediately translates into **higher perceived quality** and **attractiveness**, increasing **asset value**.<br>- Whilst it may involve additional costs, it also contributes to **operating cost savings** through different channels and supports better protection against the consequences of climate change. |
| 3 | **Promote diversity of the building form and open spaces** | - The **diversity of people, activities and ideas** is intrinsically linked to the multidimensional functioning of cities and can be encouraged by the **diversity of building form and open spaces**. | - The diversity of the building form and open spaces leads to vibrant and enjoyable environments of **increased attractiveness**, bringing socio-economic benefits. |

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|---|---|---|---|
| | | - This recommendation proposes ways through which architecture, urban design and planning can promote diversity in the built environment. | - The mix of building types, sizes and uses leads to diversification of the available properties and thus increases the **variety of economic opportunities**, benefitting also local businesses and the local economy in general. |
| **4** | **Design for human scale and senses** | - Designing for human scale and senses means designing for **eye level experience**, for **walking speed**, for dimensions that relate to the **human body** and stimuli that appeal to human senses.<br>- This recommendation proposes ways of designing projects that **better relate** to how people understand, use and interact with their surrounding environment. | - Designing for human scale and senses helps create walkable urban environments that perform best at the ground level, leading to high-quality and vibrant districts characterised by **attractiveness**, increased **value**, flourishing **commercial activities** and **safety**. |
| **5** | **Innovate for societal and environmental impact** | - This recommendation proposes ways through which architecture can generate **innovation** itself or support innovative project concepts.<br>- It also indicates how emerging **technological innovations** in the design and construction industry can help meet social and environmental needs more efficiently. | - Innovation is key to **eliminate inefficiencies** in existing processes and to enable fundamentally new, faster, and better project preparation processes.<br>- Innovation in the built environment is a key area for European **start-ups** and an important target for **venture capital investors**. |

### 3.2.2 Sustainable

| | NEB Investment Recommendation | Description | Relevance for investors |
|---|---|---|---|
| | **Sustainable** | | |
| **6** | **Design for circularity** | - The NEB encourages holistic design approaches that **bridge circularity with aesthetics and society**.<br>- This recommendation presents ways through which collaborative action and creativity can inform the **efficient and responsible use of assets** and resources, contribute to the design of flexible and adaptable built environment projects, while promoting a **new aesthetic language** founded on circular practices. | - Applying circularity principles in construction leads to **high-quality and high-value** projects and provides many benefits, ranging from more efficient construction processes to a longer life span compared to conventional projects.<br>- The re-use of assets and resources and the provision of flexible spaces offers opportunities for large **value creation from undervalued sources**. |
| **7** | **Design for climate mitigation** | - For NEB, climate mitigation solutions shall also be **affordable**, **inclusive** and promote cultural and **behavioural change**.<br>- This recommendation presents ways to bring social and cultural dimensions into technical solutions applicable to built environment projects. | - Beyond **reputation gains** and immediate **cost energy savings** from higher energy efficiency, anticipating regulatory restrictions is beneficial from many perspectives: **saving higher transition costs** later; **mitigating obsolescence risks**; ensuring **eligibility** for public grants; granting access to **"green" financing** sources; and so on. |

| | | | |
|---|---|---|---|
| 8 | **Design for climate adaptation** | - From a NEB perspective designing for adaptation means preparing adaptation solutions that are also **aesthetically appealing**, increase citizens' **well-being** and address the needs of **vulnerable people**.<br>- This recommendation presents ways through which climate adaptation solutions can become **integrated into everyday life**, while prioritising people who are most likely to be affected by climate change. | - The ability to cope with risks such as extreme weather events, changed baseline conditions and shortages of water and other resources, is a key **requirement** for all investors.<br>- As well as contributing to the wider resilience of the settlement, it can result in more tangible investment benefits such as **reduced insurance premiums**, **avoided loss** and **safeguarding of asset value**. |
| 9 | **Deploy the potential of green and blue infrastructure** | - Green infrastructure and Nature-based Solutions (NbS) deliver **environmental, social and economic benefits** simultaneously, while contributing to climate change adaptation and mitigation.<br>- This recommendation presents **simple examples** of how green infrastructure and NbS can be integrated in built environment projects and highlights the potential of green infrastructure in addressing **social inclusion**. | - Green infrastructure solutions can be highly efficient and cost-effective providing investors with multiple benefits and increasing the overall **long-term value** of assets.<br>- Depending on the type of solution, such benefits include a combination of increased **attractiveness** of buildings and open spaces, increased **resilience** to environmental risks, the **reduction of operating costs** and the **revalorisation of challenged or unused areas**. |
| 10 | **Foster biodiversity** | - There are diverse strategies to preserve, enhance and restore biodiversity across all spatial scales and stages of a project's lifecycle. This recommendation presents such strategies, from **small scale solutions** applicable to buildings, to **landscape design and urban planning** solutions.<br>- It also suggests ways to foster biodiversity through **public engagement**. | - Strategies that preserve and restore biodiversity provide diverse investment benefits, including the **reduction of operating costs**, the increased **resilience** to environmental risks, better access to **sustainable finance**, grants and other benefits and overall **enhancement of asset value** and investor **reputation**. |

### 3.2.3 Together

| | NEB Investment Recommendation | Description | Relevance for investors |
|---|---|---|---|
| | **Together** | | |
| 11 | **Ensure accessibility following a universal design approach** | - Universal design is a fundamental condition of good design, that aims at creating environments that can be **accessible, used, and enjoyed by all people**.<br>- This recommendation suggests ways to address universal design in buildings, open spaces and neighbourhoods, as well as through public engagement. | - Universal design **minimises underserved market demand** and advertises the project as catering to individual needs.<br>- Moreover, it helps make the project more **user friendly**, thus increasing the **attractiveness** of assets.<br>- Finally, universal design fosters a sense of **safety**, thereby responding to an important expectation of many customer groups. |
| 12 | **Design for people-centred mobility** | - An inclusive built environment supports easy and comfortable **people-centred mobility**. | - People-centred mobility improves the **commercial viability** and **vitality** of districts |

| | | | |
|---|---|---|---|
| | | - This recommendation proposes ways of designing and planning **safe, comfortable, and enjoyable public realms** and streets that encourage walking, cycling and public transport use. | and neighbourhoods by increasing the extent of slow mobility modes, which increases dwell times and expenditure.<br>- Costs associated with **traffic congestion**, which can act as a deterrent to investment, are reduced by diversifying the choice of transport modes. |
| 13 | **Design for mixed use, density and proximity** | - The recommendation highlights the importance of planning for **mixed uses, sufficient densities** and **proximity**.<br>- Such principles lead to the creation of vibrant and **economically viable urban environments** that facilitate citizens' access to services and employment opportunities, reduce the need for private car use, while making infrastructure investments more effective. | - A balanced and dense mix of uses sustains aggregate **property value over the long term** through increased amenities, reduced transport costs and greater resilience to property market fluctuations.<br>- The **viability of commercial uses** is improved by streets and public spaces that are animated throughout the day. |
| 14 | **Promote affordability and equitable access** | - Inclusive environments shall be **affordable**, offer **equal opportunities**, and address the needs of **vulnerable individuals**.<br>- This recommendation proposes **design solutions** and alternative **organisation models** applicable to buildings and open spaces, as well as planning solutions and inclusive policies applicable at the neighbourhood scale. | - Prioritising affordability and equal access may enhance investors' **reputation** linking them to social responsibility and awareness. A strong social orientation opens opportunities in market segments of increasing size and relevance.<br>- Investors can typically leverage on government **subsidies** for investments and count on **reliable revenue streams** during operation, as well as on a **robust demand**, even in periods of recession. |
| 15 | **Respond to the needs of the community and support vulnerable individuals** | - Responding to the **unique needs of the community** and **vulnerable individuals** is fundamental for the creation of sustainable, fair and inclusive cities.<br>- This recommendation proposes ways to identify and address the needs of communities and vulnerable individuals through the preparation of built environment projects. | - Understanding the needs of the community is essential for the preparation of **efficient planning and design proposals** that exploit underestimated assets and respond to the local demand.<br>- Caring for the needs of vulnerable people means designing inclusive, safe and enjoyable environments that are attractive for residents, visitors and businesses, increasing the **long-term value** of investments. |

### 3.2.4 Working principles

| | NEB Investment Recommendation | Description | Relevance for investors |
|---|---|---|---|
| | **Working Principles** | | |
| 16 | **Engage with citizens creatively** | - Engaging with citizens creatively means making use of approaches and techniques | - Engaging directly with citizens and communities can fundamentally **increase the quality and attractiveness** of projects in |

| | | | |
|---|---|---|---|
| | | that **unleash the creativity of communities** and empower them to shape built projects.<br>- This recommendation presents **innovative methods** which can be used to involve citizens in the preparation and implementation of NEB projects. | terms of responsiveness to local needs and context.<br>- Investors can benefit from accessing **local knowledge** and from identifying opportunities which would otherwise remain hidden. |
| 17 | **Make the best out of participatory process** | - Participatory processes shall also address many **challenges** in order to be successful.<br>- This recommendation describes good practices that help **implement public participation strategies more effectively**, in terms of preparing and planning the participation processes, addressing the right audience and running the participatory activities. | - Public participation helps investors prepare projects according to actual needs and expectations and eventually **capture value**, to the **benefit of both sides**.<br>- Public participation is key to increasing the **acceptance of projects** and establishing a reputation of a socially considerate investor, positively perceived by both the final users and the authorities responsible for planning and permitting. |
| 18 | **Facilitate knowledge exchange and dissemination** | - Multi-level engagement aims at enhancing **knowledge dissemination** and at increasing the reach of transformative solutions.<br>- This recommendation presents ways to promote knowledge exchange and drive positive change **beyond the project's immediate context**. | - Facilitating knowledge dissemination can be achieved through the creation of **partnerships**, the participation in **knowledge-exchange networks** and the effective communication of the project's innovative solutions.<br>- Such approaches help increase investors' **visibility** and improve their **reputation**, broaden their audience reach and provide increased **business opportunities** in new sectors and markets. |
| 19 | **Employ transdisciplinary approaches of design and planning** | - Transdisciplinary approaches encourage **thinking outside discipline silos** embracing creativity and generating high-impact innovative solutions.<br>- This recommendation highlights the value of **selected aspects of transdisciplinary working** relevant to the built environment sector. | - Transdisciplinary working pushes boundaries and leads to the shaping of highly **innovative and impactful solutions** that tackle complex problems.<br>- It helps investors to implement **ambitious projects** of high overall quality and attractiveness, to adopt more efficient working processes, and broaden their reach in new markets and sectors. |
| 20 | **Integrate NEB values and principles in architectural design competitions** | - The integration of NEB values and principles in architectural design competitions has a strong potential to lead to enduring, innovative, and environmentally and socially responsible solutions.<br>- This recommendation proposes ways of **integrating NEB in all phases of an architectural competition**, from the preparation of the competition brief to the evaluation of the submitted proposals. | - The integration of NEB values and principles in architectural design competitions leads to architectural proposals that are characterised by high **aesthetic quality** while having significant **environmental and social impacts**.<br>- It can help investors further increase the **quality** and **attractiveness** of their assets, enhance their **reputation**, increase their **visibility** and ensure that the projects will be embraced by the local communities. |

### 3.2.5 Relevance of the recommendations for the project development

The following table shows the relevance of each NEB Investment Recommendation to the different project development phases. These phases, including the steps of each phase, will be addressed in detail in Sec. 4.1.

| | | Project development stages | | | |
|---|---|---|---|---|---|
| | | Conception | Design | Implementation | Use |
| | **Beautiful** | | | | |
| 1 | Employ place-based design approaches | ■■ | ■■■ | ■ | ■■ |
| 2 | Connect to nature | ■■■ | ■■■ | ■ | ■■ |
| 3 | Promote diversity of the building form and open spaces | ■■■ | ■■■ | ■ | ■■ |
| 4 | Design for human scale and senses | ■■ | ■■■ | ■ | ■■ |
| 5 | Innovate for societal and environmental impact | ■■ | ■■■ | ■■ | ■■■ |
| | **Sustainable** | | | | |
| 6 | Design for circularity | ■■■ | ■■■ | ■ | ■■■ |
| 7 | Design for climate mitigation | ■■ | ■■■ | ■ | ■■ |
| 8 | Design for climate adaptation | ■■ | ■■■ | ■ | ■■ |
| 9 | Deploy the potential of green and blue infrastructure | ■■ | ■■■ | ■ | ■■ |
| 10 | Foster biodiversity | ■■ | ■■■ | ■ | ■■■ |
| | **Together** | | | | |
| 11 | Ensure accessibility following a universal design approach | ■■ | ■■■ | ■ | ■■ |
| 12 | Design for people-centred mobility | ■■■ | ■■■ | ■ | ■■ |
| 13 | Design for mixed use, density and proximity | ■■■ | ■■■ | ■ | ■■ |
| 14 | Promote affordability and equitable access | ■■■ | ■■ | ■ | ■■ |
| 15 | Respond to the needs of the community and support vulnerable individuals | ■■ | ■■■ | ■ | ■■ |
| | **Working Principles** | | | | |
| 16 | Engage with citizens creatively | ■■■ | ■■ | ■ | ■■ |
| 17 | Make the best out of participatory process | ■■■ | ■■ | ■ | ■■ |
| 18 | Facilitate knowledge exchange and dissemination | ■■■ | ■■ | ■■ | ■■■ |
| 19 | Employ transdisciplinary approaches of design and planning | ■■■ | ■■■ | ■■ | ■■ |
| 20 | Integrate NEB values and principles in architectural design competitions | ■■ | ■■■ | ■ | ■ |

■ = lower relevance, ■■ = medium relevance, ■■■ = higher relevance

# 4 Delivering the NEB

Aligning a project to NEB values and principles has an influence on all activities in the **project development process**. While investors and developers are called to set priorities based on their individual goals, levels of ambition and capacities, NEB has the potential to radically change how projects are prepared and delivered.

Therefore, this chapter starts by identifying **main phases and steps** in the project development process and investigating how NEB values and principles can be incorporated in each step. It becomes evident that the potential to align to the NEB core values and working principles, and therefore achieve the highest impacts, is significantly higher during the **early phases of the project preparation, and later during its use**.

It then lists what **key professional competences** can be beneficial – and in some cases, pivotal – to the preparation of NEB-aligned projects, reflecting the multidisciplinarity of NEB.

The chapter continues by presenting how the **procurement or purchase of works and services** can act as a key enabler to the incorporation of NEB values and principles in projects.

The key aspect of **project risks** is then addressed, showing how aligning to NEB can affect typical risk categories of built environment projects – mainly in the direction of reducing the exposure to such risk or to their impacts.

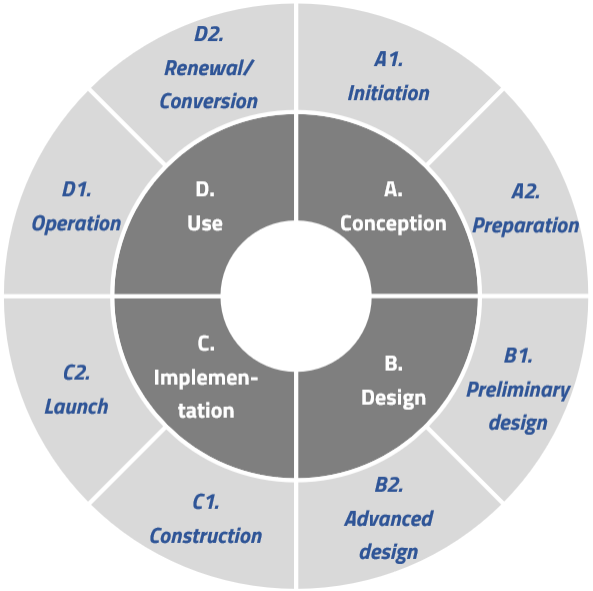
Finally, the strong links between NEB and the society at large is reflected in a **stakeholder analysis**, which indicates the role, relevance and impact of stakeholders in the development of NEB-aligned projects.

## 4.1 Project development process

### 4.1.1 Overview

The project development process is key for the implementation of NEB values and principles. In order to be applied and deliver the desired outcomes, the NEB core values and working principles need to be addressed throughout the entire process.

The **project development process** consists of a series of phases and steps. Different structures and conventions exist in practice, depending also on national legislation, practice and norms. The phases and steps can differ based on the unique characteristics of each project, but the basic principles are common to all. For the purpose of these Guidelines, a model consisting of **four phases and eight steps** is adopted, which helps link the project development process to the NEB specificities, as shown in the diagram below.




The neb core values and working principles can be incorporated during all phases and steps of the project lifecycle. However, there is a **higher potential to incorporate NEB values during the early project's preparation and design phases, and later during its use**.

The ways in which NEB can inform each step are addressed in summary in the following table, while the following sections describe in detail the ways in which alignment with the NEB core values and working principles may be achieved during each step of the project development process.

| | | A. Conception | | B. Design | | C. Implementation | | D. Use | |
|---|---|---|---|---|---|---|---|---|---|
| | | **A1. Initiation** | **A2. Preparation** | **B1. Preliminary design** | **B2. Advanced design** | **C1. Construction** | **C2. Launch** | **D1. Operation** | **D2. Renewal/Conversion** |
| **Description** | | Identification of investment opportunities | Definition of project in terms of physical outline | Preliminary project design | Detailed design that fully describes the project | Tendering and execution of construction works | Commissioning of the project and corresponding publicity | Operation and use of project assets | Adaptation, expansion, refurbishment or repurposing |
| **Main output** | | Project concept | Concept design, feasibility study and business plan | Technical plans, elevations, drawings, models, etc. | Detailed designs compliant with relevant regulations plus supporting impact studies | Tender documents, construction works and supervision contracts | Launch events and activities and lease/sale agreements | Operation and maintenance plans | Re-start of the project cycle |
| **Relevance for NEB*** | | ■■ | ■■■ | ■■■ | ■■ | ■■ | ■ | ■■■ | ■■■ |
| | | Identification of opportunities for NEB, enabling conditions for following NEB actions | The general project strategy is set, with a high potential to address all NEB core values | Critical design decisions that determine most of the visual and functional impact of the project | Design is fixed to a high level of detail, providing certainty on quality | Environmentally and socially responsible construction methods and processes | Opportunity for promoting NEB values integrated in the project | Long-term value embedded in the design generates enduring benefits | The qualities imparted by NEB facilitate efficient adaptation/conversion |
| **Beautiful** | | Quality of overall spatial organisation of concept | Integration to context, general character and configuration of individual components | Key decisions that affect aesthetic quality are taken | Detailed drawings and specifications ensure follow-through on stated ambition | Reduction of negative impact during construction | Positive visual impact at project "unveiling" | Usage over time enriches the durable character of the buildings and spaces | Enduring aesthetic value carried over to new use/conversion |
| **Sustainable** | | Compatibility of location with sustainable solutions | Strategic orientation toward specific measures | Key decisions are taken regarding energy performance, circularity and resilience | Detailed design and technical specifications of sustainability measures | Minimisation of construction waste and negative environmental externalities | Demonstration of technical measures | Sustainability aspects of the project influence user behaviour | Value added by sustainable design principles is carried over |
| **Together** | | Targeted social mix and resulting social concept, alternative business models | Affordability and accessibility issues inform design and layout | Accessibility, safety, equal access and affordability are addressed | Detailed measures to improve accessibility and flexibility | Equal and safe working conditions and employment benefits shared by local community | Opportunity to help the community embrace the project | Accessibility, user-friendliness and satisfaction are monitored and adjusted | Successful inclusion and accessibility are maintained |
| **Working Principles** | **Participatory process** | Engagement with community in idea finding | Collaborative shaping of solutions and establishment of public participation strategy | Public participation in the choice of specific design aspects | Final inputs lead to final design modifications | Continued engagement helps avoid and reduce negative impacts and embrace the project | Interaction with end users and communities to help embrace the project | Involvement of users and communities in project operation and maintenance | Input from stakeholders and local community informs new project |
| | **Multi-level engagement** | Creation of partnerships | Partnerships channel feedback on emerging design and potential synergies | Intensive exchange of ideas based on the design | Collaboration prepares the way for the next steps | Various methods employed to share knowledge and report on progress in real time | Demonstration effect of the project boosted by communication professionals | Knowledge and experience gathered through use are widely shared | Lessons learned from previous use are incorporated |
| | **Trans-disciplinary approach** | Gathering of information across disciplines, multidisciplinary input to project ideas | Creation of innovative concepts based on the collaboration of diverse disciplines | Multidisciplinary teams lead to efficient and innovative design solutions | Design optimisation through multiple expert inputs | Unique challenges encountered during construction more easily resolved | Collaboration with communication experts can help raise awareness of the project | Wide and diverse range of experts help optimise the project's operation | Transdisciplinarity leads to innovative solutions for the conversion or reuse of the asset |

* ■ = lower relevance, ■■ = medium relevance, ■■■ = higher relevance

### 4.1.2 Phase A – Conception

Phase A "**Conception**" is the initial stage of a project, spanning the early inception of a business or investment opportunity and the development of a project concept. This phase includes two steps, "**Initiation**" and "**Preparation**", which are developed in detail in the tables below with regard to their relevance to NEB. Both steps are characterised by a **high potential for incorporating NEB** values and principles. Especially during the "Preparation" step there is a great potential to align with all NEB core values, setting the general strategy for the development of the project, while integrating meaningful feedback from public engagement and collaborative working activities.

**Step A1. Initiation**

| | | | |
|---|---|---|---|
| **General description of step** | | | - In this step the investor identifies a **potential investment opportunity** in terms of location, project use and character, as well as in terms of investment strategy and horizon. Normally this stage concludes with a **decision to further explore or to abort the investment opportunity**.<br>- A **project concept** linked to a specific location is developed. The concept should be legible and understandable by people without technical knowledge, but also sufficient to inform discussion with relevant authorities and technical staff thus enabling it to develop further. |
| **Main activities in this step** | | | - The main activities in this step **vary significantly** depending on the type of investor and the type of project.<br>- In general, this step includes the high-level **exploration of the scope** of the project to be developed, its future use, size and character.<br>- Several **high-level studies** can run in parallel aiming at a better understanding of the potential site and its context. |
| **NEB Core Values** | **Beautiful** | ■■ | - Important decisions that affect the project's **key dimensions**, **massing** and **spatial organisation** are already considered at this point. |
| | **Sustainable** | ■■ | - Key decisions relevant to sustainability are taken at this step, such as the **site location** in relation to climate risks, the **connectivity** of the site through public transport aiming at reducing car-dependency and others.<br>- Options for bringing **nature into cities** are considered, for example related to the greening of major brownfield areas, the conversion of obsolete urban infrastructure into green corridors, the daylighting of urban rivers and others. |
| | **Together** | ■■ | - **Affordability** is built in through the inclusion of mixed housing typologies or housing tenures, the preparation of co-living concepts, the use of alternative business models, the establishment of housing cooperatives, etc.<br>- Depending on the project type, the **needs of specific social groups** shall be considered, for instance aiming for increased accessibility by public transport for persons with disabilities, older people, immigrants and other social groups without access to private cars. |
| **NEB Working Principles** | **Participatory process** | ■■■ | - The community or future users can get involved in the **decision making** through the submission of ideas, public voting, participatory budgeting and other approaches.<br>- Simpler forms of public participation such as consultations, surveys, workshops, focus groups are also valuable for the mapping and **identification of needs and preferences**. |
| | **Multi-level engagement** | ■■■ | - The **creation of partnerships** facilitates access to expertise and exchange of knowledge. Such partnerships can then support the project development throughout all following stages. |
| | **Transdisciplinary approach** | ■■ | - Transdisciplinary approaches help in the **gathering of information** on the characteristics and opportunities offered by the project's site and its context.<br>- Transdisciplinary working can also be instrumental in the preparation of the **project concept** itself. |

**Step A2. Preparation**

| | | | |
|---|---|---|---|
| **General description of step** | | | - The viability of the initial idea and concept is determined through studies intended to ensure that the project is **legally and technically feasible**, and **economically justifiable**.<br>- The main outputs of this phase include feasibility study, business plan and concept design. In terms of concept design, the outputs of this step depend on the project type and size, and might include high-level masterplans, architectural drawings, 3D perspectives and others. |
| **Main activities in this step** | | | - The project concept is tested and refined through an evaluation of various **options based on high-level design**.<br>- Preliminary decisions about the project's functions, capacities, physical dimensions, spatial organisation, construction techniques and materials are made.<br>- The project is described in terms of its potential **impacts** (economic, environmental, social, etc.).<br>- Close **consultation with the competent permitting authorities** is maintained to verify the likelihood of approval or achieve buy-in to the emerging project. |
| **NEB Core Values** | **Beautiful** | ■■■ | - **Important preliminary decisions that affect aesthetic quality** are taken at this point, such as on spatial organisation, dimensions, composition of volumes, connection of indoor and outdoor spaces, the distinction between soft and hard landscaped areas, construction systems, on the design of flexible or multi-purpose spaces, the use of modular components, the integration of reused structural elements, and others.<br>- The **integration** of the project to its **context** can be achieved through the choice of architectural morphologies and construction techniques, the integration of elements of high cultural or natural value, etc.<br>- For **new neighbourhoods**, integration depends on the street grid configuration, massing, building coverage, building heights, plot sizes, land use distribution etc. |
| | **Sustainable** | ■■■ | - The adoption of innovative **construction techniques** (e.g., timber-based construction, adoption of modular offsite construction) are considered, subject to refinement at the design phase.<br>- **Passive design** options are evaluated, related to orientation, massing, location and dimensioning of façade openings, etc.<br>- High level decisions related to the choice of heating and cooling systems or the integration of **renewable energy sources** are taken.<br>- For open space and neighbourhood projects, alternative solutions related to the unsealing of soil, the creation of networks of open spaces, etc. are considered. |
| | **Together** | ■■■ | - Options related to **affordability** and mixing of tenure types, accommodation types and uses and shared communal spaces are tested through concept designs.<br>- **Universal physical accessibility** and the provision of diverse **facilities and services for all** in open spaces and neighbourhoods are considered. |
| **NEB Working Principles** | **Participatory process** | ■■■ | - The concept design can be **discussed with the local community**, future users and other stakeholders, in order to help identify the needs and challenges to be addressed.<br>- A comprehensive **public participation strategy** applicable throughout all stages of the project development process can be prepared at this step. |
| | **Multi-level engagement** | ■■ | - **Partnerships** and collaborations already created from the previous step contribute through knowledge exchange or by providing feedback. At this point new collaborations can be initiated.<br>- In neighbourhood projects it is critical to engage with representatives of **adjacent districts** in order to identify potential **synergies**. |
| | **Transdisciplinary approach** | ■■■ | - The technical feasibility and refinement of a project's concept benefits from the **early collaboration of different disciplines**. |

### 4.1.3 Phase B – Design

Phase B "**Design**" includes the process through which the project gets fully described and specified. From an investor point of view, the design phase, in conjunction with the implementation phase, are when the real estate value is generated. This phase includes two steps, "**Preliminary design**" and "**Advanced design**". Both steps have a **high potential to integrate NEB** values and principles. However, the potential is higher during the "Preliminary design" step, where more strategic decisions are still taken for the project.

**Step B1. Preliminary Design**

| | | | |
|---|---|---|---|
| **General description of step** | | | - The preferred concept is translated into a preliminary design presented through a **full set of architectural drawings**, a **preliminary budget** and **timeframe**. In case of new neighbourhoods, the concept plan is developed to the level of a more **detailed masterplan**. |
| **Main activities in this step** | | | - A comprehensive **analysis of the project's context** is undertaken, in terms of **physical, natural, social, economic, and cultural characteristics**.<br>- Efforts to communicate the potential impact of the design include a **variety of presentational formats** including, inter alia, 3D models, samples of building materials and finishes, and others.<br>- In case of new neighbourhoods, the masterplan is translated into **thematic plans** conveying the movement strategy, the landscaping strategy, the proposed mix of land-uses and others. |
| **NEB Core Values** | **Beautiful** | ■■■ | - In this step **key parameters that affect aesthetic quality** are decided (e.g., massing, orientation, façade design, proportions, etc.) At this step there is great potential to integrate, reinterpret or contrast to the project's context. |
| | **Sustainable** | ■■■ | - Most **parameters affecting energy performance are fixed**, including orientation, construction techniques and materials, openings, integration of renewable energy sources, heating and cooling systems, and others.<br>- **Circular design principles** are applied, including, for example, the reuse of materials and structural elements, the flexibility and adaptability of the structure and others. Measures are also taken to allow materials and structural components to be **reused in other locations or future projects** after the end of life of the current project.<br>- Measures that increase the project's **resilience**, such as Nature-based Solutions, are also integrated at this step. |
| | **Together** | ■■■ | - **Physical and cognitive accessibility** can be addressed through careful design.<br>- **Safety** can be embedded through the creation of active frontages and by designing for increased visibility and social interaction in open spaces and large-scale buildings.<br>- Principles necessary for the delivery of **dynamic neighbourhoods** are incorporated, including the fine grain mix of uses, the provision of equally distributed public amenities and green spaces, the integration with public transport networks, etc.<br>- Proposals related to the creation of **shared spaces,** the **mix of housing types**, the creation of **flexible spaces** and others are elaborated at this stage in further detail. |
| **NEB Working Principles** | **Participatory process** | ■■■ | - The engagement of the local community, of future users and relevant stakeholders ensures that **needs and priorities are addressed**, which also increases the chances of community acceptance.<br>- As the design studies progress and more elements get fixed, the character of public participation shifts **from "decision-making" to "informing"**. |
| | **Multi-level engagement** | ■■ | - **Engagement with existing partners and the initiation of new collaborations** can help deliver more advanced and efficient methods of design and construction.<br>- Collaborations at this stage can also **prepare the ground for the next steps**, such as for the efficient launch and operation of the project. |
| | **Transdisciplinary approach** | ■■■ | - At this step **different disciplines work together intensively** as part of the project design team. Depending on the characteristics of each project, the collaboration of design teams with social experts, public engagement experts, artists, technicians and manufacturers can help shape efficient and highly innovative solutions. |

**Step B2. Advanced Design**

| | | | |
|---|---|---|---|
| **General description of step** | | | Based on the preliminary design the project's technical team further refines and specifies the design to prepare the project at the level legally required for **permitting**. |
| **Main activities in this step** | | | - The design is developed to a level of detail that fully describes the project in terms of its physical characteristics and impacts and allows the **preparation of tenders** for project execution.<br>- The advanced design shall include a **full package** of architectural, structural, mechanical, environmental, accessibility and other **studies**, as needed per jurisdiction and depending on the project type and scale. |
| **NEB Core Values** | **Beautiful** | ■■■ | - Decisions are made that still **highly affect the project's aesthetic quality and the users' quality of experience**, related, inter alia, to design of façades, landscaping, use of materials, textures and colours, vegetation, indoors and outdoors furniture and equipment. |
| | **Sustainable** | ■■■ | - The specifications of **materials, structural details**, electromechanical installations and systems and others are highly important for sustainability.<br>- For open spaces, the **landscaping**, the use of **vegetation**, **water** features, paving **materials**, the integration of **Nature-based Solutions**, etc. are key considerations. |
| | **Together** | ■■ | - The project's **physical and cognitive accessibility** can be improved through structural details that allow the use and enjoyment of the project by all.<br>- The project's **flexibility** may be enhanced by including movable and multi-functional furniture, movable or foldable wall partitions or canopies, etc. |
| **NEB W. Principles** | **Participatory process** | ■■ | - Public engagement at this step can help assess the effectiveness of **detailed design elements**, for example related to the design of ergonomic spaces and equipment and structural features that enhance physical and cognitive accessibility. |
| | **Multi-level engagement** | ■ | - Multi-level engagement is **less relevant** to this step, which is mainly about technically specifying the project. |
| | **Transdisciplinary approach** | ■■ | - The collaboration of professionals from **diverse disciplines** and between **design teams and technicians and manufacturers** helps increase the accuracy and efficiency of the design and prepare tenders that **safeguard the quality** of the project. |

### 4.1.4 Phase C – Implementation

Phase C "**Implementation**" includes the project's "**Construction**" and "**Launch**". Both steps are developed in detail in the tables below with regard to their relevance to NEB. The 'Implementation' phase is characterised by a **lower potential to incorporate NEB** values compared to the previous phases. However, there are still many aspects that can improve the project's sustainability and inclusiveness, as well as help address the NEB working principles.

| | | | **Step C1. Construction** |
|---|---|---|---|
| **General description of step** | | | This step includes the **tendering and execution of construction works**. |
| **Main activities in this step** | | | - The procurement process ensures the expertise necessary for the design implementation.<br>- **Works and supervision contracts** help ensure that the designs are faithfully executed and the implementation respects the values embodied in the design. |
| **NEB Core Values** | **Beautiful** | ■■ | - Project site management should aim to **maintain the amenity level** enjoyed in the area and **mitigate negative effects** by employing creative solutions.<br>- With the input of relevant expertise to **supervision**, ensure that any amendments of the design do not diminish the aesthetic quality of the final output.<br>- Any **lease or sale agreements** started during this step shall aim to ensure the preservation of the project's unique values.<br>- The aesthetic value of special construction techniques (e.g., traditional ones) may originate and materialise at this stage through the skills deployed by the involved craftspeople. |
| | **Sustainable** | ■■ | - Sustainability can be addressed by adopting **sustainable construction techniques** that reduce waste generation, such as modular offsite construction, by using locally sourced materials to minimise transport-related emissions, by controlling activities that generate noise and vibrations that disrupt local wildlife, and others. |
| | **Together** | ■■ | - Inclusiveness can be addressed by ensuring **equal treatment of workers and safe working conditions**, by integrating best practice clauses in works contracts, or even by including in the construction team people in need of social integration.<br>- During the construction works, accessibility levels must remain high for all, and especially for people with disabilities, in the area surrounding the construction site. |
| **NEB Working Principles** | **Participatory process** | ■■ | - Local communities shall be **kept informed about the construction process**. Continued engagement with the community helps address any emerging concerns quickly.<br>- The first phase of large-scale projects can act as **demonstrators** for the remaining project, e.g., through open events, helping the public to get familiar and embrace the entire project.<br>- Local communities can be also involved (e.g., through site visits and educational activities, possibly even contributing to some complementary activities in the construction sites, like gardening, community murals, etc.) |
| | **Multi-level engagement** | ■ | - **Implementation progress can be communicated** to the wider public through diverse means, such as live or timelapse video that broadcasts construction progress or through open events where interested stakeholders can be guided through the construction site.<br>- Exchanges between professionals allow **sharing new construction techniques**. |
| | **Transdisciplinary approach** | ■ | - Unforeseen technical problems that might occur during the construction can be better solved through the **on-site collaboration of diverse professionals**. |

**Step C2. Launch**

| | | | |
|---|---|---|---|
| **General description of step** | | | The **commissioning** of the project can be complemented by **publicity** promoting the values embodied in the project development processes. |
| **Main activities in this step** | | | - A well-designed **communication strategy** helps disseminate the embodied NEB values.<br>- In this phase it is important to establish **monitoring and assessment mechanisms** to ensure the continuous improvement of the project. |
| **NEB C. Values** | **Beautiful** | ■ | - The NEB core values are of lower relevance to this step.<br>- Any **lease or sale agreements** can include **clauses** requiring the operation of the assets to standards that ensure the preservation of the project's unique values. |
| | **Sustainable** | ■ | |
| | **Together** | ■ | |
| **NEB Working Principles** | **Participatory process** | ■■ | - The project can be launched using various publicity methods, such as public events, workshops, etc., showcasing the input of a wide range of stakeholders to the project's preparation and **helping future users** and the local community to familiarise themselves with the project and **embrace** it.<br>- In case of **phased projects**, the launch of the first phase can help increase public support and **secure further and effective public participation** in the succeeding phases. |
| | **Multi-level engagement** | ■■ | - At this stage it is possible to **establish partnerships** that will support the project's operation and enhance knowledge exchange and dissemination.<br>- A NEB-aligned project can act as a **demonstrator** itself, providing a reference for other investors and contributing to evolving best practice. |
| | **Transdisciplinary approach** | ■■ | - At this stage the collaboration of the project's **technical team with communication professionals** can help promote the project's values and raise public awareness. |

### 4.1.5 Phase D – Use

In Phase D "**Use**" the asset is finally put into use for the purpose it was created. This phase includes two steps, "**Operation**" and "**Renewal/Conversion**". There is a very **high potential** to align with NEB working principles during the "**Operation**" step. During the "Renewal/Conversion" step a new project development cycle practically starts again. Ways to integrate NEB in both steps are described below:

**Step D1. Operation**

| | | | |
|---|---|---|---|
| **General description of step** | | | The asset is put into **operation** for its intended use. This step also includes the asset's **maintenance** and the **monitoring** of its performance. |
| **Main activities in this step** | | | - The NEB core values and working principles shall be **sustained throughout the use and operation** of the project to generate a long-term positive impact for the area.<br>- The **maintenance** of the asset and the **monitoring** of its performance will be critical, allowing for the early identification and resolution of potential issues. |
| **NEB Core Values** | **Beautiful** | ■■ | - The **flexibility** of the design gives opportunities to the users to adapt the project to their needs. This **animates** the project and increases its aesthetic quality and identity.<br>- The selection of high-quality materials and the implementation of the project in high technical standards is reflected in the high **long-term aesthetic quality** of the project.<br>- **Efficient maintenance** will be key in sustaining aesthetic quality. |
| | **Sustainable** | ■■ | - Sustainability can be enhanced in diverse ways, such us by **maintaining green spaces,** introducing measures to promote **resilience** and **biodiversity**, promoting **behavioural change**, for example by introducing local material banks, by prohibiting the use of single use plastics wherever relevant, etc. |
| | **Together** | ■■ | - **Safety**, **equal access** and **comfort for all** can be enhanced during the project's operation, for example by tracking and improving the environment's **accessibility** and ensuring high maintenance standards. |
| **NEB Working Principles** | **Participatory process** | ■■■ | - The **collaborative operation and maintenance** of open spaces and neighbourhoods can be achieved though diverse initiatives, such as play streets, community cleanups, park adoption programmes, and others.<br>- Projects that are public in nature, such as cultural buildings, offer a higher potential for public engagement, for example through the organisation of **events and activities** that are either **led by the community or other stakeholders**.<br>- Collaborative operation is highly relevant to projects that are collective by nature, such as **housing cooperatives**, but also to conventional buildings through the shared management of **communal spaces**.<br>- Setting up **community forums** is valuable for the monitoring of the assets' **performance** and the **users' satisfaction**, helping to inform the asset's management.<br>- The collection and combination of data from both stakeholders and technical systems can help understand how design relates to the project's performance, in order to **inform future outcome-based design approaches**. |
| | **Multi-level engagement** | ■■■ | - A high-quality project acts as a **role model**, raising awareness towards the environment, social inclusion and culture.<br>- **Good practices** adopted by the project can be further promoted and communicated (e.g., through marketing campaigns, participation in forums, conferences, etc.).<br>- New and established **partnerships** facilitate exchange of knowledge.<br>- In all project types maintaining **open channels of communication** between property owners, managers and the local community can lead to the early identification and tackling of potential problems. |
| | **Transdisciplinary approach** | ■■■ | - The collaboration of the asset management with **diverse professionals**, such as technical experts, social experts, artists, education professionals, and other specialists, can lead to highly creative and **innovative approaches to operation**. |

**Step D2. Renewal/Conversion**

| | | | |
|---|---|---|---|
| **General description of step** | | | This step includes the **adaptation**, **expansion**, **refurbishment** or **repurposing** of an asset or set of assets. |
| **Main activities in this step** | | | - During this step an asset proven to be **unfit for its current use** is refurbished or adapted to new needs.<br>- A **new project development cycle** starts at this step, which includes a new project concept and design, leading to construction works and the re-launch of the asset.<br>- In case of neighbourhoods, the **plan preparation cycle re-commences**, providing for reinvestment and physical change in response to demographic change, new patterns of land-use and changing market demands. |
| **NEB Core Values** | **Beautiful** | ■■■ | - Depending on the scope and extent of the conversion or renewal, most suggestions relevant to the integration of NEB core values in the previous steps are **also applicable at this step**.<br>- If the original project was designed for flexibility, high and long-term aesthetic value, sustainability and increased accessibility, then its **renewal or conversion should be easier and more cost effective**.<br>- Even when a project reaches its end of life, and if the original project was prepared with attention to the use of materials and the design of its structural components, then these shall be **reusable in other projects or locations**, paving the way towards the built environment acting as a **material bank** where materials temporarily configure into a project, before finding their next use. |
| | **Sustainable** | ■■■ | |
| | **Together** | ■■■ | |
| **NEB Working Principles** | **Participatory process** | ■■■ | - Depending on the scope and extent of the conversion or renewal, the suggestions related to the integration of the NEB working principles in the previous phases are **also applicable to this step**.<br>- Planning for reuse and conversion often **starts in advance of the end of use** in order to identify key adaptation requirements. In this respect public engagement can be highly useful, helping to identify aspects that need improvement as early as possible.<br>- Multi-level and transdisciplinary working can also help **analyse challenges encountered during use** and explore ways to adapt the asset creatively, integrating new uses and identifying complementarities with other adjacent assets, for example with regard to shared resources and spaces. |
| | **Multi-level engagement** | ■■■ | |
| | **Transdisciplinary approach** | ■■■ | |

## 4.2 NEB competences

The previous sections have shown how NEB promotes innovative and holistic project preparation approaches, aiming for built environment projects that are aesthetically appealing, socially inclusive and environmentally sustainable. The **multi-dimensionality of NEB projects** requires the dynamic collaboration of professionals coming from diverse disciplines. Furthermore, the NEB working principle of **transdisciplinarity** addresses specifically the need to work beyond disciplinary silos and defines the collaboration of professionals coming from different disciplines as an essential strategy for the preparation and operation of high-quality projects.

Built environment projects require by nature the collaboration of professionals from diverse disciplines, such as architects, planners, engineers, sustainability and environmental experts, project managers, economists and others. NEB aspires to further **increase the multidisciplinary character of built environment working teams**, recognising the significant role of professionals that are not traditionally part of design and construction teams. Such professionals include for example social experts, artists and other cultural experts, public engagement experts, and mediators and facilitators.

Furthermore, NEB stresses the need to further **reinforce the integration between disciplines** in order to push knowledge boundaries and support the creation of innovative and holistic solutions. Such collaborations include, for example, architects working together with technicians and manufacturers, environmental experts with social experts, or artists with engineers.

The following table indicates **which experts coming from different sectors** (planning and design; technical; cultural; social) can be relevant for the preparation of NEB aligned projects. The list is not exhaustive. It is also noted that, in many cases, a single expert or company can provide expertise across different fields and therefore cover more than one role. Additionally, the unique characteristics of each project in terms of sector, size, objectives and context, also determine the most appropriate and effective level of expert engagement. While, for example, very large projects in challenging social contexts may require comprehensive support from a team of social experts throughout the entire project preparation process, a small highly innovative project may require the focused involvement of a technical expert with very specific competencies during short decision-making points.

| NEB Competences | Relevance for NEB |
|---|---|
| **Planning and design** | |
| **Architects** | - Architects play a key role in the development of NEB aligned projects, especially buildings. They combine knowledge in engineering, material science, arts and social studies. As a result, they can help align projects to all three NEB core values.<br>- During public participation events they are often responsible for communicating design proposals to the public and for integrating input from the public back into the design.<br>- Architects are usually the coordinators of design teams and are responsible of bringing all technical aspects together. In view of NEB, architects could potentially be the coordinators of multi-disciplinary teams that also include social experts, artists, technicians and others. |
| **Urban planners and related planners** | - Urban planners play a significant role in neighbourhood projects or in large scale building or open space projects. They can contribute to all NEB core values by planning lively and inclusive neighbourhoods, controlled to a significant extent by the mix of uses, densities, the massing of buildings, the equitable provision of amenities and green spaces, the integration of public transport, and others.<br>- Other types of planners are relevant as well, for example transport and mobility planners. |
| **Urban designers** | - Broadly speaking, urban designers provide expertise that bridges the gap between architecture and urban planning. They can help better align projects to NEB by providing input related to the design of open spaces and streets, neighbourhoods, but also related to the interface between buildings and public realm.<br>- They can also provide input on the relationship of urban morphology with socioeconomic performance, patterns of pedestrian movement and use of space, visual attractiveness, inclusiveness and sustainability. |
| **Landscape architects** | - Landscape architects are responsible for the design of all types of green spaces, from big scale urban parks to pocket parks, courtyards and green roofs. |

| | |
|---|---|
| | - They play a key role in bridging aesthetics to sustainability. Together with architects and urban designers, landscape architects are responsible for the spatial organisation and programming of open spaces, thus playing an important role also in addressing inclusiveness. |
| **Industrial designers** | - Industrial designers are responsible for the detailed design of specific project components, such as structural elements (e.g., façade systems) or equipment (furniture, lighting equipment etc.)<br>- They play a significant role in achieving ergonomic and universal design, ensuring that the provided furniture and equipment accommodate diverse needs, disabilities, and preferences.<br>- Their contribution is important in designing systems that provide flexibility and support changing needs, such as adaptive façade systems, movable internal partitions, etc. |

| NEB Competences | Relevance for NEB |
|---|---|
| **Technical** | |
| **Project managers** | - Project managers are responsible for coordinating all processes needed for the development of a project, from concept and design to implementation and monitoring. Their role is key in ensuring that the NEB core values and working principles are integrated in all steps of the project development, to the degree possible.<br>- Project managers are also responsible for assessing and managing risks, which can be different for NEB-aligned projects compared to conventional ones (see also Sec. 4.4). |
| **Engineers** | - Engineers involved in built environment projects have diverse specialisations, including structural, mechanical, hydraulic engineers, and others. They mainly contribute to the creation of functional, safe and sustainable projects, but their input also affects aesthetics and inclusiveness.<br>- As for project managers, engineers also key in assessing and managing risks, including those arising specifically from the alignment with NEB values and principles. |
| **Technicians and manufacturers** | - Technicians, such as blacksmiths, carpenters, stones masons and others, are usually experienced in working with local materials and techniques, which can lead to tailored, innovative and context-sensitive design solutions.<br>- Manufacturers have deep knowledge of their materials and products. Thus, the collaboration of designers with manufacturers can lead to the development of new innovative materials and the adaptation and evolution of structural solutions. |
| **Sustainability /climate experts** | - Sustainability/climate experts provide technical input related to the NEB value of sustainability, advising on circularity, climate mitigation, addressing topics such as passive design, generation of energy from renewable sources, and climate adaptation.<br>- Their contribution can also impact aesthetics and social inclusion, for example by tackling challenges such as energy poverty, promoting energy communities etc. |
| **Environmental experts** | - Depending on the project's characteristics, the scope of work of environmental experts might partly overlap with that of sustainability experts. However, environmental experts with a background in biology or ecology play an important role in effectively addressing the protection and restoration of biodiversity and ecosystems, in supporting the integration of Nature-based Solutions and others. |
| **Accessibility experts** | - Accessibility experts are professionals who specialise in ensuring that buildings, open spaces and neighbourhoods are accessible to all, including people with disabilities.<br>- They set accessibility requirements, implement standards and test the applied solutions. |
| **Certification experts** | - Certification experts are responsible for following the project during its preparation and implementation and assessing its performance along different dimensions related to sustainability and quality.<br>- For NEB projects, this task can be particularly relevant, as projects might have unconventional characteristics, including non-technical ones.<br>- Certification experts can also have a key role in establishing new approaches to the independent evaluation of new aspects, especially those which are most difficult to capture. |

| NEB Competences | Relevance for NEB |
|---|---|
| **Culture experts** | |
| **Artists** | - Art is key in bridging aesthetics, sustainability and inclusiveness, for example by increasing the aesthetic value of conventional sustainability solutions, by raising awareness on social and environmental matters, by helping change stereotypes and supporting behavioural and cultural shifts. |
| **Heritage experts** | - Heritage experts have expertise in the restoration and promotion of heritage-related buildings, open spaces and settlements. They can provide input related to suitable construction and restoration techniques and materials.<br>- Their engagement with communities and stakeholders can help identify and protect cultural and historical heritage assets and values. |
| **Other cultural professionals** | - Other cultural professionals that can contribute to the preparation of NEB aligned projects include historians, representatives of cultural institutions, curators, cultural policy experts, educators and others. |

| NEB Competences | Relevance for NEB |
|---|---|
| **Social experts** | |
| **Social scientists and economists** | - Social scientists and economists help align projects to their specific socio-economic context and ensure that the positive impacts of the projects are maximised.<br>- Social scientists can help identify the unique needs, obstacles and preferences of future users and the local communities, with a focus on underrepresented and vulnerable social groups.<br>- Economists are also key contributors to the feasibility analysis of projects, especially those with public character, e.g., with regard to the socio-economic impacts of NEB aligned projects. |
| **Public participation experts** | - The role of public participation experts is key because active community engagement is a fundamental component of NEB-aligned projects.<br>- Public participation experts are responsible for the design and implementation of public engagement strategies and activities. They apply the most suitable participatory techniques and approaches for the specific project and context, also ensuring the inclusion of vulnerable or underrepresented groups and individuals. |
| **Facilitators and mediators** | - NEB projects involve multiple stakeholders, from institutions and local governments to citizens initiatives and individuals. They are thus characterised by increased complexity. Facilitators and mediators support the collaboration between different parties, helping them shift away from a rigid stance and solve problems together. |
| **Communication experts** | - Communication experts can be especially helpful in facilitating the communication and the flow of information during the various steps of public participation processes, including reaching out to socially excluded groups.<br>- Moreover, communication experts help to disseminate knowledge during the projects' preparation and operation though various means, also ensuring that the projects are embedded in relevant networks and knowledge sharing activities. |

## 4.3 Procurement

Projects in the built environment are characterised by a strong distribution of roles across many specialised contractors, in the preparation, design and construction phases. The **procurement activities** are therefore key to the achievement of the project's objectives in terms of cost, quality, and timeline.

At the same time, the increasing level of fragmentation and distribution of the services and works across many specialised providers, including long and complex supply chains, shifts most of the responsibility for sustainable value creation from the project owners to the contractors. Procurement has therefore been developing from a functional task into a **key instrument** for the fulfilment of the investor and developer's ambitions.

Investors and developers that aim to implement NEB values and principles set high expectations for the service providers involved in the preparation and implementation of the project. This means that NEB projects require additional and broader **competences**, which go far beyond the technical variety typically associated with the built environment, see also Sec. 4.2.

Moreover, NEB projects typically go well beyond conventional practice and are not satisfied merely by compliance to legal requirements and mandatory minimal safeguards. The selection of **contractors** with specific capacities and expertise which are in line with the high ambitions of the project owners, is therefore a fundamental step.

At the same time, NEB naturally requires that the **modalities** under which the services are provided and works carried out are of utmost quality. Both public and private buyers can include specific social objectives in their procurement goals. Examples of social objectives, which are also immediately relevant for NEB, are:

- promoting fair employment opportunities and social inclusion;
- providing opportunities for social economy and social enterprises;
- procuring goods, services and works that are accessible to all ("design for all");
- respecting human rights and addressing ethical trade issues;
- delivering high quality social, health, education and cultural services.

Moreover, an important element of socially responsible procurement is to **consult the relevant stakeholders** which are directly or indirectly affected by the procurement decisions. This can help the contracting authority better understand barriers and opportunities for "buying social".

Finally, from a NEB perspective, procurement is also a key instrument for stimulating the **internalisation of NEB values and principles by the market**. This requires service providers to devote attention to non-technical aspects and start including them in their portfolio of competences.

With regard to public procurement, the **Public Procurement Directives** (Dir. 2014/24/EU and 2014/25/EU) have introduced rules and mechanisms that specifically support the procurement of ambitious solutions. These rules are pivotal in bringing together the NEB ambitions with the strict requirements of public procurement legislation.

By way of example, Art. 67 of the Directive has explicitly introduced **lifecycle costing** (defined in Art. 68 and including "costs imputed to environmental externalities") as a possible approach to assess the most economically advantageous tender, thereby opening the possibility to explicitly include sustainability considerations in the procedures. In general, it is now possible to introduce in public procurement procedures high requirements on aspects not immediately linked to the subject of the procedure, or going beyond what is immediately needed under the primary objective of the procedure.

Based on these set of rules, the European Commission has brought forward a comprehensive strategy for "**strategic procurement**".[65] The strategy is based on three main dimensions, which are immediately relevant to NEB projects:

- **Innovation** procurement: Initiatives to promote the procurement of innovative solutions[66]

[65] https://single-market-economy.ec.europa.eu/single-market/public-procurement/strategic-procurement_en

[66] 2021/C 267/01, Commission notice, Guidance on Innovation Procurement, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021XC0706(03)

- **Green** public procurement: Reducing the environmental impact of public procurement[67,68]
- **Socially responsible** public procurement: Using public contracts to achieve positive social outcomes[69]

Among others, a further aspect addressed by the Public Procurement Directives which is of particular relevance for NEB is the possibility to include "aesthetic and functional characteristics, accessibility, design for all users, social, environmental and innovative characteristics" as **contract award criteria**.

Due to its relevance and capillarity, a number of policy initiatives exist, and guidance documents are available on sustainable and inclusive public procurement, both on general procurement[70] and specifically for procurement related to **buildings**.[71]

With regard to the **accessibility of people with disabilities**, the Public Procurement Directives require that accessibility criteria for persons with disabilities or design for all users are included in technical specifications for all procurement which is intended for use by natural persons.

**National legislation** on procurement as well as further relevant rules (e.g., National competition law, sectoral rules addressing specifically the construction sector, public budget law, etc.), can also play a key role in supporting or enabling NEB projects. Moreover, further rules may apply to the (public) procurement of NEB projects, for example those relevant to the procurement of services (maintenance, operation, specific services to users, etc.).[72]

The table below summarises the main **workflow of a general procurement process** for services or works and indicates how the NEB is relevant to single steps. It is noted that some steps are not necessarily sequential but may need to be carried out in parallel. While the considerations presented are mainly based on the practice of public procurement, such principles of good practice are universal and also immediately relevant to procurement activities in the private sector.

[67] COM(2008) 400 final, Public procurement for a better environment, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52008DC0400

[68] European Commission, Directorate-General for Environment, Buying green! – A handbook on green public procurement, 2016. Available at: https://data.europa.eu/doi/10.2779/837689

[69] 2021/C 237/01, Buying Social – A guide to taking account of social considerations in public procurement – Second edition. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021XC0618(01)

[70] See, for example: UNEP (2021), Sustainable Public Procurement: How to Wake the Sleeping Giant! Introducing the United Nations Environment Programme's Approach. Available at: https://wedocs.unep.org/bitstream/handle/20.500.11822/37045/SPPWSG.pdf; UNDP (2022), Inclusive Public Procurement Playbook. Available at: UNDP_BCtA_Inclusive_Public_Procurement_Playbook-D4.pdf (squarespace.com) ; ICLEI (2016), The Procura+ Manual, A Guide to Implementing Sustainable Procurement, 3rd Edition. Available at: https://procuraplus.org/fileadmin/user_upload/Manual/ManualProcura_online_version_new_logo.pdf

[71] See, for example: UNEP (2018), Guidance Document on Procuring Sustainable Buildings and Construction. Available at: https://www.oneplanetnetwork.org/sites/default/files/guidance_document_on_procuring_sustainable_buildings_and_construction_final.pdf; SAICM Secretariat, Sustainable Procurement of Building Materials: A Progressive Approach to Chemicals of Concern, 2023. Available at: https://saicmknowledge.org/sites/default/files/resources/Sustainable%20Procurement%20of%20Building%20Materials_CoC.pdf; European Commission (2022), Joint Research Centre, EU Green Public Procurement (GPP) criteria for the design, construction, renovation, demolition and management of buildings (Draft), 2022. Available at: https://susproc.jrc.ec.europa.eu/product-bureau/sites/default/files/2022-03/GPP_Buildings_TR_v1.01.pdf

[72] Public procurement rules can also be a challenge to the implementation of highly ambitious projects following NEB values and principles, see for example the Statement of the New European Bauhaus Collective (NEBC) on Public Procurement. Available at: https://www.ace-cae.eu/fileadmin/user_upload/Public_Procurement_FINAL.pdf

| | Description | Relevance for NEB |
|---|---|---|
| **1. Definition of the procurement strategy** | - This step consists in setting the overall strategy or plan for the entire project, considering the **specific characteristics, the objectives and the context**.<br>- In practical terms, it includes fixing the **structure and scope** of the individual procedures (e.g., the level of aggregation or disaggregation of the project's tasks).<br>- It covers also the assessment of **risks and opportunities** from procurement perspectives, for example regarding know-how available in the market on specific local knowledge on traditional techniques.<br>- For complex projects, it includes also distributing **responsibilities** across the involved parties.<br>- **Market sounding** is also needed to tailor the strategy to the capability of the market to respond. | - From a NEB perspective, this step is particularly relevant because of the **unconventional nature and elements** of NEB projects.<br>- Having a strong focus on **aesthetical**, **environmental** and **social/participatory** aspects and innovation affects the definition of the strategy.<br>- For example, NEB projects may require **unconventional strategies** or targeting **specialised design and preparatory services**, more than relying on customary design and build contracts.<br>- Finally, as the individual procedures are expected to include criteria which may go well **beyond standard practice**, the **ability of the market** to provide such services (and under which conditions) needs to be considered at this early stage. |
| *For each procedure:* | | |
| **2. Assessment of needs and subject of the procedure** | - The step consists in assessing the **specific needs** (studies, design, works, etc.) and detailing the **subject and scope** of the procurement.<br>- This includes among others the **need to procure at all**, against other **alternatives** (e.g., use of alternative models, like leasing; access to services through other channels; etc.)<br>- The thematic coverage is particularly relevant for **transdisciplinary** projects, including the possible subdivision in thematic **lots**. | - This is a key step for NEB projects, as they do not limit themselves to providing assets but **respond to deeper needs**.<br>- This step is therefore also linked to the extensive **interaction with communities and stakeholders**.<br>- In particular, the stakeholders may need to be informed about **ambitions which cannot be easily provided** by the (local) market, or may be too expensive, or are not available at all.<br>- The procurement experts with knowledge of the market are expected to put forward as needed **alternative ideas** to the original vision, when these are not feasible.<br>- The extensive use of **lots** is also particularly relevant to encourage the participation of **smaller bidders**, like social and local enterprises. |
| **3. Choice of most suitable type of procedure** | - This step consists in assessing **benefits and challenges** of different approaches to identify the most suitable procedure.<br>- In general, more **complex procedures** can help achieve **higher ambitions**.<br>- However, they imply a significant amount of **time and resources** and, above all, require **knowledge and experience** to be successful.<br>- The choice of the procedure is also key to ensure **market interest and response** (e.g., in terms of sufficient number of bidders). | - **No procedure** is in general more suited for NEB projects than others.<br>- However, the **innovative and complex** nature of NEB projects may be best managed by making use of procedures with extensive possibilities for **interaction and dialogue** with interested bidders.<br>- These offer to the contracting authority the biggest room for achieving **tailored solutions** and taking advantage of the **knowledge and innovativeness of bidders**. |

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| **4. Definition of selection criteria** | - This step consists of defining a **minimum level of capacity** of the bidder, with reference to the subject of the procedure.<br>- The criteria help **filter out bidders** which may not be able to deliver the works or services with the expected level of quality, while **ensuring a large pool of potential bidders**.<br>- This is particularly relevant in terms of bidders' **knowledge and experience** with additional aspects like **sustainability, engagement with stakeholders**, etc. | - NEB projects can be very demanding in preparation and realisation, therefore **requiring experience and know-how**.<br>- In particular, NEB projects require high standards also with regard to the **non-technical competencies** of bidders.<br>- On the other hand, NEB projects should **encourage (or avoid preventing) the participation of smaller providers** like social enterprises, which may be desirable and reliable but not large or competitive enough in the market.<br>- Among others, an important selection criterion for NEB projects is the **link to the local community**. In public procurement, this aspect has however to be carefully formulated to avoid illicit restriction of competition.<br>- Ensuring **accessibility for all**, including for persons with disabilities, is also an important selection criterion. |
| **5. Definition of award criteria** | - This step consists of translating the project objectives into **concrete and objective requirements** and specifications.<br>- The **level of detail** depends on the choice of procedure and the overall procurement strategy.<br>- In general, the criteria can be defined in terms of **functional requirements or technical specifications or both**.<br>- The extent to which bidders are allowed to present variants helps strike a balance between **pursuing precise goals and flexibility**.<br>- When defining the criteria, it is common to refer to the largest possible extent to **existing standards**, including certifications and other independent proofs. | - A key challenge of NEB projects is that they also refer to features and quality attributes which are **not easily quantifiable or measurable**, nor captured by conventional value engineering.<br>- To this aim, an extensive use **of functional specifications and optional requirements** (therefore allowing for variants) can help identify new ways to achieve the NEB ambitions.<br>- Similarly, the weights of the different criteria should favour **quality over cost**, while pursuing the economically most advantageous result.<br>- With regard to sustainability, there exists established practice on how to include the respective requirements, for example, by referring extensively to **lifecycle costs**.<br>- Similarly, the inclusion of **social aspects** is becoming more and more common, although it may be limited to some aspects (e.g., social standards in supply-chain) and therefore not correspond to the NEB ambitions. High accessibility levels for all social groups, especially for persons with disabilities, should be rewarded.<br>- Finally, **aesthetic quality** cannot be easily addressed through procurement processes, and is better assessed by other means like architectural design competitions. |
| **6. Specification of duties and obligations of the selected bidder** | - In this step, the **detailed requirements** on the services and works to be provided are specified.<br>- This covers not only the **substance of the works and services** but also all the relevant specifications on **how they are to be delivered**.<br>- Typically, this also includes **performance and quality indicators**, the **modalities to deal with risks and unexpected events**, any **complementary activities** to be carried out (e.g., accompanying and mitigation measures), etc. | - NEB projects can include a significant amount of features and activities which **go beyond standard construction works**. For example, it is possible that NEB-aligned projects will include uncommon (new or traditional) materials, techniques and skills.<br>- NEB core values can thoroughly affect design aspects, but can still be **manageable in a conventional project setup**. NEB working principles, however, have a **strong influence on the way the project is implemented and delivered**.<br>- Among others, NEB projects request thorough interaction with communities. Depending on the specific procurement model used and the allocation of roles and responsibilities between the client and the contactors, the **modalities for** |

| | | |
|---|---|---|
| | | **the interaction with the stakeholders** have to be specified in the tendering documentation.<br>- A further aspect is the **management of specific challenges** linked to NEB (see Sec. 5.3). While they are not proper project risks (in the meaning that they cannot affect the project delivery, but they can affect the project impacts from a NEB perspective), they need to be covered by the **contractual specifications**. |
| **7. Launch of the procedure and award of the contract** | - This step consists of the **actual procurement process**. Referring to a public procurement procedure, the main activities are:<br>- Publication of the **tender**<br>- Run of **information sessions**<br>- Managing of bidders' **enquiries**<br>- Publication of **clarifications and amendments**<br>- Rounds of **negotiation or pre-selection** (if and as foreseen by the procedure)<br>- **Evaluation** of the final bids, including variants (if any)<br>- **Award**<br>- (Management of complaints as needed) | - This step is in general **not different than that of "conventional" projects**.<br>- **Public sector contractors** are strictly **bound to public procurement rules** and have therefore very limited room for manoeuvre. In general, the high level of ambition in looking for the most "NEB-aligned" bidders has to be proportionate to the risk of invalidating the procedure due to procedural errors (with the related delays and additional costs).<br>- From a NEB perspective, allowing for **variants** can be an extremely powerful way to take advantage of the bidders' knowledge, experience and creativity. However, variants need to be carefully managed and assessed in order to avoid complaints.<br>- **Private sector entities** are in this regard unbound and can **freely shape the procedure** according to their preferences. In practice, they can identify the service providers which are most in line with their expectations and visions without having to care for transparency. Nonetheless, such freedom can lead to suboptimal outcomes – applying good practice from public procurement can help private sector entities to pick the best providers. |
| **8. Execution** | - The execution of the contract is an **independent phase**, although immediately linked to the decisions made in the procurement phase.<br>- In particular, the contract management has to deal with possible **variations in the contract**.<br>- This is however strictly **dependent on the specific contractual model** in use. | - Depending on the project type, NEB projects might be more **challenging** in their execution and it can be necessary to react flexibly to unexpected developments.<br>- While sufficient **flexibility** needs to be included in the contractual framework, granting too much unconditional flexibility to the providers can lead to inefficiencies. Therefore, it can be necessary to introduce variations to the contract during execution.<br>- Under public procurement, any **changes** must happen following strictly the **rules laid out in the original contract**. Private sector entities have more freedom in adapting the contract to unforeseen events.<br>- In any case, the success of the contract at execution stage is strongly dependent on the **quality of the design and detailing of the procurement strategy**. |

There are however many other ways in which the procurement process can support alignment to the NEB values and principles. Further **good procurement practice** can consist of the following actions:

- Avoid that the procurement is "siloed" and separated from the overall NEB project, at the level of strategy, operation and responsibilities.

- Involve actively final users with a consultative role as in the procurement procedure.
- Ensure monitoring and communication, allowing for feedback, adjustments and corrective actions when procurement encounters challenges which may jeopardise the achievement of the NEB goals.
- Conduct a procurement risk assessment specifically addressing the non-technical aspects.
- Identify and interlink in the procurement strategy the procurement categories or specific contracts with particularly relevant social components.
- Understand and systematise in the procurement strategy which social objectives can be achieved through procurement and how (synergies, gaps, or barriers).
- Understand and communicate to relevant decision makers obligations and opportunities linked to procurement, identifying in particular the risks for achieving the NEB objectives arising for underestimating the procurement process.
- When carrying out market sounding and market dialogue, ensure that the non-technical aspects are given proper attention and the relevant experts are involved.
- Ensure that the ambitions and objectives are monitored, especially those which are more difficult to measure, by including contractual clauses that deal specifically with those aspects.

As mentioned in previous sections, the use of **Public-Private Partnership (PPP)** procurement and delivery models could be attractive for investors implementing NEB aligned projects. On the **benefit** side, PPP models suit well situations in which the private sector is willing to engage with the optimal provision and operation of assets and services optimising investment on a life-cycle approach which would typically fall in the public remit and bringing innovation in areas such as design solutions. Considering that, as discussed in Sec. 2.3, NEB values and principles are desirable and applicable in projects with public character and high ambitions, there can be a natural affinity between NEB and PPP models. As a matter of fact, there are examples of ambitious and successful projects in the built environment delivered under such arrangements.[73]

However, there are also significant **challenges** and possibly mismatches to PPP arrangements. Above all, it is highly important to be very precise in specifying NEB requirements in a PPP context due to the need to avoid legal disputes and ensure PPP investors can estimate their costs very precisely. Moreover, PPP models, by shifting typically public tasks to the private partner, may suffer under lack of transparency and be questioned by the public, as the public authorities have to give up some control over public assets and services. They can also be inflexible in terms of adjustment during implementation, for example in taking account of NEB elements not considered during project design, especially given the long lifetime of many PPP contracts. Finally, PPP do not necessarily provide gains in terms of quality and efficiency compared to more traditional procurement approaches, and it is challenging to assess ex-ante the case for a PPP model.

Finally, there can be alternative procurement models which could be particularly suited for NEB projects but have not yet been adopted in EU member states. An example is "**alliancing procurement"**, which is a procurement strategy based on collaboration and equal footing of the project partners, and therefore sharing of risks of benefits. It is particularly well suited for projects with high stakeholder involvement, shared objectives among the project partners, early and intense collaboration, and similar challenges with strong cooperative character.[74]

[73] A notable PPP example of high architectural value is the new concert hall in Hamburg ("Elbphilarmonie"), a highly visible, iconic building and key element of the redevelopment of Hamburg's port district. While being very well received by experts and the general public, the construction was affected by large delays and cost overruns, see for example: https://en.wikipedia.org/wiki/Elbphilharmonie

[74] For an overview of alliancing, see for example: https://cms.law/en/media/international/files/publications/guides/cms-guide-to-contract-alliancing-in-construction, and https://www.wsp.com/en-gl/insights/leveraging-project-procurement-and-delivery-approaches-for-positive-outcomes. For an institutional guidance, see: Australian Government, National Alliance Contracting Guidelines, 2015, available at https://www.infrastructure.gov.au/sites/default/files/migrated/infrastructure/ngpd/files/National_Guide_to_Alliance_Contracting.pdf
The German government is currently supporting the introduction of alternative models for built environment projects, including in particular alliancing, see: https://www.bmwsb.bund.de/Webs/BMWSB/DE/themen/bauen/bauwesen/innovative-vertragsmodelle/innovative-vertragsmodelle-node.htm

## 4.4 Project risks

Projects in the built environment are exposed to a significant number of risks (i.e., uncertainties), arising in particular from the high number of interfaces. Therefore, beyond conventional project management risks (denoted as "**internal risks**"), projects in the built environment are affected by external factors and related risks (denoted as "**external risks**"), which are in general not under the control of investors and developers and can therefore be challenging to manage and mitigate.

Projects that are NEB aligned typically have some **peculiar characteristics** which can affect the level of individual risks, mainly for the better. A NEB aligned project shall be well placed to respond to identified needs and the project context. Moreover, NEB projects are typically attractive in terms of aesthetics and functionality, as well as fundamentally sustainable. These and other aspects can help **reducing the exposure** to many risk categories. On the other hand, NEB projects tend to be more complex in their preparation and have more interfaces with different stakeholders, which may increase the exposure to other risk categories.

The table below reports **typical project risk categories** in built environment projects, i.e., risks which occur independently of NEB, and indicates how they are impacted by NEB. The table does **not** address the specific **challenges** that investors can encounter when dealing with the NEB values and principles. The challenges are discussed, together with the benefits from aligning to NEB, in Ch. 5.

It is important to stress that the two aspects – **risks and challenges** – are **different**. For example, aligning to NEB can induce **additional costs**, which is a **challenge** to investors and developers. However, additional costs are not a risk, if they are precisely assessed and properly included in the financial plan. On the contrary, if costs are highly **uncertain** and difficult to assess and the financial plan does not include sufficient contingencies, this results in a **risk** of cost overruns.[75]

| Project risk | Relevance for NEB | Impact by NEB | |
|---|---|---|---|
| **Internal risks** | | | |
| **Quality risk** | ■■■ | NEB projects are very sensitive to quality risks. However, emphasis of NEB on **thorough preparation and implementation** reduces the exposure to quality risks compared to conventional projects developed under very strong profit pressure. | ▼ |
| **Investment cost risk (cost overruns)** | ■■■ | NEB projects can be exposed to higher risk of cost overruns due to **unconventional layout, innovative technical solutions**, etc. On the other hand, NEB aligned projects are typically **prepared thoroughly**, which helps to reduce the risk of costs overruns. Therefore, in sum, while NEB projects might be more expensive than conventional ones, depending on the case, **the overall cost risk is not necessarily greater**. | – |
| **Scheduling risk** | ■■■ | NEB projects may require **complex interaction processes** with many stakeholders, **increasing the risk of delays**. Particularly innovative technical solutions can also negatively affect the project schedule. However, the thorough preparation of NEB projects typically **pre-empts possible causes of delays** (e.g., those related to public opposition) | – |
| **Organisational risk** | ■■■ | The interaction with many stakeholders, the cooperation across many disciplines, and the involvement of many experts make NEB projects more **complex to organise**. This is indeed a peculiar challenge arising from the NEB ambitions and increases the organisational risk compared to conventional projects. | ▲ |
| **External risks** | | | |

[75] It is noted that challenges and risks can be linked. For example, in the case of additional costs (challenge) and cost overruns (risk), additional costs can make the cost structure more complex and difficult to assess, therefore increasing the cost risk. However, this is not necessarily the case.

| | | | |
|---|---|---|---|
| **Ground risk** | ■■ | NEB projects might make a large use of **"unconventional" building plots and areas** (wasteland, abandoned plots, etc.), with the related uncertainties, both physical and legal. Therefore, NEB projects may overall be more exposed to this category of risks. However, at the level of individual projects, there is **no reason to assume that any NEB project is more sensitive to ground risk than conventional projects**. | — |
| **Development/ market risk** | ■■■ | High aesthetic quality and distinctiveness of NEB-aligned developments results typically in **high attractiveness**. Moreover, **lower operational costs** (and other perspective material benefits) can be strong selling points and further support demand. Therefore, NEB projects are in general less exposed to market risk. | ▼ |
| **Rental risk** | ■■ | NEB aligned projects, by creating high quality places in terms of physical and mental well-being and social relationships, can lead to more **stable and long-lasting rental agreements**, better relationships and **care among tenants and between tenants and landlords**. | ▼ |
| **Location risk** | ■■ | NEB values and principles can help deal with contexts and **locations which are challenging** from a social, environmental and historical angle. The NEB holistic approach can also **help correcting – or at least lessening the drawbacks of – poor urban planning**. Therefore, NEB alignment reduces the location risk. | ▼ |
| **Tax risk** | ■ | While this risk can be relevant for general projects, it is not directly affected by the fact that a project is aligned to NEB core values and principles. However, NEB projects can be entitled to **tax benefits** more often than conventional projects, for example if the developer is a non-profit association. | — |
| **Approval risk** | ■■ | Especially for larger projects, approval risk can be a key early risk in the development process. The alignment with NEB can help reduce the exposure to this risk. The close **interaction with stakeholders pre-empts possible opposition** and also increases the **acceptance and support by relevant authorities and decision makers**. | ▼ |
| **Financing risk (interest rate, grants, etc.)** | ■■ | Compared to a conventional project, the impact of the NEB is twofold. On the one hand, NEB projects tend to be outstanding and therefore more attractive for financiers and **enable access to grants** and other forms of financial support. On the other hand, **unconventional ownership structures and strong social focus** may hamper the access to financing and lead for example to higher risk premia. | — |
| **Legal risk** | ■■ | NEB projects can be based on **unconventional (shared) ownership and operating models**, resulting in more **complex legal relationships** among a larger number of shareholders. As such, the legal complexity and related risks can increase compared to a project based on a straightforward setup. | ▲ |
| **Force majeure (e.g. climate)** | ■■■ | One of the most common types of force majeure risk are extreme weather phenomena, resulting in particular from climate change. As NEB puts great **emphasis on climate change adaptation and sustainability**, aligning to NEB means coping effectively with such risks, by means of mitigation solutions which are innovative and aesthetically appealing. | ▼ |
| **Public opposition risk** | ■■■ | Similar to the "Approval risk" reported above, close and intense interaction with communities and stakeholders, up to their active involvement in decision making, can **pre-empt possible public opposition** and **increase acceptance**. This applies also to those who are not directly affected by the project, preventing a negative "Not in My Back Yard" attitude. | ▼ |
| **Legend** | | ▼ = Beneficial/mitigating influence by NEB<br>— = No influence by NEB<br>▲ = Negative/aggravating influence by NEB<br>■ = lower relevance, ■■ = medium relevance, ■■■ = higher relevance | |

Finally, growing attention has been given over the last years to specific risks which arise from **ESG considerations**, in line with the general trends in sustainable finance discussed in Sec. 2.1.3. These additional risks, which have been mainly neglected in risk assessments up to now, are nowadays recognised to be potentially highly significative and have found their way into relevant industry practice and formal rules.[76]

This applies also to investments in the real estate sector, which can be specifically affected by **ESG risks** across a broad range of environmental and social aspects.[77] Aligning to NEB can therefore have a very positive influence in terms of fostering practices that have a mitigating effect on some ESG risks, for example regarding sustainability or community engagement aspects.

[76] See, for example: https://www.eba.europa.eu/activities/single-rulebook/sustainable-finance/guidelines-management-esg-risks and S&P Global, Environmental, Social, And Governance Evaluation Analytical Approach, 2020. Available at: https://www.spglobal.com/_media/documents/environmental-social-and-governance-evaluation-analytical-approach.pdf

[77] See, for example: S&P Global, Real Estate ESG Evaluation - Key Sustainability Factors, 2021. Available at: https://www.spglobal.com/_assets/documents/ratings/research/100287011.pdf and S&P Global, ESG Materiality Map Real Estate, 2022. Available at: https://www.spglobal.com/_assets/documents/ratings/research/101563878.pdf

## 4.5 Stakeholders

The alignment of a built environment project with NEB values necessitates a greater commitment to stakeholder involvement, to the extent that the stakeholder input, particularly from the local level, plays a central role in the design and operation of any project.

A good understanding of the specific stakeholder landscape is therefore crucial to the successful implementation of any NEB project. It is also the starting point and provides the basis for the preparation and execution of a **stakeholder involvement plan**, as presented in Sec. Working Principles of Annex II .

The following table reports a general **stakeholder analysis**, indicating the role or relevance stakeholders typically have in a generic NEB-aligned project and how they can influence the project. It serves as a starting point for the identification and in-depth analysis of the stakeholders in real NEB projects. It is noted that often a single actor might perform more that one of the roles of the below stakeholders.

| | Role in NEB projects | | Influence on NEB projects |
|---|---|---|---|
| **Users and society** | | | |
| **Individual citizens**[78] | ■■■ | NEB has high relevance for individual citizens as they are the final beneficiaries of many NEB projects (e.g., residential buildings).<br>However, NEB may be a too complex topic for most citizens to deal directly with. | ■■ | Individual citizens may have relatively little influence on NEB projects. However, at an aggregate level, they generate the direct demand for many types of NEB projects (e.g., residential buildings). |
| **Communities**[79] | ■■■ | Communities are beneficiaries, enablers, and active participants in NEB projects. This includes the parts of the community not actively involved in the NEB projects but eventually benefitting from them.<br>In many cases, communities are also expected to be directly responsible for the project (e.g., operation). | ■■■ | Communities are called to influence and shape NEB projects through the NEB participatory approach.<br>Communities, especially well organised and represented ones, generate demand for sustainable neighbourhoods, including, indirectly, buildings. |
| **Local associations, interest groups, etc.** | ■■■ | Local associations have a key role in coordinating efforts and dialogue in the communities and therefore collecting and conveying their needs.<br>Moreover, they represent and champion the needs of vulnerable or underrepresented groups. | ■■ | Associations and interest groups are key interlocutors in consultation and participation processes, both for practical reasons of organisation and also because of their knowledge and expertise. Therefore, they can have a very large influence on NEB projects. However, their demands may conflict with budget constraints, technical feasibility, etc. |
| **Businesses** | ■■ | Local businesses can immediately benefit from high-quality open spaces and neighbourhoods and are at the same time important contributors to vibrant communities. | ■■ | As a part of the community, local businesses are called to participate actively in NEB projects. As part of the local economy, they can influence the decision making. |
| **Institutions** | | | | |

[78] "Individual citizens" refers to private persons, taken individually and outside of any form of organisation or coordination. This can be for example house owners but also tenants.

[79] "Communities" refers to citizens considered collectively as a group or community.

| | | | | |
|---|---|---|---|---|
| **Municipalities/ Local governments** | ■■■ | Municipalities can have different roles in NEB: planning authorities, permitting bodies, responsible entities for many public buildings and for all public open spaces, etc. In general, municipalities steer urban development and can refer to NEB values and principles to maximise the creation of social value. | ■■ | Municipalities can have immediate and strong influence on NEB projects through their different roles. However, this can be significantly hampered by red tape, lack of capacities and resources, budget constraints, etc.<br>Moreover, for private buildings, the influence is typically limited to external appearance. |
| **Policy makers** | ■■ | Policy makers define sustainability and social policies and goals, promote and share best practice, introduce incentives and instruments, etc. However, their role is mainly indirect. | ■■ | While policy makers can help create a policy environment which is instrumental for NEB projects, their direct influence on project investors and communities can be limited. |
| **Regulators** | ■ | Regulators define binding requirements, mainly on sustainability and social matters, which are relevant to NEB. However, the NEB ambition goes well beyond standards and covers many dimensions which are immaterial and non-quantifiable. The role of regulators is therefore rather indirect. | ■■ | Regulators can influence NEB by increasing the level of binding requirements, at least on some aspects, and therefore by "raising the bar". Moreover, they can enlarge the scope and cover aspects previously unregulated. |
| **Asset providers** | | | | |
| **Developers** | ■■■ | Developers have a key role in implementing NEB projects as they are eventually responsible for translating NEB values into reality. Moreover, they coordinate all the process and are therefore also responsible for applying the NEB principles. | ■■ | The influence of developers is bound to the investors' demands and expectations, and the general market situation. Moreover, developers can be constrained by the availability of resources. Finally, developers may not be able or willing to cope with public participation or to coordinate multidisciplinary working teams. |
| **Landowners** | ■ | Landowners are key stakeholders in the real estate industry. However, their specific role with regard to NEB is limited, although they can have an active role in projects addressing for example derelict sites. | ■ | The direct influence of landowners on NEB is limited. However, they can indirectly have large influence as the availability of land is typically particularly constrained, at least in the urban context. |
| **Architects, advisors and engineers** | ■■■ | Designer and architecture offices have a key role in creating NEB projects and also ensuring that they are developed and implemented according to NEB ambitions. This group also includes engineers and technicians with specific skills, and can be complemented by social experts, artists, public engagement experts etc. | ■■ | Architects and designers can significantly influence NEB projects by means of their design decisions. However, they are constrained by the investors' expectations and the ideas arising from participatory processes, up to a level of co-design where the community is empowered to take substantial although supervised decisions. |
| **Construction companies** | ■■ | Construction companies are responsible for realising the NEB projects and are therefore asked to develop, test and apply innovative construction techniques and processes. They can also be responsible for reactivating traditional construction practices. | ■■ | Construction companies are mainly tasked with realising the projects. They can influence NEB by adopting environmentally and socially responsible technical solutions and working processes, and through the expertise and knowledge they concentrate. |
| **Specialised industries** | ■■ | Industries providing technological solutions and components can have an important role in implementing innovative NEB projects. | ■ | Although innovative technologies can play a key role and industries can accordingly provide impulses and ideas, NEB projects are |

| | | | | |
|---|---|---|---|---|
| | | This may include also the provision of services linked to the projects (e.g., regarding maintenance), possibly under innovative models. | | mainly people and community-centred more than technology driven. It follows that the direct influence of industries on NEB is relatively limited. |
| **Facility managers** | ■■ | By carrying the responsibility for the project after completion, facility managers are responsible for ensuring that the project quality is maintained over time and its functionality is preserved according to the original intentions. | ■ | Facility managers have an important but relatively passive role in NEB, as they are actively involved only at later stages. Their experiences in operating and maintaining buildings can represent an important input also to the design teams. |
| **Certification providers** | ■■ | Building certification providers are key actors in advancing sustainability (in a broad sense) in the built environment. However, while the scope of certifications is enlarging, many aspects of NEB projects remain unquantifiable. | ■■ | Certification providers can influence the acceptance and attractiveness of NEB projects by providing a recognised seal of quality, covering at least some of the NEB values. More in general, they can provide frameworks that further develop on the systematic assessment of NEB alignment. |
| **Financiers** | | | | |
| **Direct investors** | ■■■ | Direct investors are the key decision makers and have therefore the actors who can push the application of NEB in projects. They set investment targets (including return expectations), risk level, and budget. They also coordinate the financing of the project with other financiers. | ■■ | Direct investors set the project strategy in terms of quality, innovativeness, and integration in the communities. However, they do not typically deal directly with NEB values and principles and rely on developers and design teams to be informed on existing options and make their decisions. |
| **Indirect investors** | ■ | Indirect investors purchase financial products linked to real estate projects. Based on their attitude, they can prefer responsible products which are backed by sustainable and social projects. | ■ | Indirect investors can redirect financial flows towards sustainable and socially responsible projects, including those aligned to NEB. This requires however high transparency and clarity of benefits at an aggregate level. |
| **Banks, financial institutions, lenders** | ■■ | Banks and other financial institutions and lenders play an important role in the financing of (private) real estate projects, which are typically highly leveraged. Their willingness to lend can be strongly conditional on the project characteristics (e.g., in terms of quality, attractiveness and sustainability) and the risk level. | ■ | Their direct involvement in projects is in general limited. However, lenders committed to responsible investments can have an important role in enabling projects aligned to NEB. In the long term, lenders can contribute to the creation of a financing environment favourable to NEB. |
| **Advisors and financial service providers** | ■■ | Financial advisors specialised in sustainable finance have very good knowledge of the market and can have a key role in linking NEB projects to capital, directly and indirectly. They can also support the establishment of NEB in the financial industry. | ■■ | They can help align NEB projects with the expectations of the financial markets. In general, they can help identify ways to make NEB values and principles understandable, recognisable and valuable to financial market participants. |

Role / Influence: ■ = lower, ■■ = medium, ■■■ = higher

# 5 Making the NEB case

Building upon all the considerations presented so far, this chapter makes the case for the **impacts to the society** at large and the **benefits to the investors** that the alignment of projects to NEB can provide.

In line with current trends and already established practice in the financial sector and the real estate market, **the impact logic of NEB** is discussed, also sketching a possible investment process informed by NEB. To this aim, the NEB can mainly draw and rely on the concepts of **impact investing**, which offer a framework for aligning investors' goals of with the purpose of "doing good".

The chapter then provides a catalogue of concrete **socio-economic impacts**, which are immediately relevant to public investors, in light of their statutory duties, and for private investors, in light of specific societal impact goals and general social responsibility commitments most corporates abide by.

Similarly, the chapter reports a catalogue of immediate **investment benefits** which investors – of whatever nature – can expect to obtain from the alignment of their project to NEB. These include both immediate and direct financial benefits, as well as indirect ones, e.g., in terms of reputation, visibility, and alignment to policy objectives.

Finally, **challenges** possibly arising from creating NEB aligned projects are discussed. While the NEB can bring significant benefits, these do not always go without a cost. This shows that striking the right balance, under the specific and individual conditions of each investor and each investment, is eventually the key to success.

## 5.1 How the NEB adds value

### 5.1.1 The NEB impact logic

Investors willing to engage with NEB and involve in creating projects aligned to NEB values and principles need to have clarity about the **way in which NEB can create value** for them and their stakeholders. By doing so, investors can assess if and to what extent aligning to NEB makes sense in light of their specific investment and societal objectives, and eventually make informed decisions.

A comprehensive, quantitative analysis of achievable benefits and related costs, as needed to carry out capital budgeting or even cost-benefit analyses, is beyond the scope of this guide. Nonetheless, this chapter will first provide general considerations for **systematically addressing the issue of impacts and benefits** and will then introduce, qualitatively, **areas of benefit and impact** stemming from NEB.

As already addressed at the very beginning of this Guide (Sec. 1.1.2), NEB can fundamentally create value to investors in **financial** terms and to the society in **socioeconomic** terms. The boundary between the two is however flexible, as investors are increasingly willing to produce positive societal impacts, as reflected in existing sustainable finance frameworks, as discussed in Sec. 2.1.3. Similarly, investors aiming primarily for societal impacts – typically public sector investors, impact investors and philanthropies – have to take into account the cost effectiveness of their investments from a financial perspective.

The strictly business case for NEB projects is relatively straightforward and may be divided into **direct and indirect impacts**. Other possible impacts, for example the contribution to enabling the conditions for future direct benefits, can also be considered as an indirect effect.

By way of example, the direct and indirect effects behind two benefits (cost savings and increased attractiveness), is reported in the table below, whereas the range of main **financial benefits** arising from the alignment to NEB are reported in Sec. 5.2.2.

| Financial benefit (examples) | Direct effect | Indirect effect | Time horizon |
|---|---|---|---|
| **Cost savings** | They can arise **directly** in terms of monetary savings, for example from **operating cost savings**, e.g., related to energy (high energy efficiency, physical and non-physical measures reducing energy demand, optimisation measures like energy communities, and so on) and other sustainability aspects. They can **accrue** to the **investor or the users or other entities**, depending on the specific ownership model. | Significant cost savings can also occur **indirectly**, arising for example from **procedural gains**, **risk reduction** (therefore reducing actual costs from expenses for risk mitigation, lower risk premia, reduced reserves and provisions), **flexibility** for changing use, **lower rate of obsolescence**, and so on. | These cost savings generally accrue in **the medium and long term** and will be prioritised by investors with a long-term investment approach. **The time mismatch** can however be managed with appropriate **contractual arrangements**. In any case, the prospect of future cost savings can affect the value of the asset also in the short term. |
| **Increased attractiveness** | This can occur **directly**, in terms of higher aesthetic quality and related **distinguishing features** (e.g., functionality, green elements, etc.) which increase the **attractiveness** and therefore the **demand** for assets and the asset value. Attractiveness for users can also arise from **non-physical characteristics**, e.g., innovativeness, responsiveness to specific needs, etc.. | Attractiveness can result indirectly from **immaterial qualities** linked to NEB, for example the **social value** of NEB projects or the increased **reputation** associated with committing to NEB ambitions. | Increased attractiveness and distinctiveness can be relevant both in the **short term**, in terms of immediate interests, and demand after implementation, and in the **long term**, by counterbalancing the loss of value due to age. As above, the prospect of **value retention** is reflected in the asset value also in the short term. |

The "**socio-economic case**" is however more challenging to tackle quantitatively than the financial one. This is mainly because of the broader range of benefits and the complexity of the impact logic, which relies on many stakeholders and the complex interactions among them. Moreover, the socio-economic dimension is affected by intrinsic difficulties in defining and measuring the impacts, which is fundamental to enabling monitoring and reporting, as well as avoiding "impact washing".

On the other hand, the topics of **sustainable and impact finance** are receiving ever more attention. While universally accepted established frameworks are still missing, there are growing efforts to deal with the impact mechanisms of responsible investments. While such efforts have mainly originated in the context of development finance,[80] they are now being applied also in a broader scope and in particular in urban context.[81]

When dealing with sustainable investments, a fundamental distinction must be made between **two channels of beneficial impact**, which are complementary:

- **Minimising the negative impacts** of an economic activity to the smallest possible extent (with the physically or technically unavoidable impacts to be compensated by appropriate compensation measures).
- **Maximising the positive impacts** (e.g., in terms of quality, scope and duration).

While wider **societal impact** is a fundamental feature of sustainable investments, its measurement is typically underdeveloped and not given significant attention in existing frameworks. The reason is not so much to be found in the lack of recognition for societal challenges and the need for intervention, but mainly the fact that such aspects are based on norms and values that are less tangible than environmental or governance aspects.

[80] See, for example: https://www.impactprinciples.org/ and https://www.ifc.org/en/our-impact/impact-investing-at-ifc

[81] See, for example: Impact Investing Institute, Place-based impact investing: Emerging impact and insights, 2024. Available at: https://www.impactinvest.org.uk/wp-content/uploads/2024/05/Place-based-impact-investing-Emerging-impact-and-insights.pdf.

There exist however **frameworks** which try to comprehend and, as far as possible, measure the impacts of built environment projects.[82] In general, "social value is created when buildings, places and infrastructure support environmental, economic and social wellbeing, and in doing so improve the quality of life of people." [83]

Any framework has however to deal with the **complexity** of the built environment and be applicable to new and existing buildings, open spaces, neighbourhoods, and even infrastructures. It must also be able to work through several **levels of social value** reach (local community, supply chain, town and global society) and consider how to deliver it in a holistic way (identification of stakeholders, understanding of best interest and definition of outcomes).

One key challenge consists of **linking** the high ambition of NEB with existing frameworks when it comes to assessing the impacts of NEB aligned projects on communities, the society at large and the environment.[84] To this aim it is necessary to clearly distinguish between outputs, outcomes, and impacts, as presented in the following table.

| | General definition[85] | Definition in the context of NEB | | Examples of outputs, outcomes and impacts from NEB projects in the built environment |
|---|---|---|---|---|
| **Outputs** | The **immediate** (objective and quantifiable) **results** of an action | The **physical assets and their characteristics** provided by the NEB investment as they are used by the target groups (including activities and other offers) | **Beautiful** | - Outstanding new or renewed buildings (as recognised for example by independent assessment)<br>- Open spaces recovered, converted or greened |
| | | | **Sustainable** | - New or converted zero-emission buildings<br>- New district heating systems from renewable energy sources |
| | | | **Together** | - Social/affordable housing units provided<br>- Accessibility measures for different groups |
| | | | **Working Principles** | - Public participation and stakeholder engagement events carried out<br>- New permanent formal and informal processes and arrangements in place |
| **Outcomes** | The likely or achieved **short-term and medium-term effects** of an intervention's outputs | The **direct and indirect, measurable gains** brought about by the NEB projects outputs, opening up new possibilities and leading to changed perspectives and behaviours in the target groups. A NEB investment is only effective through outcomes | **Beautiful** | - Increased demand for buildings, new businesses attracted by the neighbourhood<br>- Lower fluctuations in occupancies, lower vacancy (residential and commercial) |
| | | | **Sustainable** | - Saving of resources and avoidance of emissions<br>- Reduction of local pollution |
| | | | **Together** | - Reduction of poverty. Improved social mix in population<br>- Lower crime rates |
| | | | **Working Principles** | - Reduction in formal complaints and disputes<br>- New social and community initiatives established |
| **Impacts** | **Long term effects on society** | The fundamental, lasting **transformations in** | **Beautiful** | - Establishment of high and diverse cultural standards<br>- High level of satisfaction and physical and mental well-being |

[82] See for example: ICG, Social Impact Investing - Return. Value. Impact., 2022. Available at: https://icg-institut.de/en/publications/

[83] UK Green Building Council (UK GBC), Framework for Defining Social Value, 2021. Available at: https://ukgbc.org/resources/framework-for-defining-social-value/. And: A Guide for Delivering Social Value on Built Environment Projects, 2022. Available at: https://ukgbc.org/resources/a-guide-for-delivering-social-value-on-built-environment-projects/

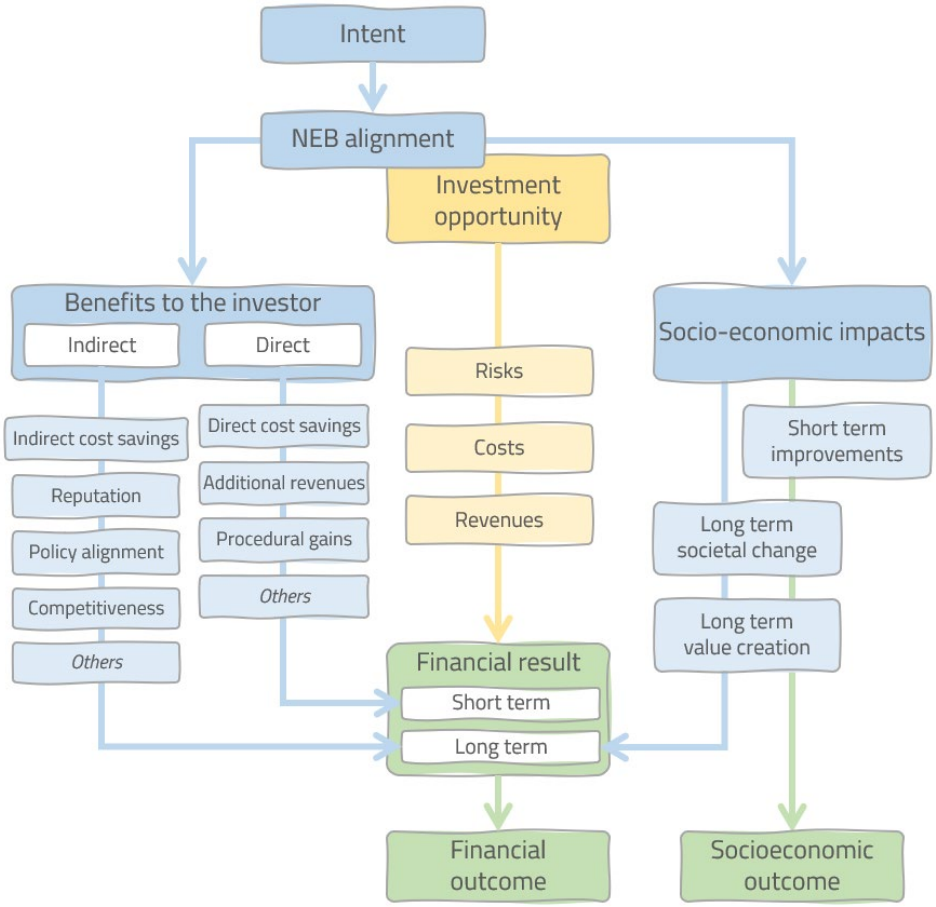
[84] It is noted that a "NEB Impact model" has been proposed in the context of the EU-funded CraAFt project, see: NEB Impact Model, Initial Version, Deliverable 1.1 update, 14.07.2023. Available at: https://craft-cities.eu/wp-content/uploads/2023/07/D1.1-CrAFt-NEB-Impact-Model-updated.pdf.

[85] See for example EC: https://wikis.ec.europa.eu/display/ExactExternalWiki/Introduction+to+Results+and+Monitoring or OECD: https://www.oecd.org/dac/results-development/what-are-results.htm

| | | | | |
|---|---|---|---|---|
| | produced by an intervention | **society and economy** induced and enabled by the NEB projects outcomes<br>The ultimate purpose of any NEB project | **Sustainable** | - Full climate neutrality and full circularity<br>- Broad integration of natural and built ecosystems |
| | | | **Together** | - Widespread physical and social inclusion<br>- Establishment of deep and permanent social bounds and collaborative practices |
| | | | *Working Principles* | *WP do not provide impacts by themselves but contribute to the implementation of the core values* |

The **overall logic** is summarised in the following diagram. Given the fundamental intent to consider a NEB-aligned investment, the investor will first assess, as for any conventional investment opportunity, the **balance of risks and returns**, which in turn results from costs and revenues. However, the alignment to NEB enlarges the scope: the investor may well benefit from **direct and indirect effects** resulting from the NEB alignment. Direct effects lead typically to financial benefits in the short term, whereas indirect benefits are typically able to bring a positive financial effect in the medium and long-term.

Moreover, the NEB alignment translates into **socio-economic impacts**, in line with the investor's intent. Such desirable impacts materialise in the **short term**, for example by immediately improving living conditions, removing barriers and increasing accessibility. In the **long term**, they induce positive societal changes, long term value creation, and, eventually, economic growth. While the investor may not immediately reap any concrete benefit from the short-term socioeconomic improvements, there will eventually be a financial benefit from the long-term upwards trends, as these will offer new business prospects.



### 5.1.2 Impact-oriented investment process

In general, the investment process consists of the sequence of high-level decisions related to the allocation of capital to a project. In practical terms, the investment process captures the general steps which an investor would typically carry out when doing business: starting from the intention to invest to the eventual divestment.

From a NEB perspective, this path necessarily assumes the connotations of an **"impact investment" process**. An investor who commits to aligning with NEB intends to achieve some non-financial goals beyond pursuing pure investment targets in terms of risk-adjusted return. As discussed in Ch. 2.1.3, different levels of commitment and ambition exist, ranging from the basic avoidance of negative environmental and social side-effects of the investment to the provision of extensive positive impacts on society. Accordingly, when an investment intention includes non-financial considerations, the investment process needs to cover and integrate the non-financial dimension into the decision-making process.

This line of reasoning applies to **for-profit investors** blending financial and non-financial targets. **Not-for-profit investors**, and in particular public authorities and other public sector actors, however, do not typically follow an "investment process" approach but rather provide public goods and services in the most efficient and cost-effective way in accordance with their statutory mandate.[86]

Nonetheless, not-for-profit investors can also benefit from the application of systematic impact investment frameworks to their decision making. Impact investors typically base their decisions on a systematic analysis of **non-financial risks and opportunities** and closely **measure and monitor** the non-financial impacts of their activities. Whereas public sector investors often do not rely on systematic, objective approaches (for example, Cost-Benefit-Analysis) but are mainly driven by political consensus and established administrative processes.

In what follows, the main steps of a **generic impact investment process** are reported and interpreted from a NEB perspective.[87] Challenges in the process arise from the nature of the NEB core values, as these often refer to immaterial and difficult to quantify impacts, e.g., regarding aesthetic quality and transformative societal impacts. Similarly, the NEB working principles play a key enabling role in the implementation of the three NEB core values. However, the contribution provided by the working principles is challenging to capture and monitor.

For these reasons, it is up to each investor to find the most appropriate **balance** between the benefits of systematically assessing and monitoring evaluating impacts (in terms of clarity of impacts, transparency, visibility, and communicability, etc.) and the related costs and efforts. In any case, the difficulty of capturing and quantifying some impacts should not deter investors from committing to the highest ambition of societal change.

| Step | Relevance from an impact perspective[88] | How NEB affects this step |
|---|---|---|
| **1. Definition of strategy** | Definition of **impact goals** and overall **impact strategy**, set up of **impact plan**. | - Align their **impact focus and goals** to the relevant **NEB core values**, as relevant for the **built environment** and its strong **local character**.<br>- Go **beyond pursuing individual impact goals** and **integrate** their goals across all NEB core values, at least at a basic level.<br>- Commit to adhere to the **NEB working principles** and make **intensive engagement** with stakeholders and communities a central element of their strategies. |

[86] It is noted that public sector investors do also invest for-profit, especially in financial assets, but this is not relevant in the context of NEB aligned projects.

[87] For details on impact investment processes, see for example: IFC, Investing for Impact: Operating Principles for Impact Management, 2019. Available at: https://www.impactprinciples.org/sites/default/files/2019-06/Impact%20Investing_Principles_FINAL_4-25-19_footnote%20change_web.pdf, and: UN PRI, An Introduction To Responsible Investment – Real Estate, 2022. Available at: https://www.unpri.org/download?ac=16711. It is noted, the steps vary depending on the nature of the investment (direct, indirect, etc.) and the context (e.g., individual investment vs. investment within a fund).

[88] Adapted from: ICG, Social Impact Investing - The Best Practice Guide for the Real Estate Industry, 2021. Available at: https://icg-institut.de/en/social-impact-investing/social-impact-investing-practical-guide/

| | | |
|---|---|---|
| | | - Prepare an **impact plan** which defines how concretely the investor intends to reach their goal and **engage** with the community. |
| **2. Sourcing/ Originating** | **Screening** of investments in line with their **ability to contribute** to achieving investments goals and implementing the impact strategy. | - Screen investment opportunities against their ability to provide **impacts in line with NEB values and principles**<br>- Screen the ability of potential investments to contribute to the **implementation of the impact strategy** and achievement of the impact goals.<br>- Screen investment opportunities against the **specific context,** with particular consideration of **local stakeholders** in terms of their role according to the NEB working principles. |
| **3. Due diligence** | Review of **expected impacts** and their ability to respond to needs.<br>Analysis of **compliance** with relevant policies.<br>Review of **risks** and **opportunities**. | - Assess and possibly estimate the **ability** of selected project(s) to align to the **NEB core values** and deliver the intended impacts.<br>- Assess the ability of the investments to respond to **local challenges and opportunities** in the community.<br>- Assess compliance with **relevant rules** (e.g., regarding sustainability and inclusiveness), **best practice** (e.g., regarding aesthetic quality and inclusiveness) and, in particular, **local policies**.<br>- Assess **risk and opportunities** to the implementation of the impact plan, especially with regard to the application of the NEB working principles. |
| **4. Structuring** | Determination of project specific **targets and KPIs**.<br>Set up of mechanisms for **interaction, monitoring and reporting**.<br>Set up of **safeguards** for ensuring achievement impacts. | - Define **targets and KPIs** for aspects which can be **quantified** (e.g., those related to the sustainability core value).<br>- As the NEB ambition refers to a large extent to aspects (e.g., aesthetics) and transformative societal impacts which **cannot** be easily measured, define appropriate **qualitative mechanisms** to capture, document and possibly assess them (e.g., through independent expert review).<br>- Define **safeguards and mitigation measures**, addressing in particular the critical role of **stakeholders** but also any **innovative or unconventional technical or procedural solutions** in the project. |
| **5. Management** | **Monitor** of progress and impacts, **communication** with all stakeholders and disclosure with shareholders.<br>**Improvements/ corrective measures** as needed (including mitigation of possible negative side-effects). | - Define a **communication strategy**, involving communication experts as needed.<br>- Develop and apply (empirical) measures to capture and communicate **non-quantifiable impacts** (e.g., audio-visual documentation, site visits, etc.).<br>- Run periodic **participatory reviews** and collect systematically **feedback** from stakeholders, respond to it visibly and deal with suggestions and improvements.<br>- Implement and monitor **mitigation and corrective measures** and communicate them.<br>- Foster **networking and exchange of information** between projects and participation in appropriate forums. |
| **6. Exit** | "**Impact oriented exit**" (exit based on impacts achieved and outlook on future developments).<br>Put in place measures and **safeguards** ensuring long-term sustained impacts. | - Define an **exit strategy**, ensuring for example that a sufficiently robust governance is in place (to ensure that the project's impacts will not be discontinued).<br>- Foresee an appropriate **hand-over and transition**, as needed.<br>- Liaise with **project partners**, ensuring that the project's ecosystem is not harmed by the change.<br>- Liaise with the **relevant stakeholders**, including in particular local authorities. |

| | | |
|---|---|---|
| **7. Review** | **Lessons learned** from the investment, based on feedback from stakeholders.<br>**Sharing experience** in the community.<br>Improvement of impacts strategy and plan as needed. | - Collect **formal and informal feedback** from all project participants and the stakeholders. To this aim, participatory techniques can be used.<br>- Involve experts to carry out an **independent review**, as possible.<br>- **Report back** findings to the project users and the community.<br>- **Share** the experience and the findings in relevant networks and forums, also using different media.<br>- Reflect on the **implications** for other ongoing projects, if any.<br>- **Adapt strategies and procedures** for future projects. |

## 5.2 NEB impacts and benefits

### 5.2.1 Socio-economic impacts on communities and society

The table below summarizes the main categories of **impacts** that NEB projects typically generate.[89] Each project has its own characteristics and corresponding impacts. The intensity and reach of such impacts depend on many factors, like the size of the project, the specific challenges and the complexity of the context, and the receptivity and ability of the stakeholders to internalise the impacts.

The table also indicates the **NEB core values** which mainly relate to each impact. While the working principles are mainly instrumental to the achievement of impacts along the core values, they can also provide some benefits on their own. For example, the opportunity of being involved in projects and actively contributing to them, and the resulting positive feeling of empowerment, can add to a better quality of life.

| | | Description | Beautiful | Sustainable | Together | Working Principles |
|---|---|---|---|---|---|---|
| 1. | **Quality of life** | Projects adhering to NEB values enhance the quality of life of citizens and communities by providing **enjoyable, attractive and convenient urban environments**, characterised by high aesthetic value, proximity to services and amenities, connectivity, accessibility and comfort. Design for human scale and cognition, personalisation, flexibility and adaptability, lead to increased **sense of belonging and pride** for the local communities. This also helps cities, villages and regions retain and attract young people and families, while being convenient also for the older generations and all people with diverse needs. | ■ | ■ | ■ | ■ |
| 2. | **Physical well-being** | NEB projects are designed to provide **healthy spaces and microclimates** and foster an **active lifestyle**, for example by encouraging walking and cycling, and by providing access to high quality open green spaces. By shifting the perspective from the individuals to the community, physical well-being translates into an element of social enrichment and can contribute to reducing the huge societal costs arising from unhealthy lifestyles. | | ■ | ■ | |
| 3. | **Mental well-being** | While beauty is a strongly subjective value, NEB projects aim at giving to all members of the community the opportunity to **contribute to shaping their places** according to their own preferences and taste, and thereby identify themselves with it. NEB projects also give space to **emotions**, for example by taking into account sensory perceptions and emotional sensibility. The promotion of **active lifestyles**, the increased access to high quality **green spaces**, the creation of districts characterised by efficient **density** and **proximity** also influence positively mental well-being.<br>All these factors strengthen the positive impacts of high-quality design on the **satisfaction and happiness** of individuals and eventually on their mental health, which yields benefits for wider society. | ■ | | ■ | ■ |
| 4. | **Security** | Lack of security can impose significant costs on society due to the direct consequences of crime and the preventive measures and missed opportunities. Projects aligned to the NEB values and principles can contribute to increased safety by including appropriate design solutions, e.g., by eliminating unsafe spots | ■ | | ■ | |

[89] It is noted that the term "co-benefits" is often used to indicate the positive externalities and wider impacts of green investments, e.g., in terms of well-being, health, social cohesion, etc. However, in the case of NEB (and impact investing in general), such "co-benefits" are in fact primary goals of the investment, equally important as, for example, environmental and climate-related goals. Therefore, in these Guidelines, the term "[socio-economic] impacts" is used, whereas the term "benefits" is used to refer to the possible gains and advantages to investors from adhering to NEB values and principles.

| | | | | | | |
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| | | and **maximising visibility** at all times. More significantly, NEB projects aim at establishing cohesive and living communities, in which safety results from **collective and reciprocal care** and a **high level of social activities**. | | | | |
| 5. | **Mutual care** | Beyond contributing in general to physical and mental well-being, NEB projects are intrinsically oriented towards dealing efficiently with members of the community who need care and support. This can cover a wide range of situations in which **solidarity, cooperation and inclusion** is translated into concrete solutions, for example by encouraging interaction between different generations, by providing appropriate and flexible spaces, and by providing inclusive and connected buildings and environments by design.<br>This leads to immediate benefits for the society in terms of avoided costs and more **efficient use of caring capacities**, while freeing resources otherwise bounded. | | | ■ | ■ |
| 6. | **Optimal use of resources** | NEB projects aim at making the **most efficient use of resources** during construction and operation, both through **technological solutions and collective behavioural ones**. Moreover, NEB projects take a very long view, considering not only the **entire lifecycle** but also thinking and acting intergenerationally. This means finding and implementing **long-lasting and "sustainable" ways** of using resources.<br>Therefore, beyond direct monetary gains to the users from reduced consumption of resources, NEB projects provide societal benefits by ensuring that such resources are optimally used and therefore sufficient for all. | ■ | ■ | | |
| 7. | **Optimal use of land and space** | Space – at any level: unused land, free open spaces, floor space in buildings for different purposes, etc. – is a valuable resource. NEB projects make very **efficient and careful use of space** by **tailoring to the actual needs** of communities, fostering **intensive, collective and shared use**, providing for **flexible and adaptable use**, and so on.<br>In this way, the NEB approach in the built environment can provide immediate societal benefits, especially in situations where available space is already highly constrained. | ■ | ■ | ■ | |
| 8. | **Creativity and innovation** | Creativity is a fundamental driver of innovation and therefore of economic value creation, especially in modern service-oriented societies. NEB projects foster transdisciplinarity and creativity by empowering individuals to **express their ideas, share them and cooperate creatively** in smaller or larger groups. This is very relevant for projects in the built environment, both in the design phase and in the consequent use. Moreover, NEB projects in the built environment enable creativity at a very practical level, for example by simply offering adequate spaces for individual and collective creative work, or by offering flexible and affordable space suitable to entrepreneurship. | ■ | ■ | ■ | ■ |
| 9. | **Social cohesion and stability** | The fundamental orientation of NEB projects towards inclusion, representation and sharing of common values encourages the creation of **strong and interdependent community ties**.<br>This helps to minimise and **solve collaboratively social conflicts** within and across communities. At a larger scale, the implementation of NEB values and principles in the built environment, where people physically meet and live close to each other, promotes **respect, acceptance and tolerance**. Increased awareness and openness towards cultural diversity are a prerequisite to social peace and stability and therefore offer an immediate benefit for society. | ■ | | ■ | ■ |
| 10. | **Resilience and sufficiency** | Projects developed and operated in line with NEB values can contribute to the resilience and self-sufficiency of communities and cities. At a physical level, implementing **sustainable and resource-protecting solutions** improves the ability to cope with external adverse events or shortages, natural or human-made | | ■ | ■ | |

| | | | | | | |
|---|---|---|---|---|---|---|
| | | ones. At an organisational level, interconnected communities are more resilient to crises, through the ability to implement **collective solutions to challenges**. Such qualities apply in particular to adaptation measures to climate change. All these qualities help in reducing costs to society which are otherwise very probable to occur. | | | | |
| 11. | **Social justice** | NEB projects contribute to optimising the access and the use of physical and non-physical resources. While the most efficient use of resources is a benefit in itself, NEB projects also contribute to ensuring that their use is more just, by aiming for **affordability** and for the **better allocation and distribution of resources** according to actual needs.<br>A more equitable access to resources, including high-quality buildings and open spaces, beyond being implicitly a desirable outcome, may become an imperative need in the future, when crises and other challenges may put further pressure on the use of resources by society. | | ■ | ■ | ■ |
| 12. | **Local economic growth** | By going beyond standards and established paradigms, NEB projects can provide benefits in terms of economic growth and higher prosperity of communities. On a small scale, NEB projects can act as **catalysts for new local business opportunities and job creation**, mainly leveraging on **higher attractiveness and liveability** of buildings and neighbourhoods. On a larger scale, NEB projects can ignite **large scale business opportunities and economic growth** arising for example from innovative technical solutions, new services and new sustainable supply chains. | ■ | ■ | ■ | |
| 13. | **Climate** | NEB aligned projects, by targeting the highest sustainability and carbon neutrality standards, provide immediate benefits in terms of **climate change mitigation and adaptation**. In particular, they go beyond conventional measures and aim at closing the gap to full neutrality by means of fundamental **behavioural changes and innovative solutions**, both individual and collective. Moreover, NEB projects also aim at **aligning climate measures and high aesthetic ambitions**. NEB projects can therefore serve both as **test-benches and as demonstrators**, promoting the uptake of climate measures and enabling further societal benefits at larger scale. | ■ | ■ | | |
| 14. | **Education** | The NEB core values and principles can provide significant educational benefits to all citizens through different channels. By their nature, NEB ambitions foster an active perception and appreciation of aesthetic quality, sustainability practice and social integration, therefore supporting the **development of awareness and formal and informal knowledge**. Moreover, the collaborative and trans-disciplinary nature of NEB projects calls for the **accumulation and dissemination of knowledge** and shared experience across groups and between experts and laypersons. Finally, in practical terms, NEB aligned projects also provide **immediate opportunities for educational activities** and comprehensive educational programmes, e.g., related to sustainability or social competence. | ■ | ■ | ■ | ■ |
| 15. | **Protection of nature and biodiversity** | Aligning projects to NEB values and principles can help reduce and mitigate the undesirable effects of excessive land consumption and destruction of ecosystems.[90] In particular, the NEB holistic approach helps integrate the protection of nature into comprehensive concepts of urban planning and design. In this way, **biodiversity and nature become integrated components that provide benefits to the community while being protected**, for example in the form of Nature-based Solutions. Moreover, this helps raise awareness towards matters related to nature and ecosystems and cultivate an understanding of threats and remedies. | ■ | ■ | | |

[90] See, for example: https://www.eea.europa.eu/en/topics/in-depth/land-use

| | | | | | | |
|---|---|---|---|---|---|---|
| 16. | **Cultural preservation** | Cultural preservation ensures the **safeguarding of cultural capital**, both tangible and intangible, **for future generations**. NEB recognises the strong social dimensions of heritage and its potential to bring people together around collective memory and shared values, creating a **sense of pride and belonging**. At the same time, the NEB holistic approach encourages the **integration of heritage elements into the dynamic and evolving identities** of modern communities, that are simultaneously rooted and open to growth. | ■ | | ■ | ■ |
| 17. | **Local democracy** | The participatory and co-creation nature of the NEB empowers citizens to **own their future** and promotes a culture of **democratic participation** in the development of communities, cities, villages and regions, by means of engagement of individual citizens and communities in the design and implementation of projects. This enhances **accountability of public bodies**, boosts **investments tailored for communities** and their specific needs and improves the **connection of citizens with governing institutions**. | | | ■ | ■ |

### 5.2.2 Benefits and opportunities for investors

Aligning projects with NEB values and principles provides direct and indirect benefits and opportunities to investors, who can leverage on the NEB holistic, integrative approach to **create value** to their shareholders and stakeholders. Engaging with NEB and elevating a "conventional" project to become more ambitious, impactful, and even transformative, can however also require additional efforts and resources from investors and developers.

Due to the variety and complexity of possible situations, general conclusions on this trade-off are challenging to draw. The optimal **balance between efforts, costs and benefits** is eventually an individual decision and can only be established on a project-by-project basis by the project owners, in line with their specific business model, their targets and eventually, their individual preferences and convictions.

As discussed in Sec. 5.1.1, investing in projects aligned with NEB principles offers investors a dual opportunity: achieving financial returns while making positive contributions to society and the environment. Although NEB does not target financial impacts, nor is it based on marketing considerations, NEB-oriented ventures can in fact provide **direct monetary benefits** such as cost savings through efficient resource management and improved revenues.[91]

Additionally, **indirect monetary benefits** can occur, including competitive advantage in mature markets, asset value appreciation, growing demand for NEB-inspired spaces and access to green financing options. Ultimately, investing in NEB initiatives offers a holistic approach to generating monetary returns while making broader societal and environmental impacts, in line with the logic of sustainable and impact investment discussed in Sec. 5.1.2.

The table below reports **main categories of benefits** that investors in NEB projects can obtain from aligning to NEB values and principles, based on the specificities of each project, and distinguishing between profit-oriented and non-profit investors. As for the societal impacts in the previous section, the table indicates the core values from which the benefits mainly stem. This is without prejudice to the fundamental NEB pledge to integrate all three core values but can help investors identify strategies that align to their own impact strategies and project ideas.

The **time horizon** in which the benefits materialise and the actors to which they accrue are not considered in the table. This is because both aspects depend on the exact structure of the investment and the underlying contractual arrangements. For example, benefits related to revenues (additional revenues, more stable revenues, etc.) accrue to the owner of the asset and are earned over the entire investment lifetime. However, the perspective of such future benefits is immediately reflected in the value of the asset and are therefore reaped, at least partially, by the investor who creates the asset.

[91] They are denoted as "benefits" – as opposed to "impacts" – to highlight the fact that they are subordinated to the primary goal of NEB, which is to create a "sustainable and inclusive future that is beautiful for our eyes, minds, and souls", as per the NEB Compass.

| | | Description | For-profit investors | Non-for-profit investors | Beautiful | Sustainable | Together | Working Principles |
|---|---|---|---|---|---|---|---|---|
| | **Direct benefits** | | | | | | | |
| 1. | **Operational cost savings** | NEB's holistic approach raises the ambition of current sustainability standards to the level of **complete carbon neutrality and deployment of most sustainable practices**. For example, energy efficiency is enhanced from the mere implementation of technical solutions to a fundamental re-thinking of energy consumption behaviours and patterns at individual and collective level, therefore unlocking further potential for cost reductions. | ■ | ■ | | ■ | | ■ |
| 2. | **Capital cost savings** | Implementing NEB values means striving for **circularity in its thoroughness**. Minimising the use of resources and materials, thinking in terms of lifecycle, reusing and repurposing systematically existing assets and components, integrating and optimising sustainability within the users' and the community's needs, can reduce capital costs. The savings can materialise both in the short term, when implementing projects, and in the long term, when carrying out maintenance and renewals. | ■ | ■ | | ■ | | |
| 3. | **Revenue stabilisation** | Projects that are aligned to NEB are closer to the people and satisfy their **emotional, mental, and social needs** beyond the material ones, creating stable and enduring bonds. Moreover, implementing NEB means creating high quality assets and ensuring the value is created and maintained. For these reasons, fluctuations in use (both residential and commercial) are less probable to occur, therefore also stabilising the revenue streams to the landlords. | ■ | | ■ | | ■ | ■ |
| 4. | **Ancillary revenues generation** | The creation of high-quality buildings and open spaces and the transformation of neighbourhoods into vibrant areas of social interaction typically have an immediate positive effect on the level **of local business activity**. Opportunities for new, more diverse and more profitable economic activities lead to the generation of ancillary revenues to investors, further reinforced by the general increase in local economic prosperity. | ■ | | ■ | | ■ | |
| 5. | **Appreciation of asset value** | Embracing the NEB mindset means committing to producing assets of **higher quality**, with regard to aesthetic appearance, functionality, durability, integration to the context, etc. Distinctive quality is a value which receptive and conscious market actors can recognise and appreciate. This applies also to the retention of the asset value over time and the insensitiveness to market vagaries. | ■ | ■ | ■ | ■ | | |
| 6. | **Procedural gains** | Implementing a project in line with NEB values and principles means running the processes differently. Following the NEB working principles **means dialoguing thoroughly with all stakeholders and involving them actively** from the very beginning of the project preparation. In the operational phase, NEB calls for partnership, empowerment, and self-governance. All this can pre- | ■ | ■ | | | ■ | ■ |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | empt objections, challenges and other obstacles which often accompany complex planning procedures and thus help avoid related penalties (delays, cost escalations, etc.). | | | | | | |
| | **Indirect benefits** | | | | | | | |
| 7. | **Reputation** | Committing credibly to NEB values and principles sends a strong message **of social and environmental responsibility**. Investors who decide to go beyond current sustainability practices and standards, demonstrate that they want to proactively contribute to fundamental societal transformations through a better built environment. | ■ | ■ | | ■ | ■ | ■ |
| 8. | **Visibility** | Aligning to NEB and applying its values and principles can **increase the visibility and reach of projects**, therefore helping the investor to enter new regions and market segments. For small investors, aligning the NEB can help go beyond the local context, also by means of accessing networks, events and other channels of exchange and promotion. Similarly, for non-commercial investors, visibility means entering or enlarging networks, enabling cooperation, accessing support and facilitating inclusion in activities (e.g., pilots etc.). | ■ | ■ | ■ | ■ | ■ | ■ |
| 9. | **Access to sustainable finance** | Projects which align with NEB values and principles necessarily excel in environmental performance and social impacts. As such, NEB projects are more likely to **attract the attention of providers of green and sustainable capital**, who are willing to go beyond standard sustainable investment opportunities but aim at getting involved in outstanding projects with high visibility. However, this applies mainly to providers of capital who have capacities, interest and resources to appreciate the NEB added value (e.g., large direct investors with strong sustainability focus). | ■ | ■ | | ■ | | |
| 10. | **Access to grants and other benefits** | Following and implementing NEB can help investors and project owners to access **grants and possibly other benefits**: **monetary**, like access to dedicated financing instruments, and **non-monetary ones**, for example access to technical assistance facilities. Similarly, adhering to NEB principles can be an asset in competitions and serve as a demonstration of high-quality claims, typically in combination with established industry standards and certifications. | ■ | ■ | | ■ | ■ | ■ |
| 11. | **Use of untapped resources** | NEB implicitly asks for **improving and recovering challenging areas**. This means in practice that assets are recovered and repurposed, and eventually made lively and attractive. For investors, this offers the opportunity of revalorisation and commercial exploitation of assets which would otherwise remain unexploited. Such untapped resources can be particularly valuable in dense urban environments with limited availability of spaces. | ■ | ■ | ■ | ■ | | |
| 12. | **Saving time** | Adhering to NEB principles means ensuring that projects are well aligned to actual needs, are prepared thoroughly, and follow high quality standards. This can help **expedite permitting procedures, thereby saving time and efforts**. In the long term, this effect can become even stronger, as it contributes to establishing good practice which is immediately **recognised by the competent authorities**. | ■ | ■ | | ■ | ■ | ■ |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 13. | **Identity and leadership** | Investors willing to engage in sustainable and impact investment practice may lack an appropriate conceptual and practical framework for their ambitions. The NEB can provide a **suitable, authoritative and visible framework**, also in the context of a recognised community of like-minded investors. Moreover, ambitious investors can apply NEB values and principles in parallel with other ESG and CSR commitments, leveraging on synergies to strengthen their identity and leadership. | ■ | ■ | ■ | ■ | ■ | ■ |
| 14. | **Aligning with policy objectives** | For non-profit investors, aligning to international, EU and national policy objectives in terms of sustainability, social and physical inclusion, etc. can be a key business and reputational advantage. Aligning with NEB can therefore offer a further dimension in terms of **commitment and excellence**.<br>Moreover, for-profit investors can also benefit from **alignment with recognised policy objectives**, in terms of reputational gain and acceptance. | ■ | ■ | | ■ | ■ | ■ |
| 15. | **Social impact** | For non-profit organisations, providing **social impacts** is an explicit operational objective, which must also be demonstrated and communicated to donors and other bodies. For such organisations, aligning projects with NEB can therefore help **fulfil expectations** and achieve the organisation's own objectives. | | ■ | | ■ | ■ | ■ |

## 5.3 NEB challenges

Depending on the type of project, its context and the adopted solutions, the implementation of NEB core values and working principles might entail monetary **costs** or a range of administrative, and procedural **challenges**. While this perspective can appear daunting to investors willing to engage with NEB, the eventual challenges depend to a very large extent on the specific characteristics of the projects, the specific Investment Recommendations (see Annex I) incorporated into the project, and the context of each investment.

Experienced investors and developers will find it less challenging to align with NEB than project owners just starting to deal with sustainability and social impact. For this reason, many institutional and industry-driven initiatives exist which **offer assistance and guidance** to investors willing to engage with these topics. The same applies to the NEB initiative, which is accompanied by a large programme of formal and informal supporting activities.[92]

The following table presents a series of general **challenges** that may occur when implementing NEB projects, indicating the category of investor to which they apply and proposing **mitigation measures**. More specific challenges and mitigants are addressed in the specific Investment Recommendations presented in Annex I.

| | | Description | Mitigation measures | Private investors | Public investors | Third- sector |
|---|---|---|---|---|---|---|
| | **Financial** | | | | | |
| 1. | **Additional investment costs** | *Additional investment costs may arise in very different ways from developing a project that adheres to NEB values. The resulting challenges and the appropriate mitigation measures can have however very a different nature depending on the type of investor:* | | | | |
| | | *Small real estate investors and Third-sector investors:*<br>Investors may be willing to implement more ambitious and complex solutions but **do not have sufficient resources** to cover the additional costs. | - Look for more cost-effective alternatives.<br>- Look for alternative sources of capital (e.g., grants, donations, partnerships, etc.).<br>- Distribute investments over longer timeframes. | ■ | | ■ |
| | | *Large real estate investors:*<br>Investors might **not be willing to pay for the additional investment cost** that may **reduce their return** on investment. | - Look for more cost-effective alternatives.<br>- Analyse and present to shareholders expected non-financial benefits.<br>- Persuade shareholders on social value of expected impacts. | ■ | | |
| | | *Municipalities and donors:*<br>Investors might **not be willing to accept additional investment costs without having sufficient comfort about expected impacts**. | - Introduce and follow a NEB impact. Strategy which suits the investor's investment strategy.<br>- Link clearly and visibly additional costs to expected impacts.<br>- Communicate actively on impacts and ensure high transparency on costs. | | ■ | ■ |
| 2. | **Additional operational costs** | NEB projects may include solutions or materials which cause **additional operational costs**, including possibly unexpected ones (e.g., resulting from shorter maintenance intervals). Such | - Look for more cost-effective alternatives.<br>- Analyse the relationship between additional operational costs and benefits or impacts directly linked to the sources of costs. | ■ | ■ | ■ |

[92] https://new-european-bauhaus.europa.eu/get-involved_en

| | | | | | | |
|---|---|---|---|---|---|---|
| | | costs may **reduce the profitability** of the investment (in the case of commercial projects) or represent an additional charge to the operator (in the case of non-commercial projects) | - Involve where possible stakeholders in the operation and maintenance of the project. | | | |
| 3. | **Lack of demand or interest** | In the case of commercial projects, aligning to NEB can lead to **a level of ambition and quality which may not be demanded by the market**.<br>For non-commercial projects, there may be no sufficient interest or awareness, or the NEB may appear as **misaligned with the needs of the community**.<br>The optimal scale of projects in terms of NEB may not suit the investor's portfolio or market demand. | - Align the project to the actual needs of the community and to the context.<br>- Involve the stakeholders early, to adapt to expectations and increase acceptance.<br>- Tune the level of ambition to the readiness of the market and the future users.<br>- Make expected impacts and benefits visible and understandable.<br>- Communicate actively from very early stages.<br>- Look for synergies and put the project in relation to other projects and activities in the same environment. | ■ | | ■ |
| 4. | **Limited access to financing** | Accessing financing for NEB projects, particularly for smaller investors and for small projects with limited budget, may be challenging due to **perceived risks**, **lack of track record** typical of any new initiative, and **limited awareness of sustainable finance options**.<br>This can also be linked to the fact that NEB projects may have **longer payback periods** compared to traditional projects, for example, due to the lifecycle cost savings associated with energy efficiency measures, renewable energy systems, and other sustainability features. | - Achieve clarity on strengths, weaknesses (with mitigants) and impacts of the project, making a strong and convincing case for it.<br>- Explore alternative contractual models to realign time horizons.<br>- Involve finance specialists with knowledge and track record in innovative projects.<br>- Connect to financing organisations that are open and committed to financing innovative projects with high impact. | ■ | | ■ |
| 5. | **Cost competitive ness** | NEB-aligned projects may face challenges in **competing with conventional development** projects on cost, particularly in the **short term**. | - Identify and target customer groups willing to accept additional costs to have higher quality.<br>- Ensure that all features that create additional costs are visible and appreciable.<br>- In particular, quantify and communicate long term benefits. | ■ | | |
| 6. | **Limited funding** | While the availability of public funding can represent a mitigant to many challenges, **constrained public budgets** may lack flexibility to deal with additional ambitious project features that go beyond the "do minimum". | - Introduce flexibility where possible, e.g., by phasing projects.<br>- Identify possible additional sources of funding, in particular grants.<br>- Emphasise the socio-economic benefits, especially in the long-term.<br>- Refer to "success stories" (comparable examples of already implemented projects). | | ■ | ■ |

| | | Description | Mitigation measures | Private investors | Public investors | Third- sector |
|---|---|---|---|---|---|---|
| | **Technical** | | | | | |
| 7. | **Technical complexity** | NEB projects may include **innovative technical solutions** (technological, but also procedural, organisational, etc.) which are complex, both in implementation and operation. This might require **additional efforts** (e.g., tailor-made solutions, more complex processes, coordination issues, etc.) and introduce constraints (e.g., restricting the pool of suppliers, reducing flexibility, etc.), and eventually lead to higher costs.<br>The technical complexity (including the difficulty to quantify aspects related to aesthetics, the specific local context, etc.) can also be a limiting factor in formulating precise **contractual agreements**, for example as needed in PPP models. | - Adapt the complexity to own capacities and resources, assess different options.<br>- Involve experts with specific know-how, both in technical matters and in their application in a legal/ contractual context.<br>- Rely on the knowledge of manufacturers of components and solutions.<br>- Look for cooperations, partnerships and networks to tackle the most complex issues. | ■ | ■ | ■ |
| 8. | **Lack of capacity and experience** | Implementing the NEB ambitions can require **special skills** and a sufficient degree of experience from all parties involved in the project, during preparation, implementation, and operation. This refers not only to architectural and engineering skills but also to all other professions involved (e.g., social impact, communication and facilitation experts, accessibility experts, etc.) | - Make use of networks and other channels (including universities etc.) to access wider pools of experts.<br>- Plan sufficient time and resources for the right experts to be found and involved.<br>- Be aware that the initial efforts will pay-off and a community of experts will develop. | ■ | ■ | ■ |
| 9. | **Untested innovative solutions** | Innovative, relatively untested solutions always entail some level of risk. The resulting challenge consists, for example, of **uncertainties** surrounding **unconventional technical solutions** or the practicability and effectiveness of **new organisational structures** and processes. | - Apply a fail-safe approach, so that the project is not compromised as a whole by the failure of some parts.<br>- Assess the risk that is bearable, given the specific context.<br>- Do not underestimate non-technical and non-physical risks.<br>- Introduce and run a strict and comprehensive risk management process. | ■ | ■ | ■ |

| | | Description | Mitigation measures | Private investors | Public investors | Third- sector |
|---|---|---|---|---|---|---|
| | **Procedural** | | | | | |
| 10. | **Additional procedural efforts and time** | Implementing NEB values can increase the **complexity** and the **duration** of processes in project preparation and implementation. Moreover, new processes and **organisational structures may need to be set up**, temporary and permanent ones. This results mainly from the high ambitions of the NEB working principles but can also be linked to unconventional technical solutions, especially if reliant on behavioural changes. | - Look for inspiration from comparable projects, directly or via networks and other knowledge sharing channels.<br>- Plan sufficient time and resources for the new structures and procedures to be put in place.<br>- Introduce a strong stakeholder management system.<br>- Rely on experts with specific knowledge and experience with stakeholder management.<br>- Plan and introduce transition measures as needed. | ■ | ■ | ■ |
| 11. | **Lack of public interest and participation, public opposition** | Although at different level of ambition, the implementation of NEB projects is fundamentally **dependent on public interest and the active participation** by the stakeholders and the community in general. This can represent a challenge especially in **communities which are not used to public engagement** and may therefore **lack not only experience but also confidence**. | - Involve the community and collect information on their needs and concerns at the earliest possible stage in order to pre-empt potential issues in later stages.<br>- Develop and deploy a systematic and visible stakeholder engagement plan, including a comprehensive communication component.<br>- Assign sufficient time and resources to stakeholder and community engagement throughout the process.<br>- Rely on specialists in public participation, possibly with experience in comparable contexts. | ■ | ■ | ■ |
| 12. | **Coordination effort** | Especially in project preparation and design, the NEB ambitions can lead to **additional coordination effort**. This is mainly due to the need to interact with a **large number of stakeholders at different stages and at different levels**. Moreover, there is a need to coordinate **across different disciplines**, different (local) providers (instead of standard wholesale channels), etc. | - Allocate sufficient resources to project management.<br>- Set up an "extended" project management plan covering all the aspects (beyond investment and construction).<br>- Set up a stakeholder engagement plan, well integrated with all other relevant plans.<br>- Apply communication and mediation techniques to facilitate communication across disciplines. | ■ | ■ | ■ |

| | | Description | Mitigation measures | Private investors | Public investors | Third- sector |
|---|---|---|---|---|---|---|
| | **Administrative/ legal/ political** | | | | | |
| 13. | **Lack of adequate regulatory instruments (e.g., for innovative models)** | National legislation and local prescriptions may **not offer appropriate instruments or sufficient incentives** to innovative models, especially those based on shared ownership, shared operation, etc. | - Assess at the earliest possible stage the legal basis for the envisaged model and liaise with relevant authorities.<br>- Rely on tested models in comparable contexts, as far as possible.<br>- Rely on commitment, cooperation, and goodwill more than on legal structures. | ■ | | ■ |
| 14. | **Regulatory uncertainty and lack of adequate governance** | **Uncertainty surrounding regulations, policies, and incentives** related to sustainable development and green building standards may create challenges for NEB projects, impacting project feasibility, profitability, and investor confidence. | - Follow as far as possible norms and accepted standards.<br>- Document and ask for independent verification of all features going beyond current standards or deviating from them.<br>- Strive for independent certification and third-party opinions. | ■ | ■ | ■ |
| 15. | **Lack of local political support** | Projects in the built environment, especially large ones, are reliant on support by local decision makers. While decision makers may tend to support projects with high visibility, high NEB ambitions and innovative character **may not align with political priorities**, especially if the project impacts are expected to occur gradually and in the long-term. | - Identify, quantify (as far as possible) and communicate the strengths of the project, making a strong and convincing case for it.<br>- Lobby and gain support for the project by the stakeholders.<br>- Identify benefits for local decision makers (e.g., in terms of visibility).<br>- Identify different options and variants as a basis for negotiation. | ■ | ■ | ■ |

# 6 Conclusions

The scaling up of NEB and its mainstreaming in the built environment sector requires **coordinated efforts by all actors** involved in the initiation, preparation and implementation of such projects.

This chapter therefore first summarises general **advice to investors** on how to put NEB successfully into effect in investments in the built environment.

Second, it proposes a range of **action points** for the key audience groups of these Guidelines, indicating the way ahead towards the establishment of "**NEB good practice**".

## 6.1 Putting the NEB into practice

This Guide shows that implementing NEB in sizable investments in the built environment offers great opportunities but also poses challenges. While there is no simple solution to complex problems, applying a **structured and systematic approach** to integrating NEB core values and principles is the first step towards success.

Whilst advice on successfully implementing a "NEB project" is project-specific, here are some general recommendations on how to proceed and where:

| | Advice to investors |
|---|---|
| **1. Put the people first** | The NEB core values and working principles serve to improve the quality of life of citizens. Aligning with NEB means **putting the people and the community in first place**. NEB calls for granting human values, like compassion, empathy, unity, creativity, the same attention to economy, functionality, and efficiency. This applies on both sides of the project: who creates it and who will use it. |
| **2. Think in terms of processes** | NEB is, first and foremost, about a new way of doing things. As an extreme example, the same identical building can have a completely different meaning for a community depending on how it is conceived, designed, implemented, and used. Focusing on **processes instead of assets** is therefore key to realising successful projects. |
| **3. First plan then do** | The greater the challenges, the quicker people expect to see changes. However, only **thorough planning** ensures that the project **fits the context and produces impacts** that are targeted and permanent. Good planning also makes it easier to react and set a new course when things do not develop as expected. |
| **4. Take a long-term time horizon** | Buildings are there to stay, and communities too. While any project in the built environment naturally has a long-term horizon, projects that align with NEB go further. They look back across generations and **look forward towards sustainable and just ways of living**. |
| **5. Give attention to the context** | Aligning to NEB means adopting **place-based design approaches**. Therefore, understanding and responding to the specific context and the needs of the local community in all their complexity and dynamics is fundamental for successful projects, without giving up the indisputable advantages arising from standardisation end economies of scale. |
| **6. Get the right team** | NEB ambitions are high and need **skilled and dedicated people** to be achieved. This requires discovering and bringing to light hidden competencies in the community, including informal ones. Eventually, the collective knowledge will grow, spread and establish as the new standard. |
| **7. Communicate** | NEB projects can only succeed if they are based on respectful dialogue and genuine openness to **exchange and collective solution finding**. With increasing complexity and a growing number of different needs, views and constraints to accommodate, extensive and professional communication is critically important. |

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| **8. Break silos** | NEB is a holistic approach and so are NEB projects. The three core values and the working principles are only meaningful if they are **integrated and complemented**. To do so, the project owners have to break silos and bring together people, solutions and procedures from all fields. |
| **9. Experiment** | No systematic change can take place by keeping to the beaten track. NEB projects must be **innovative** in what they do and how they do it, in order to achieve deeper changes in behaviours, worldviews and paradigms. |
| **10. Have a vision** | A good project needs a good vision. Investors that implement NEB projects must be guided by a solid **commitment and a long-term perspective**. This will radiate to all stakeholders and support the projects against challenges and drawbacks. |

## 6.2 Where to go from here?

In order to mainstream NEB in the built environment, a concerted effort is required by all actors that initiate, develop and implement such projects. While the benefits of applying NEB values and principles are evident, the misalignment of interests, the lack of knowledge, the lack of resources, and other obstacles can hamper the spontaneous adoption of NEB at a large scale.

The table below summarises possible **action points for the different audience groups** of this guide, as identified in Sec. 1.2.2. Each group can have a key role in promoting NEB and contributing to the establishment of NEB values and principles as widespread good practice in built environment projects.

| | **Action points to mainstream NEB investments in the built environment** |
|---|---|
| **Investors** | - Include NEB into **ESG and CSR** commitments already in place.<br>- Join relevant **initiatives and pledges** for sustainability and social action.<br>- Look out for new **opportunities** linked to NEB, including public financial and non-financial support.<br>- Integrate NEB in **marketing** activities, leverage on the specific benefits that NEB can bring in different market segments. |
| **Developers** | - Encourage **contractors** to engage with NEB values and related expectations, increasing capacities in the long term.<br>- Create **partnerships**, join relevant networks and attend events to gather and share knowledge.<br>- Apply NEB solutions to **components and smaller projects** and progressively extend it to more ambitious projects. |
| **Decision makers** | - Leverage on NEB to obtain support to projects by all stakeholders and ensure broad "**ownership**" of projects.<br>- Prompt **technical experts** to collect information and evidence on NEB projects and NEB benefits, that are easily communicable across hierarchies and among stakeholders.<br>- Create **alliances** and ensure broad support from other decision makers which will also benefit from the NEB projects. |
| **Design teams** | - Increase **capacities** in areas related to NEB or enlarge field of competence by adding experts with new competencies to the team.<br>- Develop a portfolio of "**NEB solutions**", that is, ready-to-use blueprints for methods and techniques that can be applied to align projects to NEB.<br>- Propose proactively **innovative solutions** in line with NEB to clients. |
| **Public administrations** | - Strengthen **participatory processes** by setting up permanent procedures and bodies dealing with participatory issues.<br>- Help project investors and developers get familiar with **local needs, challenges and opportunities**.<br>- Allocate **funding** within the Municipal budget complementing existing EU funding and national funding to realise NEB initiatives. |

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| | - Integrate **NEB criteria** in public projects and activities, as well as in the applicable permitting and planning frameworks. |
| **Communities** | - Enquire about NEB and the **benefits** it can provide to communities, collect and share knowledge in a suitable way.<br>- Create within the community **structures** o, coordination, representation and communication as needed to bring forward requests linked to NEB to relevant authorities and decision makers.<br>- Assist, support and give voice to **weaker groups** in the communities and empower them to benefit from NEB. |

Annex I

# NEB Investment Recommendations

| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Beautiful | **Architects, Landscape architects** | **Conception** | ■■ |
| | **Urban planners, Technicians** | **Design** | ■■■ |
| | **Heritage experts, Social experts** | **Implementation** | ■ |
| | **Public participation experts** | **Use** | ■■ |

# 1. EMPLOY PLACE-BASED DESIGN APPROACHES

*Place-based design respects and builds on the place's distinct cultural, natural and aesthetic qualities, creating a unique identity and fostering a sense of belonging by the local community.*

## Relevance to investors

*Buildings and open spaces that respect and build on the place's distinct qualities are perceived as valuable and attractive. Moreover, each specific context offers unique opportunities that can be exploited and leveraged. Developments that take advantage of their surroundings enrich the neighbourhood and initiate a virtuous circle which creates value in the long-term, to the investors and the local community.*

## Description

For NEB any built environment intervention shall harness the place's unique cultural, natural and aesthetic qualities, and promote a sense of identity and belonging among its community members. There are diverse strategies applicable to any type of built environment project that support place-based design.

### Discover and build on the place's unique qualities

Place-based design requires a deep knowledge and appreciation of the place and its people. Some ways to achieve that are:

- **Perform detailed analyses of the project site and its context** prior to design, in order to understand and map the local social, economic, cultural values, the place's physical characteristics, its unique needs, challenges and potential. The analyses can include the collection and processing of data and information from formal sources combined with data deriving from interviews, informal mappings, photographical surveys, and others.
- **Engage locals in the discovery of the place**, its traditions, values and activities. The participation of the community and local stakeholders in the early stages of the project preparation reinforces the feeling of ownership and ensures that the proposed solutions respond to the real needs and preferences of end users. See also Rec. 16 and Rec. 17.
- **Build on the unique aesthetic identity of the project's surrounding environment** by engaging in a meaningful dialogue to the landscape and surrounding buildings, integrating, evolving or re-interpreting local morphologies and typologies, construction techniques, materials, colours and others, either by adopting an integrative approach or by contrasting to context aiming to create novel experiences.

*Investors can benefit enormously by creating projects which suit their environment and capitalise on it. Projects which are not anchored in their context can face opposition, lack of interest and demand, and loss of value in the long-term.*

### Learn from vernacular architecture

Vernacular architecture reflects the local history and culture and is intrinsically linked to its geographical and climate context, offering solutions and principles that hold the potential to enrich contemporary architectural practice, such as:

- **Use locally available materials,** to achieve visual reference and integration to the built and natural environment. Locally produced materials are often more affordable and more environmentally sustainable, as the costs and carbon footprint associated with transportation are minimised. Additionally, using local materials supports local businesses, labour force and economy.
- **Employ or re-interpret local construction techniques**, which evolved over decades or centuries based on a trial-and-error basis, aiming to formulate the best suitable technical solution according to the available resources and needs. This invaluable know-how has become increasingly respected and is now being reclaimed in many parts of the world. Many of these techniques and practices have been categorised as intangible cultural heritage and are subsequently being reintegrated into the rehabilitation and construction of both old and new buildings. In this respect it is also valuable to connect with both local artisans and construction experts to document and help disseminate such construction techniques.

- **Aim for low-cost climate responsive design** for projects of all types, including buildings, open spaces, and neighbourhoods, focusing on efficient orientation, spatial layout, location and density of openings, use of natural materials that achieve high levels of insulation, use of passive cooling techniques, such as cross ventilation or wind towers, installation of rainwater harvesting systems and others.

*In the short-term, the use of traditional materials and techniques may be not the easiest path to follow, if compared to fully conventional, standardised approaches. In the long-term, however, it offers advantages in terms of aesthetic quality, durability, sustainability and value retention.*

### Protect and promote local heritage

Heritage includes anything inherited from the past that is considered worth preserving for the future generations. It includes cultural heritage, which might be tangible or intangible, and natural heritage. Heritage conveys cultural and aesthetic values and local identity that reflect a long relationship between communities and places, bringing people together around common history and shared memories. Some ways to promote and preserve heritage from a NEB perspective are:

- **Protect and preserve heritage through innovative and quality interventions**, using new materials, restoration and renovation techniques aiming for circularity, energy efficiency and resource management, aiming though at minimally invasive design.
- **Reuse heritage buildings, sites, or spaces that are obsolete, underutilised, or abandoned** by engaging stakeholders, including citizens' initiatives, in decision-making and prioritising uses of public nature that allow the community to benefit from the assets' high cultural value.
- **Aim for the harmonious co-existence of historic and contemporary elements.** Heritage features shall coexist with new contemporary elements without losing their authenticity and relevance. At the same time, the contemporary interventions should be distinct, promoting originality and avoiding imitation.
- **Prioritise heritage preservation of assets according to significance and impact.** Proactively promote cooperation and collaboration between experts and local communities, authorities and stakeholders to valorise assets of high importance and impact for the history, development goals and identity of the communities.
- **Deploy the potential of heritage to connect people.** Heritage has a unique potential of bringing communities together around shared values, common past and identity. As a result, it acts as a catalyst that attracts people to join collaborative initiatives that support heritage preservation and valorisation, such as local heritage working groups and multi-stakeholder partnerships, thus promoting social connectedness, raising awareness on the place's history and fostering planning initiatives for future development.

*The relationship between people, cultural values, and buildings and places is an asset which is available, often without additional costs, to investors willing to take advantage from it.*

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Asset value.** Projects that engage in a meaningful dialogue with their physical and social environment are characterised by increased attractiveness. As a result, they create and lock in value in the long-term.<br>- **Visibility.** Projects which do not repeat conventional, standardised solutions, possibly also in a challenging but meaningful way, capture attention and are perceived as valuable.<br>- **Untapped resources.** Any environment offers specific opportunities and potentials, which may be not immediately visible. This can be in the form of physical assets, such as heritage, and social and economic chances, including pre-existing unsatisfied demand and unanswered needs. |
| Investment challenges and mitigants | - **Additional investment costs.** Engaging with the local context and designing projects that respond to it can induce additional design and investment costs. \| This can be mitigated by assessing and quantifying the expected long-term benefits and exploring cost saving potentials from local opportunities, e.g., local sources of materials.<br>- **Technical complexity.** Integrating non-standard solutions and tailoring projects to respond to specific needs can increase complexity compared to fully standardised projects. \| This can be mitigated by exploiting local skills and knowledge as well as critically reconciling non-standard requirements with easily implementable |

| | |
|---|---|
| | solutions. |
| Socio-economic impacts on community and users | - **Quality of life.** Designing for the context increases the attractiveness of the built environment, creates a unique identity, and fosters a sense of belonging by the local community, thus enriching the aesthetic and cultural experience of everyday life.<br>- **Local economic growth.** Place-based design reinforces the place's unique identity and aesthetic quality, attracting residents, businesses and visitors who seek authentic experiences.<br>- **Cultural preservation.** Place-based design, learning from vernacular architecture and protecting and promoting heritage are key for the safeguarding of history and the preservation of cultural capital for the future generations. |

## Useful sources


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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Beautiful | **Architects, Landscape architects<br>Urban designers, Urban planners<br>Environmental experts** | **Conception** | ■■■ |
| | | **Design** | ■■■ |
| | | **Implementation** | ■ |
| | | **Use** | ■■ |

## 2. CONNECT TO NATURE

*Bringing nature in everyday urban life improves the citizens' well-being and quality of experience and the cities' environmental and economic performance.*

### Relevance to investors

*Connecting to nature provides direct benefits to the users and the environment and it immediately translates into higher perceived quality and attractiveness, increasing socio-economic benefits as well as asset value. Whilst it may involve additional costs, it also contributes to operating cost savings through different channels and supports better protection against the consequences of climate change.*

### Description

Buildings, open spaces, and neighbourhoods can be designed in simple, low-tech and low-cost ways that encourage people to connect to nature, to understand it and value it more. Although many newly built environments are designed as indoors-oriented, spending time outdoors can lead to considerable benefits for our physical and mental well-being, offer opportunities for social interaction and raise awareness and consensus on environmental challenges.

#### Strategies applicable to Building projects

- **Bring the outdoors environment inside**. In this respect windows and doors play the most important role, by allowing visual connections to nature, and bringing fresh air and natural light inside the buildings. Thinner and smaller buildings provide better opportunities for natural light and efficient cross-ventilation. Whenever possible natural light should be coming from at least two directions, significantly improving the human experience in indoor environments. Natural light and ventilation are important for all spaces, including staircases, corridors, bathrooms, and others.

  *Efficiently designed façade openings provide visual connections to nature that increase a building's attractiveness and value, while opening opportunities for significant energy savings from reduced artificial lighting and air conditioning, thereby reducing operating costs.*
- **Provide hybrid spaces** that allow spending time at the building edges. Simple details, such as canopies or roof extensions, can activate the building edges, allowing users to spend time outside on a rainy day or leave stuff outside their door. Other examples of hybrid spaces include porches, verandas, loggias, balconies, and roof terraces that provide inexpensive additional living spaces with great importance for smaller housing units. At the ground level, arcades are significant hybrid public spaces that increase the sidewalk widths, protect from rain, wind, or sun, and accommodate various outdoor activities.

  *In both residential and commercial buildings, hybrid spaces create additional exploitable spaces in inexpensive ways.*
- **Apply simple greening measures**, such as pots, planters, and wooden or metallic structures that support vertical greening. Such measures increase the presence of greenery in the city, upgrade aesthetically the urban environment, improve climate resilience and ameliorate citizens' physical and mental well-being, while cooling buildings, acting as noise and privacy buffers and providing habitats to local fauna and flora. See also Rec. 10.

  *The aesthetic quality of the individual buildings and their surroundings, as well as their long-term resilience against climate-related risks are immediate assets to owners and users.*

#### Strategies applicable to Open space and Neighbourhood projects

- **Make streets green**. This is one of the most important and simple measures that can help bring nature into cities. Trees can change the microclimate of streets, provide shade, and protect from wind, thus making walking and cycling more pleasant. They also help reduce the urban heat island effect, they absorb carbon dioxide and purify air, while providing sensory experiences with their changing seasonal appearance, their sounds, and smells.

  *Greening of streets increases climate resilience and leads to property uplift in the residential and commercial sector, influenced by the improved public realm quality.*
- **Integrate water features in urban design**. This can happen in many ways, for example by introducing drinking fountains in open spaces, or waterjets that transform

hardscaped landscapes into playful social spaces. A remarkable example of bringing and managing water in cities is the Freiburg "Bächle", a system of shallow water channels running in the old city of Freiburg as a reference to the medieval system of small streams. These small multifunctional water channels cool the city, separate pedestrian movement and sitting zones from tram corridors and they turn the city into a big playground.

*The integration of water features in urban design can significantly increase the attractiveness of urban settings, while its effective management – saving, collection, reuse – directly translates into operating cost savings.*

- **Exploit the potential of each settlement's unique natural assets.** Most cities and villages possess some unique natural assets, such as proximity to mountains or water bodies, landscape views, or topography. Integrating such assets in everyday life encourages outdoor activities and fosters a better connection with nature. Waterfronts, for example, offer excellent opportunities for pedestrian-friendly spaces, and for leisure activities such as swimming, sunbathing, games, picnics, and others. The Island Brygge Harbour Bath[93] in Copenhagen exemplifies how activities typically associated with vacations can become part of everyday city life, offering free and socially inclusive leisure opportunities while connecting people to nature, right in the heart of an urban environment.

*Comfortable and attractive outdoor spaces for social life are key drivers for flourishing commercial activities and increased attractiveness of neighbourhoods to tenants and buyers.*

- **Restore hidden natural elements.** An illustrative example is the daylighting of urban rivers and streams that were previously covered by road infrastructure, such as, for example, the uncovering of the Aarhus river[94] in Denmark. Other examples include the transformation of hardscaped open spaces into softly landscaped green areas, by unsealing soil, also aiming at increasing climate resilience. Additionally, obsolete urban infrastructure can be converted into green spaces. A great example is the Promenade Plantée,[95] a 5km long elevated linear park in the heart of Paris, that is the result of the conversion of a long-abandoned mid-19th century railway line into the world's first elevated park walkway. Such interventions have significant positive impacts on improving the image of cities and villages, increasing their resilience, providing high quality leisure spaces for citizens, and bringing nature back into the built environment. See also Rec. 9.

*The restoration of hidden natural elements and the conversion of obsolete urban infrastructure into high-quality green spaces are key in improving the attractiveness of degraded urban environments and increasing asset values, while improving resilience against climate change.*

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Increased asset value.** By improving the living quality and the overall attractiveness of buildings and neighbourhoods, green elements can increase the attractiveness and therefore have a positive impact on the value of assets.<br>- **Operational cost savings.** Depending on the solution, the creation of green areas can also lead to reduced operating costs, for example related to the lower risk of flooding due to greater water absorption.<br>- **Resilience to environmental risks.** Depending on the solution, the creation of green areas leads also to increased resilience to environmental risks.<br>- **Reputation.** Projects which explicitly address nature by appropriate design solutions send signals on the attitude of the investors and their attention to sustainability issues.<br>- **Visibility.** Extensive green elements are often distinguishing and can have a signature character, therefore giving very high visibility to the projects. |
| Investment challenges and mitigants | - **Additional investment costs.** Green elements are an additional design and constructive element and can therefore induce additional investment costs (including expert advice etc.). \| This can be mitigated by including the green elements in the procurement documentation, as well as assessing how the increased attractiveness and associated revenue and asset value benefits balance the additional costs.<br>- **Additional operational costs.** Green elements typically require continuous maintenance. \| This can be |

[93] https://landezine.com/copenhagen-harbour-bath/

[94] https://una.city/nbs/arhus/aarhus-river-project

[95] https://www.paris.fr/pages/de-bastille-a-vincennes-par-la-coulee-verte-4932

| | |
|---|---|
| | mitigated by appropriate choice of plants and set ups as well as through the active involvement of communities. Costs may also be offset by lifecycle savings in energy or other operating costs.<br>- **Increased complexity.** While green elements can be integrated relatively simply into projects, they might need dedicated design arrangements and precautions. \| This can be mitigated by incorporating the green elements into the design work at an early stage, ensuring suitable expertise in the design team, and referring as far as possible to standardised solutions. |
| Socio-economic impacts on community and users | - **Physical well-being.** The widespread availability of attractive green areas offers many opportunities for spending time in a healthy environment, actively and passively, therefore improving physical well-being.<br>- **Mental well-being.** The presence of natural elements both outside and inside creates pleasant and comforting environments and contributes to mental balance, rest, and recuperation.<br>- **Climate.** Green infrastructure helps mitigate climate change and has an immediate effect on local climate change adaption, e.g., through cooling effects and improved air quality.<br>- **Education.** Green areas and green elements are immediately suitable as educational laboratories on nature-related issues. Green areas offer opportunities for general outdoor educational activities and recreation of students.<br>- **Protection of nature and biodiversity.** Including green elements in projects is the most straightforward way to contribute to the protection and restoration of nature and biodiversity. Beyond the immediate material benefits, it can also have large impact in terms of awareness-raising. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Beautiful | **Architects, Landscape architects<br>Urban designers, Urban planners<br>Public participation experts** | **Conception** | ■■■ |
| | | **Design** | ■■■ |
| | | **Implementation** | ■ |
| | | **Use** | ■■ |

# 3. PROMOTE DIVERSITY OF BUILDING FORM AND OPEN SPACES

*Building form and outdoor space diversity enhances the aesthetic appeal and multidimensional functioning of cities, their vitality and prosperity.*

## Relevance to investors

*The diversity of the building form and open spaces leads to vibrant and enjoyable environments of increased attractiveness, bringing socio-economic benefits, albeit these are difficult to quantify. The mix of building types, sizes and uses leads to diversification of the available properties and thus increases the variety of economic opportunities, benefitting also local businesses and the local economy in general.*

## Description

Diversity of people, activities and ideas is intrinsic to the multifarious functioning of cities and can be fundamentally supported by the diversity of both the building form and outdoor spaces. Although diversity in the built environment is often the result of many different minds and periods of time, informed urban planning, architectural and landscape design can promote it over homogeneity through multiple approaches.

### Diversity of the building form

- **Aim for visual and functional variation** and promote the co-existence of buildings of different sizes, typologies, architectural styles, and ages, and of buildings that accommodate diverse functions and incomes. Visual and functional variation creates dynamic and interesting urban environments, which are enjoyable to live in and explore. It also reflects the unique cultural, social, and economic characteristics of a place and the diverse profiles of its residents and users, thus contributing to a stronger place identity and sense of belonging.

  *Vibrant urban environments characterised by visual and functional variation are typically highly attractive both for residential and commercial purposes.*
- **Identify, preserve, rehabilitate, restore and reuse heritage buildings**, including historic, industrial and modern 19th and 20th century heritage. Heritage buildings reflect the historical continuity and cultural values of a place, while fostering feelings of pride and ownership in the community. Consider equally buildings of recognised heritage and buildings of high local significance.

  *Due to their unique characteristics, charm and continuous appreciation over time, heritage buildings have a unique potential for distinguishing use and long-term investment.*
- **Plan to accommodate different dimensions in close proximity**, aiming for urban form that can bring diverse groups and purposes together, such as social housing in proximity to private housing, public institutions in proximity to private businesses and commerce, and corporations in proximity to community organisations. To achieve that, land can be subdivided into size-differentiated properties, aiming for a few large and very large plots and more medium and small ones.

  *Smaller plot sizes provide higher potential for a fine mix of uses, allowing local businesses to benefit from the synergies of mixed-used development. Diversified assets also offer increased flexibility in case of changing needs and demand.*
- **Avoid strictly repetitive or homogeneous design** in new neighbourhood developments. This can be supported by engaging the community in the planning process to identify their needs and preferences, by involving multiple architectural firms, or by introducing architectural competitions in the design process. Options for personalisation by the future users can also be provided, for example by allowing future residents to design their own homes or participate in the design process.

  *Variety and personalisation help responding to users' and customers' needs, thereby increasing market potential.*

### Diversity of outdoor spaces

- **Provide a network of diverse outdoor spaces**. This shall include spaces of different sizes (from big parks and plazas to small local squares and pocket parks), spaces of different functionalities (from very general to specific ones), different types of ownership (public, private and shared/common outdoor spaces) and different levels of privacy (from highly visible to more intimate). The greater

the diversity of outdoor spaces, the more outdoor activities and social life take place.

*Diverse open spaces serve the needs of multiple users creating vibrant neighbourhoods, thus enhancing the area's character and attractiveness.*

- **Design for functional diversity**, by providing spaces that serve a variety of functions and activities for diverse social groups, such as spaces for recreation, gatherings, markets, performances, sports, games, playgrounds, picnic areas, walking trails, cycling routes, etc. Consider providing spaces that accommodate collective activities that foster interaction, as well as individual activities.

  *This can create demand for diverse service providers, increasing small-scale commercial activity.*

- **Design flexible and adaptable open spaces**, which can accommodate changing needs and seasonal changes. For example, use temporary installations and movable and flexible structures and furniture which can be repurposed and reorganised depending on the different seasons, activities and needs. Additionally, consider the multiple alternative purposes that each space serves. For example, streets should not be designed only as movement conduits, but also as key spaces for community building, where people stand, sit, shop and interact with each other. Similarly, parks, squares and shared courtyards should be designed not only as leisure spaces, but also as through movement spaces that provide functional links and shortcuts within the urban fabric.

  *The flexible and adaptive design of open spaces increases their utilisation and long-term value, as they can support changing needs and demand.*

- **Design for the local users**, by understanding the unique needs and preferences of the community that will use the open spaces. Collect, process and integrate input from diverse local stakeholders, including residents, workers, local businesses and community organisations.

  *Understanding the unique needs of the local users helps increase users' satisfaction and creates long-term bonds.*

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Flexibility.** Planning for diverse needs, behaviours and preferences provides an advantage to investors in the short-term, whereas the ability to adapt to change is a benefit in the long-term.<br>- **Untapped resources.** The revalorisation and commercial exploitation of underestimated/undervalued assets and areas offers new opportunities for investors, especially in already densely developed contexts.<br>- **Ancillary revenues generation.** Vitality and prosperity immediately translate into the improvement and creation of local business activities (retail etc.), therefore allowing for new channels of revenue generation. |
| Investment challenges and mitigants | - **Complexity.** Avoiding homogeneous, standard design and incorporating flexibility can be complex and imply additional efforts, in assessing the needs, designing, constructing, converting, etc. \| This can be mitigated by allocating sufficient resources to the preparatory activities and deploying appropriate procurement techniques that leverage on the diversity.<br>- **Additional procedural efforts.** Effective interaction with the community to assess and suit the specific local needs requires dedicated skills and might require additional effort in terms of time and resources. \| This can be mitigated by the timely start of the preparatory activities, involving experts with specific experience, and establishing participation formats that can be easily replicated.<br>- **Additional investment costs.** Complexity and flexibility can increase the short-term additional investment costs. Moreover, preserving existing assets can be more expensive than rebuilding from scratch. \| This can be mitigated by balancing extra costs with future expected additional returns and cost savings and assessing the market capacity to carry such costs. |
| Socio-economic impacts on community and users | - **Optimal use of land and space.** By responding explicitly to the diverse needs of people and targeting interventions in a coordinated and systematic way, the urban space and the existing stock of buildings are used in the most effective way.<br>- **Local economic growth.** A diverse and vibrant urban environment encourages social activities and interactions, contributing also to the development of economic activities.<br>- **Safety.** A lively, dynamic and conscious environment translates into higher social cohesion and collective awareness, therefore supporting a higher level of safety. |

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1. Jacobs, J. (1961). The Death and Life of Great American Cities. Random House.
2. Sim, D. (2019). Soft City – Building Density for Everyday Life. Island Press.
3. UN Habitat (2024). My Neighbourhood. Available at: https://unhabitat.org/sites/default/files/2023/05/my_neighbourhood_publication_19.05.2359.pdf

| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Beautiful | Architects, Landscape architects<br>Urban designers, Urban planners | Conception | ■■ |
| | | Design | ■■■ |
| | | Implementation | ■ |
| | | Use | ■■ |

# 4. DESIGN FOR HUMAN SCALE AND SENSES

*Designing for human scale and senses means designing for eye level experience, for walking speed, for dimensions that relate to the human body and the human senses.*

## Relevance to investors

*Designing for human scale and senses helps create walkable urban environments that perform best at the ground level, leading to high-quality and vibrant districts characterised by attractiveness, increased value, flourishing commercial activities and safety.*

## Description

Designing for human scale, senses and cognition means paying attention to the eye level experience, designing for walking speed, using dimensions that relate to the human body and stimuli that appeal to human senses.

### High-quality experience at eye level

Human beings observe, interpret, and interact with their surroundings mostly at eye level. It is mainly what happens at the ground floor and street level that connects people to a place. This means that open spaces and neighbourhoods should perform well at the level of the ground, providing a consistent high-quality experience with changing scenes and stimuli. Some practical ways to achieve a consistent high-quality eye level experience are the following:

- **Active ground floor uses**, including retail, offices, workshops, cafes and restaurants, services and others. Active ground floors ensure that more people spend time at street level, foster social interactions, contribute to the vitality of neighbourhoods and increase the feeling of safety. They also enhance the experience of pedestrians by making walking more interesting.

  *Reserving the ground floors for active commercial uses opens up opportunities for additional revenues.*
- **Frontages characterised by increased transparency and high density of windows and doors** encourage pedestrians to pause and provide key visual connections between streets and building interiors, linking public and private spaces, thus increasing street-life intensity and allowing the passive surveillance of the public realm.[96] The high density of ground floor building entrances creates denser patterns of pedestrian movement in outdoor spaces, increasing the possibility of spontaneous social encounters and, thus, increasing safety.[97] In contrast, long blank frontages of institutions or shopping malls tend to turn their back to the public realm, to internalise public life and create unpleasant urban environments.

  *Frontages characterised by increased degree of transparency and dense entrances contribute to the creation of vibrant and safe urban environments, thus increasing asset attractiveness and value.*
- **Continuous frontages** that create consistent street edges that clearly define public realm and guide pedestrian movement, that can be achieved by joined up buildings with decreased setbacks that promote the connection of buildings to the public realm.

  *Decreased setbacks also increase the usable floor area, while joined buildings save considerable space that is wasted when there are gaps between them and promote more compact built forms that are more energy efficient.*
- **Design smaller open spaces.** Smaller spaces that still remain proportional to their function bring people close to things and to each other. Greater proximity allows for attention to detail, for distinguishing small sounds and smells, thus intensifying experiences. It also supports human interactions, sociability and intimacy, and allows for a better overview of spaces, thus increasing the feeling of comfort, control and safety.

  *Even in the case of large-scale urban environments, the presence of smaller built elements can humanise extra-large spaces, increase their attractiveness and, thus, their value.*

### Planning for walking

Human beings are designed to walk at a speed of 5km/h. At this speed they have the time to study the details of buildings and observe other people and activities, enjoying a rich sensory experience. When driving a car at 50km/h or

[96] Jacobs, J. (1961). The Death and Life of Great American Cities. Random House.

[97] Hillier, B., & Hanson, J. (1984). The Social Logic of Space. Cambridge University Press.

more, the opportunity to observe people and buildings is missed. Architecture that aims to be perceived at a driving speed has been oversimplified and magnified to send all signals quickly and to a longer distance. The results are big scale urban environments, that lack detail and lead to impoverished experiences.[98] Designing neighbourhoods for walking can be achieved through the following ways:

- **Compact, dense, well-connected and mixed-use neighbourhoods**, support short distance movements, walking and cycling, by providing a mix of residential, commercial, and community infrastructure in a single building, block, or neighbourhood. Moreover, **medium to small size building blocks** create dense meshes of narrower streets that are more easily enjoyable and walkable. According to a helpful rule of thumb, intersections every 100 to 200 metres make a more granular grid that is friendly to pedestrians.[99] However, the blocks might be even smaller in city centres where there is an increased intensity of activities and there is a need for longer frontages. See also Rec. 13.

  *Medium to small size building blocks also increase the usable length of building fronts and the number of junctions and corners, leading to a better use of land and to an increased potential for commercial activities.*

- **Human-scaled streets,** that are narrower but remain related to the buildings' height, bring the various activities closer to each other and are easier to cross, thus creating pedestrian friendly environments and enhancing pedestrian safety. In contrast, wide streets are difficult to cross and often act as barriers that segregate neighbourhoods. Very wide streets should be generally avoided, except for major throughways which should be located, if possible, at the edges of urban districts. See also Rec. 12.
- **Street grids that are easy to understand and navigate in**, characterised by continuity and increased permeability. Street grids should connect neighbourhoods internally, but also to their immediate surroundings and the wider city, providing an increased density of junctions and avoiding streets that terminate in dead-ends or cul de sacs or segregated "islands" within neighbourhoods (shopping malls, fenced corporate or residential areas, etc.) that disorient pedestrians and obstruct their movement.

  *Increased walkability and street connectivity lead to higher quality urban environments characterised by higher land values and increased potential for commercial activities.*

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Visibility.** Creating assets and spaces which easily connect with people is the most efficient way to capture attention and increase the visibility of developments.<br>- **Attractiveness.** Design for human scale helps to create interesting and pleasant urban environments, responding to the growing expectations of customers that attach increasingly more value to assets that offer experiences beyond mere fitness-for-purpose.<br>- **Optimal use of land and spaces.** The exploitation of ground floors, the increase in the length of usable frontages, and similar measures immediately translate into optimal use of available space. |
| Investment challenges and mitigants | - **Lack of technical knowledge.** Good planning and design require specific competences and significant experience, as the best ideas can fail to work in practice if they are not properly implemented. \| This can be mitigated by accurate selection of the right planning and design team, for example though competitions, as well as by relying on solutions which have been tried and tested.<br>- **Coordination effort.** Creating complex urban environments with significant commercial use requires good coordination with stakeholders and authorities to maintain the right balance and avoid pursuing vitality at the cost of confusion and discomfort. \| This can be mitigated by engaging closely in early stages with stakeholders and authorities, monitoring closely the development of the area, and providing for mitigation and conciliatory measures that can be quickly implemented if needed. |

[98] Gehl, J. (2010). Cities for People. Island Press.

[99] Calthorpe P., GPSC (2022). Ending Urban Sprawl. Urban Standards for Sustainable and Resilient Development.

| | |
|---|---|
| Socio-economic impacts on community and users | - **Enhanced quality of life.** Designing for human scale can increase connectedness to other people and surroundings, as well as increase levels of satisfaction and happiness. Increased proximity and connectedness lead also to greater daily comfort and reduced costs of living, for example through lower car use.<br>- **Physical and mental well-being.** Increased walkability leads to increased exercise and recreation opportunities, less stress and more psychological restfulness.<br>- **Optimal use of land and space.** Compact and dense environments optimise the use of available land.<br>- **Safety.** Active ground floor uses, frontages characterised by increased transparency and high density of windows and doors and walkable streets enhance passive surveillance and safety.<br>- **Local economic growth.** Compact and well-connected neighbourhoods support local economic growth and help create synergies between the different types of activities. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Beautiful | Designers and planners | Conception | ■■ |
| | Engineers, Manufacturers | Design | ■■■ |
| | Social experts | Implementation | ■■ |
| | Public participation experts | Use | ■■■ |

## 5. INNOVATE FOR SOCIETAL AND ENVIRONMENTAL IMPACT

*Innovative architectural design can support new societal trends and organisational models and exploit the potential of emerging technologies to address current social and environmental challenges.*

### Relevance to investors

*Innovation is a key driver of sustainable growth and can unleash potential and opportunities, especially against increasing complexity and challenges. Moreover, innovation is key to eliminate inefficiencies in existing processes and to enable fundamentally new, faster, and better project preparation processes. Some may have tangible financial and economic benefits, whereas others may bring socio-economic benefits which are difficult to valorise financially but are important for society. Innovation in the built environment is also a key area for European start-ups and is an important target for venture capital investors.*

### Description

Responsible and innovative architecture can promote new ways of living, of interacting with each other and with the environment, and of better utilising resources, with or without the integration of advanced technology.

There are many examples of innovative built environment projects that do not necessarily integrate advanced technology. In these cases, architecture either supports social innovation by responding to emerging social trends and organisational models and by enabling inclusive processes, or it generates innovation itself through advanced architectural concepts and compositions.

Some examples of innovative project concepts that can be endorsed by architecture or urban design and are not necessarily per se technology-related are the following:

- **Collaborative living models**, that are based on shared ownership and management. In most cases, the properties are co-designed, co-owned and co-managed by their residents. The properties may usually include shared spaces, such as kitchens, dining rooms and communal green areas, or foresee the sharing of amenities, such as childcare. A remarkable example is Gleis21,[100] a co-housing project in Vienna emphasising affordability, inclusion, and solidarity. The future residents were actively involved in the design of the project, which also includes "flex apartments" for people in need of shelter, such as young refugees.
- **Intergenerational living schemes,** that bring together people from different age groups, typically older people, and young adults, students or children, benefiting all groups through companionship, mutual support, sharing needs and knowledge exchange.
- **Small but flexibly designed residential units,** that can provide low-cost housing, providing accommodation or emergency shelter in densely built urban areas, without compromising quality.
- **Community gardening initiatives,** that bring together residents to cultivate shared green spaces, promote urban agriculture, exchange and preserve traditional knowledge regarding local cultivation methods and seeds, and foster community connections.
- **Social farming**, that combines farming with healthcare and educational services, aiming at raising social and environmental awareness while promoting solidarity. Social farming activities take place in a farm or market garden and are designed to include people with specific needs, such as people with physical, mental, or emotional difficulties, people with drug dependencies, or older people.
- **Co-working spaces,** that have unique design requirements and qualities, aiming to promote interaction and collaboration among members in order to foster innovation, to provide privacy and also flexibility, allowing for the easy reconfiguration of spaces based on changing needs.
- **Open access workshops and makerspaces**, as flexible environments for experimentation and learning by-doing. They can be tech-heavy and focus on coding, robotics or 3D-printing, including for example small-scale collaborative digital fabrication labs, or low-tech, focusing

[100] https://2021.prizes.new-european-bauhaus.eu/node/269238 and https://gleis21.wien/

on arts and crafts, agriculture, food and others.

- **Diverse types of living labs**, that focus on the co-creation, experimentation and prototyping of innovative solutions to real world problems. They are typically supported by the industry, academia and governments, and are tested and "approved" by the end-users.
- **Designing for flexibility and DIY**, in diverse types of spaces, whether indoor or outdoor, allowing for experimentation and self-organisation.

*Flexibility in terms of configurability and adaptability of use offers the opportunity to target a broader and varying audience, ensuring optimal and continuous use also under challenging conditions.*

At the same, several technological innovations are emerging in the design and construction industry, including design methods, construction techniques, new types of materials, data collection methods, and others. Such innovations can help meet social and environmental needs more efficiently and they can be integrated in everyday architectural practice. Some examples of promising innovations in the sector are:

- **Use of bio-based materials,** in the construction of the built environment. Bio-based materials derive from living organisms and are processed into functional products that can be used for different parts of a building, including its structure, insulation, lining of internal surfaces and building envelope. Examples of bio-based materials include timber, bamboo, hemp, straw, wood fibre, cork and wool. Such materials are renewable, while plant-based materials actively absorb $CO_2$ during their growth phase.

  *The unique aesthetics of projects that visibly integrate biobased materials can increase the assets' distinctiveness and attractiveness.*
- **3D printing** is an additive manufacturing process that creates a physical object from a digital model. 3D printing can be used to produce rapid and low-cost structures or components, such as modular housing units, and has the potential to decentralise manufacturing, thus reducing costs and emissions related to transportation and waste. It also fosters creativity and innovation and can help democratise access to manufacturing technologies.

  *Depending on the project type, 3D printing can reduce project timelines, material consumption and need for labour, thus reducing overall costs, while allowing for more creative and distinctive designs.*
- **Parametric design,** which uses algorithms and parameters to generate and control complex forms. Among its many applications, parametric design can support sustainability, allowing for the exploration of forms in relation to energy efficiency, thermal comfort, natural ventilation and others. In the urban scale, parametric design can help simulate the effects of urban planning and design choices and assess the performance of alternative spatial layouts in terms of energy efficiency, reduction of urban heat island effects, connectivity, accessibility, flows of pedestrian movement and many others.

  *Depending on the project's type, parametric design can help improve the project's performance, from maximising energy efficiency and reducing operating costs, to improving spatial layouts.*
- **Modular off-site construction,** that incorporates modular building elements that were prefabricated off-site and are quickly deployed. Modular off-site construction also reduces construction waste, and disturbances to the environment. It can be also used to provide rapidly built housing in case of housing shortages or humanitarian crises.

  *Off-site construction can reduce construction time and costs. If appropriately designed, the modules can be re-used in other sites or can be integrated in other projects.*
- **Digital twins** which are comprehensive simulation models of physical objects, structures or complex systems, including buildings, neighbourhoods and cities. They can serve to study and shape solutions that address various highly complex topics, from sustainability to demographic change, poverty, social inclusion and others.

  *Digital twins facilitate predictive design and efficient asset management and can support impact assessment under a multi-objective environment, leading to optimal project outcomes.*
- **Artificial Intelligence (AI)** that allows the application of advanced computational algorithms and machine learning techniques to design, construct, and manage buildings, open spaces or neighbourhoods in ways that optimise their social, economic and environmental performance. These tools allow the analysis of vast amounts of data ("big data"), supporting decision-making processes (including participative approaches) throughout the building lifecycle.

  *AI enables the faster and more efficient preparation of projects, allowing the digital assessment of multi-purpose scenarios in risk-free environments in order to shape optimal solutions.*

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Reputation.** Creating, facilitating, or adopting new innovative solutions is universally recognised as a distinguishing behaviour and contributes to creating a "cutting-edge" reputation.<br>- **Procedural gains.** Innovation applies to both technologies and processes. Digitalisation is the key driver to achieving procedural gains, especially when it happens systematically across all involved parties.<br>- **Capital cost savings.** Innovation can introduce upfront transition costs, but eventually leads to efficiency gains and therefore capital cost savings.<br>- **Operational cost savings.** Technological solutions help to manage, operate and monitor assets more efficiently, therefore enabling significant operational cost savings. |
| Investment challenges and mitigants | - **Increased complexity.** Innovative solutions may be more complex to implement and use than conventional ones, or at least require a transition period and the acquisition of additional competencies. \| This can be mitigated by the timely and thorough planning of the transition, taking advantage of synergies, and relying on alternative procurement models (e.g., outsourcing, X-as-a-service, etc.).<br>- **Low reliability of solutions.** Innovative solution is necessarily exposed to the risk of lower reliability, which can manifest also in the long-term. \| This can be mitigated by preferring solutions which have gone through extensive testing and foresee contingency plans to manage efficiently possible failures. |
| Socio-economic impacts on community and users | - **Creativity and innovation.** Innovative projects foster creativity and empower individuals to express ideas, generating solutions of high socioeconomic value.<br>- **Social justice and mutual care.** Depending on the type of the solution, socially innovative projects can reduce social disparities and provide more equitable access to resources.<br>- **Climate.** Depending on the project type, innovatively designed and operated projects can improve environmental performance, providing immediate benefits on climate adaptation and mitigation.<br>- **Education.** Particular projects might also have strong educational impacts, providing access to informal learning activities. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Sustainable | Architects, Urban planners<br>Engineers, Sustainability experts | Conception | ■■■ |
| | | Design | ■■■ |
| | | Implementation | ■ |
| | | Use | ■■■ |

# 6. DESIGN FOR CIRCULARITY

*NEB encourages holistic approaches that bring strong social and aesthetic dimensions into circular built environment projects.*

## Relevance to investors

*Applying circularity principles in construction leads to high-quality and high-value projects and provides many benefits, ranging from more efficient construction processes to a longer life span compared to conventional projects. Moreover, the re-use of assets and resources and the provision of flexible spaces offers opportunities for large value creation from undervalued sources.*

## Description

A circular economy is a system which maintains the value of products, materials and resources in the economy for as long as possible and minimises the generation of waste. This means a system where products are reused, repaired, remanufactured or recycled.[101] The NEB encourages holistic design approaches that bridge circularity with aesthetics and society. Some strategies to pursue are described below.

### Avoid new construction and prioritise asset re-use

The avoidance of new construction holds out the greatest potential for saving resources and retaining value. This can be achieved by prioritising the reuse, renovation and repurposing of existing buildings and infrastructure over the creation of new. Wherever building new structures is necessary, the development of brownfield land should be prioritised over expansion into untouched natural areas, in order to protect ecosystems and biodiversity.

From a NEB perspective, participatory and interdisciplinary work can support this effort in the following ways:

- **Identify re-use and repurposing opportunities** in the community, for example though the mapping of empty properties, or through workshops where the community and design professionals explore creative reuse or repurposing concepts.
- **Explore and highlight the hidden aesthetic quality of existing assets** that are generally considered to be unattractive.
- **Advocate for idle assets** to be made available for reuse.

*Existing buildings and spaces can offer high potential for value creation, especially in contexts where new construction is constrained or could encounter opposition.*

### Design for flexibility and adaptability

Flexibility significantly reduces space consumption and adaptability increases the project's lifespan and its potential to be converted, reducing the use of resources in the long-term. From a NEB perspective some ways to achieve design flexibility and adaptability are:

- **Liaise with the community to identify innovative concepts of multi-use spaces**, aiming at maximum utilisation of assets during different periods of the day, week, or year, and accommodating various functions, thus reducing space consumption and leading to increased opportunities of social interaction.
- **Identify potential future needs** and property typologies that are likely to be in high demand in the future through socioeconomic and demographic studies and by engaging with the community and other stakeholders. Ensure that the spaces can be easily converted to meet future needs.
- **Employ a new aesthetic language that supports increased convertibility**, for example by including visible modular elements, designing structural grids and building envelopes that can meet diverse building needs (e.g., residential, commercial, etc.) or using versatile or movable structural elements or equipment, such as internal walls, canopies, furniture and others.
- **Use standardised structural elements in distinct and creative ways**, creating projects with unique identity and high aesthetic quality. Standardised structural elements are more likely to be reused and generate less waste during the production phase.

[101] https://www.europarl.europa.eu/topics/en/article/20151201STO05603/circular-economy-definition-importance-and-benefits

*By designing for flexibility investors maximise both the use of resources and the target audience of their projects, both in the short and long-term.*

### Use materials efficiently while promoting new aesthetics

The efficient use of materials in built environment projects can lead to new aesthetic values, in the following ways:

- **Avoid unnecessary structural components**, decorative elements or finishes wherever possible.
- **Avoid material intensive structures**, such as deep underground and high-rise structures, and use high strength materials and material-efficient structural forms that reduce the total material needed.
- **Integrate reused materials**, such as secondary raw materials in concrete (e.g., recycled aggregates), or biobased materials, such as timber, which minimise the need for interior finishes and create spaces with unique aesthetic identity. The reuse of materials can also lead to new aesthetics that value imperfect or "raw" finishes.

*Circularity provides at the same time technical benefits and cost savings and creates a contemporary look that satisfies the expectation of modern users.*

### Promote sharing and collaborative initiatives

Other ways to foster circular behaviour in the community and households include:

- **Encourage circular community-based initiatives**, like local material banks, repair cafes, swap events, food donation programmes, and others, that encourage adopting a circular lifestyle while strengthening social ties.
- **Promote sustainable waste management practices**, including recycling, composting and efficient waste separation and collection, that encourage occupants to actively engage in recycling and composting initiatives.
- **Promote urban communal gardens** that support circularity by combining food production with composting facilities that support plant cultivation, while creating opportunities for social interaction, enhancing our relationship with nature and raising awareness on environmental issues.
- **Promote the shared use of assets and services, including product-as-a-service concepts**, where consumers purchase the desired service paying only for the units they consume, rather than the product itself. This allows them to benefit from state-of-the-art technologies without investing upfront, reduces the overall resource consumption as products are shared, and encourages people to consume more responsibly, as they are more aware of their consumption.

*Circularity is a long-term economic imperative with a growing relevance to the decision making of individuals, corporates and administrations.*

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Increased asset value.** By contributing to a longer lifetime and more intensive and continuous use of assets, the attractiveness and the value of the assets are increased.<br>- **Flexibility.** Flexibility is a key advantage when dealing with changing conditions, crises and unexpected events. It also helps mitigate uncertainty on future use, for example for new developments in evolving contexts.<br>- **Reputation.** Applying circularity means complying with high sustainability standards, thereby cementing a reputation for commitment to sustainability.<br>- **Access to grants.** Committing to circularity and sustainability in general can facilitate access to public grants and other forms of support, financial and non-financial (e.g., technical assistance). |
| Investment challenges and mitigants | - **Additional investment costs.** Although circularity practices can reduce costs due to the reuse of existing assets, structural elements or materials, in some cases they might be more expensive to implement than conventional solutions, mainly due to a lack of market readiness. \| This can be mitigated by ensuring that the project is embedded from the very beginning in a circular ecosystem. If such a system is not yet available, the circular ambition must be tailored to the circumstances.<br>- **Untested solutions.** Advanced circular solutions can still be premature and pose a reliability risk in the long-term. \| This can be mitigated by ensuring a good balance between tested solutions and less tested ones and by carefully tuning the level of ambition and the resulting risk level to the ability of the stakeholders to deal with such risk. |

| | |
|---|---|
| Socio-economic impacts on community and users | - **Optimal use of land and resources.** In the built environment sector, circular practices optimise the use of land and resources, prioritising the repurposing of existing assets over the construction of new ones, reusing materials, refusing structural elements wherever they can be avoided, and designing for flexibility and adaptability.<br>- **Climate.** Circularity is key in reducing greenhouse gas emissions associated with life cycle of materials (including extraction, production, transportation and disposal), providing immediate benefits to climate mitigation.<br>- **Protection of nature and biodiversity.** Circular practices reduce raw materials extraction, minimise waste disposal in landfills and promote nature regeneration, thus preserving natural habitats, ecosystems, and biodiversity.<br>- **Education.** Holistic design approaches that bridge circularity with aesthetics and society have a big potential to raise awareness on environmental challenges and support behavioural and cultural changes. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Sustainable | **Architects, Urban planners**<br>**Engineers, Sustainability experts**<br>**Environmental experts** | **Conception** | ■■ |
| | | **Design** | ■■■ |
| | | **Implementation** | ■ |
| | | **Use** | ■■ |

# 7. DESIGN FOR CLIMATE MITIGATION

*For NEB, climate mitigation solutions shall also be affordable, inclusive and promote cultural and behavioural change.*

## Relevance to investors

*While climate change is a global challenge, individual investors, developers and, eventually, users can benefit from being forerunners in climate mitigation. Beyond immediate cost energy savings from higher energy efficiency, anticipating future regulatory restrictions is beneficial from many perspectives: saving higher transition costs later; mitigating obsolescence risks, ensuring eligibility for public grants and other forms of financial support dedicated to early adopters; granting access to "green" financing sources; and so on. Moreover, investors and developers can benefit from reputational gains for their efforts in combating climate change.*

## Description

The built environment sector is one of the larger emitters of greenhouse gases. These emissions can be categorised into two main types: operational carbon, stemming from building heating, lighting, and cooling, and embodied carbon, which arises from the materials used in construction, their transportation and assembly, as well as their eventual disposal.

From a NEB perspective, the reduction of both operational and embodied carbon shall be addressed not only through purely technical solutions but may be seen from a broader perspective that questions aesthetic and cultural values, and prioritises inclusion and affordability.

### Strategies applicable to Building projects

The concept of "sufficiency" is instrumental in linking technical solutions to behavioural change. It supports conscious design and consumption, recognising that much of what we build and use is not always needed. Some ways to address sufficiency in building projects are:

- **Reduce space consumption** by avoiding the oversizing of housing units. During the last decades the living space per person has increased significantly. Bigger living spaces require more land, more construction materials to be built and more energy to be operated. Living spaces can be reduced in size without compromising quality through flexible design, through the increased provision of shared spaces and services, and by including more hybrid indoor-outdoor spaces that significantly improve the quality of living in small spaces. See also Rec. 2 and Rec. 14.
- **Prioritise passive design solutions** that do not rely on mechanical systems. Passive solutions are affordable and accessible by a broad range of people due to reduced operating costs. Key parameters to be addressed include the building's orientation, the insulation of its envelope, the size and location of windows, the performance of glazing and window frames, the implementation of green roofs and wind towers, the provision of shading through vegetation or louvers, and others. Aiming for compact built forms also improves energy efficiency, as buildings with large surface areas compared to their volume tend to lose thermal energy quickly.
- **Explore and prioritise the use of low-carbon materials**, that may reduce the embodied carbon of the building. Consider materials such as timber, low-carbon cement formulations or alternative cementitious materials, insulation from cellulose, sheep's wool, or hemp, and natural building materials such as rammed earth.
- **Recognise the aesthetic value of simplicity** by avoiding unnecessary decorative elements and reducing finishings wherever possible thus helping to reduce the embodied carbon of the building.
- **Cover remaining energy needs by renewable energy sources**, such as solar, wind or biomass. Consider the aesthetic integration of photovoltaic panels, solar thermal collectors or wind turbines in buildings or open spaces early in the design process.
- **Integrate energy management systems**, such as smart metering, that allow users to be aware of and to better control their energy consumption.
- **Support cycling and e-mobility**, for example by providing safe and comfortable bike parking spaces or recharging points for electric cars and e-bikes, including cargo-bikes.

*Climate change mitigation measures, mandatory and voluntary ones, can become distinctive and valuable elements when integrated in the design. Moreover, they*

*typically correspond to energy saving measures, thus inducing considerable and enduring operating costs savings, to the benefit of future users.*

### Strategies applicable to Neighbourhood projects

Some strategies to tackle climate mitigation in neighbourhood projects are:

- **Aim for compact urban development**, that reduces land consumption and promotes energy and material efficiency. Compact developments reduce greenhouse gas emissions by protecting natural greenfield areas, reducing transportation needs and decreasing car dependency, and requiring less infrastructure per capita. See also Rec. 13.
- **Plan and design for walking and cycling** as zero-emission, low-cost and healthy forms of urban mobility. See also Rec. 12.
- **Employ bioclimatic design principles** in urban planning and design. Some examples include the careful study of the street grid orientation, which also determines the orientation of plots and later buildings, the width of the streets in relation to buildings height in order to control the building façades' exposure to environmental factors depending on the climate, the compact form of urban blocks with continuous building frontages to maximise energy efficiency, and others.
- **Promote carbon sinks** through green and blue infrastructure such as urban forests, wetlands, and riparian zones along rivers and streams. See also Rec. 9.
- **Support energy communities**, that are legal entities based on voluntary and open participation that engage in generating, sharing, supplying, and distributing renewable energy for electricity, heating, and cooling. Energy communities are owned and controlled by citizens, local authorities or small and medium enterprises. They present an alternative to traditional profit-driven energy companies because they allow citizens to be involved in decisions related to their energy production and consumption. They also raise environmental awareness and promote behavioural change, while providing socio-economic benefits to their members and the local areas where they operate.[102]

*Beyond energy savings, design for climate mitigation means making better and more intensive and effective use of scarce resources, therefore improving the investment case for built environment projects. For public authorities, it can reduce the pressure on providing or upgrading costly infrastructure.*

## Impacts, benefits and challenges

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|---|---|
| Horizontal investment benefits | - **Operational cost savings.** Energy efficiency measures directly induce energy cost savings and indirectly other benefits, e.g., lower exposition to external factors like price shocks, technical disruptions, and so on.<br>- **Reputation.** Implementing climate mitigation measures, especially innovative and efficient ones, helps develop a good reputation vis-a-vis buyers and (green) investors, decision makers and public authorities.<br>- **Aligning with policy objectives.** As climate change mitigation is an established policy objective, adhering to it ensures compliance, reduces obsolescence risks, and provides high acceptance and visibility. |
| Investment challenges and mitigants | - **Lack of capacity and experience.** Innovative design for climate mitigation, especially if going beyond conventional technological solutions, may require specific competences for design and possibly also for implementation and maintenance/operation. \| This can be mitigated by joining relevant networks for exchange of knowledge and experiences and by taking advantage of existing technical and financial assistance programmes at national and EU level.<br>- **Untested solutions.** Design for climate mitigation can rely on very innovative and modern solutions which may not have a sufficient track record. \| This can be mitigated by choosing a good mix of innovative and conventional solutions in order to distribute risk and by partnering with other projects for testing and developing new solutions. |

[102] https://www.rescoop.eu/news-and-events/news/the-social-impact-of-energy-communities-ten-benefits-they-bring

| | |
|---|---|
| Socio-economic impacts on community and users | - **Physical well-being.** Passive design solutions create healthy and comfortable indoor environments, taking advantage of natural ventilation and light.<br>- **Affordability.** The use of passive design solutions and the avoidance of mechanical systems reduces the ongoing operating costs, leading to more affordable projects. Energy communities also provide access to more affordable energy.<br>- **Optimal use of land and resources.** Designing and planning for sufficiency ensures the long-term sustainable use of land and minimises the use of materials and energy needed both for the construction and operation of built environment projects.<br>- **Climate.** Designing for sufficiency, prioritising passive design strategies and using renewable energy resources minimises the carbon footprint of built environment projects and supports the global fight against climate change. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Sustainable | **Architects, Landscape architects<br>Urban planners, Engineers<br>Environmental experts** | **Conception** | ■■ |
| | | **Design** | ■■■ |
| | | **Implementation** | ■ |
| | | **Use** | ■■ |

# 8. DESIGN FOR CLIMATE ADAPTATION

*For NEB, designing for climate adaptation means increasing resilience to climate change impacts while preserving and adding cultural, social and aesthetic value.*

## Relevance to investors

*Climate change risks are an actual threat to the long-term value of assets. The ability to cope with risks such as extreme weather events, changed baseline conditions and shortages of water and other resources, is a key requirement for all investors. As well as contributing to wider climate resilience, it can result in more tangible investment benefits such as reduced insurance premiums, avoided loss and safeguarding of asset value.*

## Description

Building resilience and adapting to climate change is a top priority for cities. From a NEB perspective, planning and designing for climate adaptation means going beyond technical requirements to encompass design solutions that are aesthetically appealing, conducive to citizens' well-being and reflective of the unique needs of vulnerable social groups.

### Climate adaptation infrastructure as part of everyday life

When combined with open spaces, climate adaptation solutions can become part of everyday life, providing appealing leisure spaces, while raising awareness on climate change. Some examples are:

- **Rain gardens** that are landscaped areas designed to absorb and filter run-off water from roofs and other hard surfaces. Similarly, **water squares** are usually implemented in densely built inner-city areas where finding room for water retention is difficult. Water squares include lower-level areas that can be submerged in case of heavy rainfall events. They can be multi-functional, combining water retention functions with green areas, recreational and sports facilities. Water squares make the dynamics of water visible to people, creating urban landscapes of high aesthetic value and providing rich sensory experiences. Some remarkable examples of water squares include Benthemplein in Rotterdam[103] and Enghave Park in Copenhagen.[104].
- **Flood-defence walls and embankments as public realm**. The physical and visual relationship to water is one of the key assets of waterfront cities and villages. However, the need to implement flood defence walls or embankments often disrupts this connection. This can be mitigated by designing flood-defence infrastructure as integrated landscaped parts of the public realm. Some examples include the upgraded 625m long Niederhafen Promenade in Hamburg[105] and the Tocotocodandan flood defence walls in Osaka.[106] In both cases flood defence walls were designed as multi-functional terraced spaces, integrating waterfront promenades and seating areas.

  *The creation of rain gardens, water squares, and the design of flood-defence infrastructure as public realm offer multiple benefits simultaneously to investors, creating high quality and attractive open spaces for different public and commercial uses.*
- **Increase of the "sponge city" effect** while providing high quality spaces. There is a great potential to increase climate resilience and aesthetic value and to improve people's well-being by converting previously hard, impervious surfaces into softly landscaped green spaces. Such spaces can reduce the urban heat island effect and allow slower run-off during and after rainstorms. Taasinge Square[107] is Copenhagen's first climate adapted urban space. The project included the unsealing of 1,000m$^2$ of asphalt and the conversion of a car parking area into a landmark park that collects rainwater from roads and rooftops and combines it with possibilities for play, making

[103] https://www.urbanisten.nl/work/benthemplein

[104] https://landezine-award.com/enghave-climate-park-by-third-nature-tredje-natur-in-danish/

[105] https://www.zaha-hadid.com/architecture/hamburg-river-promenade/

[106] https://architizer.com/projects/tocotocodandan-flood-defence-as-waterfront-public-space/

[107] https://www.danskeark.com/content/taasinge-square

the response to climate change visible and understood to anyone in a real urban context. See also Rec. 9.

*Soil unsealing is a simple and low-cost way to increase an asset's resilience while improving its attractiveness, thus securing its long-term value.*

### Caring for those affected the most

In view of the increased intensity and frequency of extreme weather events, vulnerable groups of people could face higher risks, because they are less able to avoid climate and environmental hazards (e.g., living in high-risk zones, such as floodplains, or in energy-degraded housing stock), they are more sensitive to hazards (e.g., older people are at greater risk in case of extreme heatwaves), or they are less able to cope with potential mental or physical health problems (e.g., they cannot afford appropriate treatment, they live in overcrowded households etc.). Urban climate adaptation shall address such social inequalities and target the most vulnerable groups.

At urban planning level, urban climate adaptation strategies can become more inclusive by actively engaging vulnerable social groups in order to identify and understand people's unique needs and concerns and boost their adaptive capacity. The preparation of climate adaptation strategies should be also based on the collection and analysis of detailed socio-spatial data that allow the mapping of social vulnerabilities, including data on the quality of building stocks and on the spatial distribution of various social groups in relation to their age, economic status, household composition, living conditions, cultural background etc. Such analyses are essential to identify risks and implement targeted mitigation measures.

Regarding open space design, creative multidisciplinary initiatives can enhance climate resilience while promoting social justice. The Paris "OASIS"[108] schoolyard programme is a remarkable example, that aimed at transforming schoolyards into green spaces accessible to both pupils and vulnerable citizens. The City of Paris recognised that different social groups and different areas of the city had unequal vulnerabilities to heatwaves of increased frequency and duration. Schoolyards, as sealed spaces equally distributed in all neighbourhoods, had a great potential to be converted into accessible green spaces that cool the city. The designs were the result of the collaboration with students, teachers and school staff.

*Addressing the specific needs of different groups in view of climate change helps to meet users' expectations and can reinforce the reputation of an attentive investor.*

### Untap the potential of culture and arts

Culture, in its diverse forms, can support action towards climate adaptation by engaging communities, influencing trends and sparking innovation. Some examples include:

- **The use of arts and cultural history** to raise awareness about the effects of modern lifestyle on the climate and the environment. Arts and culture play an important role in depicting new norms and promoting cultural shifts at individual and collective level.
- **The promotion of participatory stewardship, inventorying, and cultural mapping** in identifying significant cultural assets that must be protected against climate change, in monitoring their performance and in maintaining them.
- **Learning from traditional architecture and construction practices**, increasing urban resilience and promoting a strong local identity.

*Exploring the potential of art and culture to advance climate adaptation can lead to innovative and distinct projects, with high visibility and reputation benefits to the investor.*

## Impacts, benefits and challenges

Horizontal investment benefits

- **Capital cost savings.** Measures which increase the resilience against climate risks bring long-term savings in terms of reduced physical damages and/or need of maintenance, repairs and renewal.
- **Reputation.** Implementing climate adaptation measures underpins the investor's reputation for awareness and long-term thinking. The risk of climate-related reputational damage is also reduced.
- **Reduced insurance premiums.** Adaptation measures may contribute to reduced insurance premiums, or even impact whether a property is insurable or not; besides this, it may contribute to avoided losses or avoided business interruption in case of extreme weather events or gradual climate change.
- **Untapped resources.** By actively designing for climate adaptation, technical infrastructure projects are transformed into places which can be socially and commercially deployed.

[108] https://climate-adapt.eea.europa.eu/en/metadata/case-studies/paris-oasis-schoolyard-programme-france

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|---|---|
| Investment challenges and mitigants | - **Technical complexity.** The preparation of adaptation measures that are also characterised by strong aesthetic and social dimensions (such as water squares or flood defence walls that are designed as integrated parts of the public realm), might be more complex to design and dimension, also given the fundamental uncertainty related to climate events. \| This can be mitigated by making use of established solutions and applying as far as possible scalable measures.<br>- **Unknown practicability of innovative solutions.** Depending on the country, the preparation of structural adaptation solutions that also have strong aesthetic and social dimensions might not be mainstreamed. As a result, such approaches are characterised by a degree of innovation. \| This can be mitigated by taking a progressive approach, applying first "fail-safe" systems and then continuously increasing the ambition towards more sophisticated and appealing solutions. |
| Socio-economic impacts on community and users | - **Optimal use of land and resources.** The preparation of projects that address climate adaptation, social inclusion and open space improvement simultaneously achieve optimal use of land and resources.<br>- **Resilience.** Climate adaptation solutions are key in improving the resilience of urban areas.<br>- **Social justice.** Caring for the needs of vulnerable groups in view of climate change promotes social justice and tackles social disparities.<br>- **Education.** Climate adaptation solutions that are integrated in everyday urban life can have a strong educational impact, by making the response to climate change tangible and understood by all. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Sustainable | **Architects, Landscape architects<br>Urban planners, Engineers<br>Environmental experts** | **Conception** | ■■ |
| | | **Design** | ■■■ |
| | | **Implementation** | ■ |
| | | **Use** | ■■ |

# 9. DEPLOY THE POTENTIAL OF GREEN AND BLUE INFRASTRUCTURE

*Green and blue infrastructure delivers environmental, social and economic benefits simultaneously, while contributing to climate change mitigation and adaptation.*

## Relevance to investors

*Green and blue infrastructure solutions can provide investors with multiple benefits. Depending on the type of solution, such benefits include a combination of increased attractiveness of buildings and open spaces, increased resilience to environmental risks, the reduction of operating costs and the revalorisation of challenged or unused areas. Accordingly, investments in green infrastructure can be key in partnering public and private sector interests and can open opportunities to private investors in terms of access to (green) incentives and other benefits.*

## Description

Green and blue infrastructure refers to the interconnected and multifunctional green and blue spaces that provide a wide range of services simultaneously, such as:

- Providing resources, such as wood, water and living species that contribute to the ecological balance and sustainability of food chains.
- Sustaining environmental services, for example through pollination, water purification and improvement of air quality, while contributing to climate mitigation and adaptation.
- Improving citizens' quality of life, by providing fresh air, improving the local microclimate, and providing opportunities for recreation and connection to nature.

Green and blue infrastructure relates to, and partly overlaps with, the concept of Nature-based Solutions, defined as "solutions that are inspired and supported by nature, which are cost-effective, simultaneously provide environmental, social and economic benefits and help build resilience. Such solutions bring more diverse natural features and services into cities, landscapes and seascapes, through locally adapted, resource-efficient and systemic interventions".[109]

In an urban context Nature-based Solutions refer to green and blue infrastructure solutions that vary in terms of spatial scale, ranging from green roofs and small-scale stormwater systems to wetlands and urban forests, and in terms of human control and technology, ranging from self-regulated natural ecosystems to hybrid grey-green solutions.

### Examples of urban green infrastructure interventions

Some examples of urban green and blue infrastructure interventions include:

- **Creation of well-connected networks of green spaces**, from big scale urban and peri-urban parks to local urban allotments and communal gardens, that improve the quality of air and the local microclimate, provide habitats and water regulation due to unsealed soils, and offer opportunities for recreation and social interaction. See also Rec. 10.
- **Green roofs and green walls** that help absorb rainwater and provide habitats for wildlife, improve air quality by absorbing pollutants and reduce the urban heat island effect, while improving the building's insulation and overall aesthetic quality. See also Rec. 10.
- **Decreased soil sealing and porous pavements** that allow rainwater to infiltrate through the surface and the underlying soil layers, either by using materials that are porous themselves, such as porous concrete, or by using impervious materials with void patterns. See also Rec. 8.
- **Greening of linear transport infrastructure** by planting vegetation along transport corridors of diverse capacities, from highways and railways to local streets and tram lines. While adding natural elements to the infrastructure alleviates the unavoidable impacts, such measures can also benefit residents (e.g., noise reduction, better visual integration) and act as ecological corridors that facilitate wildlife movement. There is also a high potential to unseal soil and create green linear spaces on former transport corridors, for example, by creating walking tracks or linear gardens in former railways or obsolete traffic lanes.

[109] https://research-and-innovation.ec.europa.eu/research-area/environment/nature-based-solutions_en

- **Restoration and daylighting of urban waterways** by removing obstructions that cover rivers or streams and restoring them to their previous condition. The coverage of waterways was a common practice in the past, often aiming to increase buildable surface areas. The daylighting of forgotten streams and rivers offers protection against floods and contributes to urban climate resilience, provides high-quality recreational spaces for pedestrians and cyclists and improves cities' image. See also Rec. 2.
- **Restoration of urban wetlands and floodplains** to reduce urban flooding, to restore water quality through natural filtration and provide habitats for wildlife, while providing opportunities for outdoor relaxation spaces or ecotourism activities.
- **Sustainable Drainage Systems (SuDS)** as alternative drainage solutions that mimic natural drainage processes by reducing surface water flooding and the transfer of pollution to the water table. Due to their multifunctionality, SuDs are usually more efficient and less expensive compared to conventional drainage systems.

*Green infrastructure solutions can become distinguishing, attractive elements and lead to value creation and long-term value retention through higher aesthetic quality, increased resilience or reduced operating costs. Moreover, they can bring together, and capitalise on, public and private interests, to the benefit of both sides.*

### Green infrastructure for social inclusion

Green infrastructure has the potential to support social inclusion. Although the physical and mental health benefits related to nature are widely acknowledged, not everyone has access to such natural spaces nor can participate in the decision-making processes that affect them. Some pathways to align green infrastructure with social inclusion are:

- **Aiming for low-value land areas**. In urban areas land values range from premium land that commands high investment and returns, to lower value land that often comes in smaller and fragmented pieces. Green infrastructure has a high potential to activate such "low value" land, by creating for example pocket parks and community gardens, providing health and aesthetic benefits to urban areas and citizens that need it the most.
- **Supporting community-based actions in green infrastructure projects**, ensuring that diverse voices are heard and considered during the preparation of projects. Such actions can also be supported by providing communities with surveys and maps that demonstrate the lack of green spaces in particular areas. Such data can help residents access evidence to help improve their own localities.
- **Creating partnerships early enough in the project preparation process** in order to access expertise and resources from private, public and third sector organisations that focus on green infrastructure and social inclusion and act at local, regional or national level.

*Green infrastructure solutions can provide highly effective and low-cost ways to recover and revalorise unused or challenged areas. By doing so, they can be a major factor for local and regional long term economic growth.*

## Impacts, benefits and challenges

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|---|---|
| Horizontal investment benefits | - **Untapped resources.** Green infrastructure can activate and revalorise abandoned, unused or low value land in cost effective ways.<br>- **Attractiveness.** Green infrastructure has the potential to significantly improve the aesthetic quality of assets, but also the image of broader urban districts.<br>- **Resilience to climate risks.** Green and blue infrastructure solutions are key in addressing adaptation to climate change, for example by reducing the risk of flooding or reducing the impact of urban heat island effect.<br>- **Operational cost savings.** Green and blue infrastructure can also lead to reduced operating costs, for example due to the lower incidence of flood events because of increased water absorption. |
| Investment challenges and mitigants | - **Additional investment costs.** Some solutions might lead to increased investment costs. \| This can be mitigated by looking for dedicated sources of funding and financing and taking advantage of financial incentives, such as tax abatements. Additionally, initial investment costs can pay-off in the long-term, e.g., by increasing the asset's resilience to climate change impacts and reducing energy-related operating costs.<br>- **Technical complexity.** Green infrastructure and Nature-based Solutions might be more complex to prepare and implement. \| This can be mitigated by planning sufficient resources for specialised technical advice, |

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| | looking for partnerships in order to access expertise and know-how, and relying on the knowledge of manufacturers of components.<br>- **Additional procedural efforts and time.** Depending on the scale and complexity of each project, the preparation of large green infrastructure solutions might require additional studies and coordination among experts. \| This can be mitigated by allocating sufficient resources for the early planning and management of the project preparation process, recurring as far as possible to standardised solutions, looking for synergies across projects, and so on. |
| Socio-economic impacts on community and users | - **Physical and mental well-being.** Green infrastructure improves the quality of air, the local microclimate, provides opportunities for exercise, recreation and connection to nature, thus significantly improving citizens' quality of life and well-being.<br>- **Social cohesion.** Green areas offer opportunities for recreation and social interaction.<br>- **Optimal use of land and resources.** Green infrastructure is cost-effective and offers multiple socioeconomic benefits simultaneously, achieving optimal use of land and resources.<br>- **Resilience.** Green and blue infrastructure increases resilience against climate hazards, such as flooding, sea-level rise, and more frequent and intense droughts and heatwaves.<br>- **Climate.** Green and blue infrastructure plays a key role in climate mitigation, by decreasing greenhouse gas emissions related to intensive land use and capturing and storing carbon dioxide from the atmosphere.<br>- **Protection of nature and biodiversity.** Green infrastructure solutions improve the quality of soil and water, while supporting ecosystems and biodiversity. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Sustainable | Architects, Landscape architects<br>Urban planners, Environmental experts | Conception | ■■ |
| | | Design | ■■■ |
| | | Implementation | ■ |
| | | Use | ■■■ |

## 10. FOSTER BIODIVERSITY

*Although urban development is typically considered to put significant pressure on biodiversity, there are diverse strategies to preserve, enhance and restore it across all spatial scales and stages of a project's lifecycle.*

### Relevance to investors

*Strategies that preserve and restore biodiversity respond to widespread expectations on the green and healthy quality of individual projects and urban environments. They provide diverse benefits to investors, developers and users, including the reduction of operating costs, the increased resilience to environmental risks, better access to sustainable finance, grants and other benefits, and overall enhancement of asset value and investor reputation.*

### Description

Biodiversity refers to the variety of life on Earth and the natural patterns it forms.[110] It supports everything in nature that humans need to survive. Biodiversity loss is recognised as a systemic risk that threatens our future well-being.

Fostering biodiversity can help to achieve the overall objective of the EU Biodiversity Strategy for 2030 which aims to stop the loss of green urban ecosystems, address land take and soil sealing, and promote green infrastructure and Nature-based Solutions. Although urban development is often linked to environmental challenges and biodiversity loss, there are multiple strategies applicable to different project types and stages of a project's lifecycle.

#### Strategies applicable to Building projects

- **Introduce green roofs**, from roof gardens with potted plants and planted green roofs to biodiversity roofs, which include a mix of seeds or plants, often specially formulated by an ecologist and focused on native species, aiming to benefit pollinators and other wildlife. Moreover, **introduce green walls**, also known as living walls, green façades, or vertical gardens, which provide refuges for birds, insects, and other wildlife in densely built areas where land can be scarce and expensive. See also Rec. 9.
- **Use wall materials and textures that provide opportunities for plant climbing and food collection**, such as for example dry stone walls that offer living space to specific animals and plants that live in the shade between the stacked stones. Avoid using highly reflective materials that create risks, as is the case of large glazing surfaces that often result in bird strikes.
- **Apply low-cost greening measures**, like planters or simple metal or wooden frameworks, that support spontaneous and informal planting in roofs, balconies or outer building edges, and can allow conventional buildings to support large amounts of greenery. See also Rec. 2.
- **Apply natural forms of boundary protection**, through vegetation (shrubs, bushes, trees etc.) or soft landscaping (water, slopes, etc.), instead of hard walls and fences from metal, stone, concrete and other materials, which contribute to habitat fragmentation.
- **Provide nesting sites**, such as bird boxes and bird feeders.
- **Promote eco-friendly construction techniques**, including off-site modular construction and low waste management strategies that minimise ecosystem disruption.

*Simple greening measures can provide insulation benefits, shade building façades, absorb solar radiation and mitigate urban heat islands effects, thus leading to energy savings and reduced operating costs. Moreover, they increase the attractiveness of buildings and, thus, their value. Off-site modular construction can also reduce labour costs and lead to time savings.*

#### Strategies applicable to Open Space projects

- **Preserve existing green spaces and create new ones**, choosing a diverse range of native plant species that provide food and habitat for local wildlife, which are more adapted to local soil and climate conditions and require less maintenance. Choose the right species of plants taking into account climate change considerations. Avoid cutting and instead protect veteran trees in new building plots as they provide habitats for different species to nest and root. Reduce pruning of trees as they provide habitat

[110] https://www.unep.org/unep-and-biodiversity

for fungi and lichens and limit it to the time of the year that the impact is least severe.
- **Introduce bioswales and raingardens**, as soft landscaped elements designed to capture, absorb, and filter rainwater. Such elements reduce flooding risks and improve water quality, while creating mini ecosystems that support biodiversity. See also Rec. 8.
- **Reduce light pollution**, from artificial lighting, and noise pollution, for example from transport sources, which can disrupt animals' behaviour and migration patterns.

*Native plant species require less maintenance and reduced water for irrigation, leading to reduced operating costs, and are likely to be more resilient to climate change. Reduced soil sealing and the implementation of bioswales are low-cost solutions that increase the projects' resilience.*

Strategies applicable to Neighbourhood projects

- **Design a network of diverse urban green spaces**, including spaces of different sizes, controls and wildness. The spaces should be connected to each other and connect urban to peri-urban and rural ecosystems through corridors of vegetation, allowing for the movement of species between fragmented habitats. This helps maintain resilience in ecosystems. See also Rec. 9.
- **Plan for compact urban environments**, reducing sprawl and the consequent disruption to ecosystems, and instead focusing on regenerating or infilling unused land and repurposing of buildings. See also Rec. 13.
- **Prioritise the protection and restoration of urban water bodies**. See also Rec. 2.
- **Promote sustainable mobility** encouraging walking, cycling and the use of public transport, reducing air pollution, noise pollution, the fragmentation of habitats due to road infrastructure and the risks of animal-vehicle collisions. See also Rec. 12.

*Planning for compact mixed-used urban developments and encouraging people-centred mobility increases the viability and attractiveness of urban areas. Moreover, high quality and well-connected green spaces improve the quality of living and the attractiveness of urban environments, thus increasing asset values in the long term.*

Fostering biodiversity through public engagement

- **Exploit the potential of citizen science initiatives**, where citizens engage in biodiversity monitoring and in collecting valuable scientific data on local flora and fauna, while developing a better understanding of biodiversity and conservation issues, through activities such as bird watching, plant identification, water quality monitoring and others.
- **Establish stewardship programmes**, where individuals or organisations take responsibility for the maintenance and protection of green areas or water bodies, for example through park adoption programmes, protection of endangered species in waterfront areas, "plant a tree" initiatives where citizens are planting trees either in their own garden, rooftop or together in a designated community plot, etc.
- **Introduce community and school gardens**, where residents and pupils can grow food, flowers and other plants, learning about plant diversity, pollinators and gardening, while connecting to nature and supporting biodiversity.
- **Create partnerships** among schools, local organisations, environmental NGOs and responsible municipal/regional agencies to enhance resources and expertise related to biodiversity protection and enhancement.

*The establishment of stewardship programmes can reduce maintenance costs, as citizens engage voluntarily in the protection and maintenance of urban areas.*

## Impacts, benefits and challenges

Horizontal investment benefits

- **Attractiveness.** The integration of measures that enhance biodiversity can increase the attractiveness of developments through higher perceived quality.
- **Visibility.** Outstanding features like extensive green areas and surfaces with high visual impact can provide high visibility to projects, therefore acting as flagships for developers and investors.
- **Operational cost savings.** Specific solutions that support biodiversity also lead to reduced operating costs (e.g., due to energy savings because of increased insulation in case of green roofs, due to low irrigation and maintenance needs when using native plant species, etc.).
- **Resilience to environmental risks.** The creation of new green areas increases assets' resilience, especially when using native plant species, for example by reducing the risk to flooding or the impact of urban heat island effect.

| | |
|---|---|
| | - **Access to grants and other benefits and alignment to policy objectives.** The integration of measures that enhance biodiversity often leads to increased opportunities to access grants and other benefits and improves alignment to policy objectives and green building standards. |
| Investment challenges and mitigants | - **Complexity.** To successfully integrate biodiversity at the building and neighbourhood levels, projects may require a deeper study at design and planning level, as well as increased efforts during implementation in terms of coordination. \| This can be mitigated by involving experts with specific know-how, and aiming for partnerships that provide access to knowledge and expertise.<br>- **Increased capital expenditure.** Project designs integrating green and blue infrastructure might require higher initial capital expenditure. \| This can be mitigated by investigating more cost-effective alternatives relying on experts, by looking for alternative sources of capital, such as grants, and by being aware of the long-term cost savings due to reduced operating costs and increased resilience. |
| Socio-economic impacts on community and users | - **Nature.** Projects fostering biodiversity help first and foremost protect flora and fauna against the negative impacts of urbanisation and the general destruction of natural habitats, and therefore avert the loss of species.<br>- **Physical and mental well-being.** Projects designed to promote biodiversity typically enhance the quality of life of citizens and communities through high quality green spaces, more attractive buildings and pleasant neighbourhoods, fostering the development of healthier, cohesive and responsible communities.<br>- **Education.** An increased presence of a variety of species in close proximity can help increase the awareness in the population on nature protection topics. Projects that support biodiversity can offer specific opportunities for community education, for example through the involvement of local schools.<br>- **Climate.** The incorporation of biodiversity measures can help make neighbourhoods more resilient to climate change, create better local microclimate (mainly, cooling effect), and contribute to climate change mitigation. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Together | Designers and planners<br>Accessibility experts<br>Public participation experts | Conception | ■■ |
| | | Design | ■■■ |
| | | Implementation | ■ |
| | | Use | ■■ |

# 11. ENSURE ACCESSIBILITY FOLLOWING A UNIVERSAL DESIGN APPROACH

*Universal design is a fundamental approach of good design and ensures that any environment can be accessed, understood, used and enjoyed by all.*

## Relevance to investors

*Universal design minimises underserved market demand, as projects become accessible and usable by all citizens, and ensures that the project caters to individual needs. Moreover, it helps make the project more user friendly, thus increasing the attractiveness of assets. Finally, universal design fosters a sense of safety, thereby responding to an important expectation of many customer groups.*

## Description

The goal of universal design is to create environments that can be accessible, understood, used and enjoyed by all, regardless of age, size, ability or disability.[111] Universal design should not be considered as a special requirement that serves only specific social groups. Accessible environments benefit everyone, including people with disabilities, those who have limited mobility, pregnant women, older people, caregivers with young children, and others. It should be considered that most people will experience some form of temporary or permanent impairment and sometimes disability in their lifetime due to age, illness, accident, or other causes.

*Universal design has long been associated with special needs. However, changing demographic patterns, increasingly flexible residential habits and more open societal views make universal design almost a prerequisite for modern real estate developments.*

Universal design is guided by seven principles,[112] which can be used to inform the design process:

1. **Equitable use**, which refers to designing spaces that everyone can enjoy, without discrimination.
2. **Flexibility in use**, that encourages designers to create versatile solutions that accommodate diverse needs and preferences.
3. **Simple and intuitive use**, ensuring that the environment is easy to understand or use by people of diverse knowledge and language skills or concentration levels.
4. **Perceptible information**, which relates to communicating information clearly, effectively and in multiple ways, regardless of the user's sensory abilities.
5. **Error tolerance**, which reduces risks and the negative effects of unintentional or accidental activities.
6. **Low physical effort**, ensuring that the environment can be accessed and used with minimal effort.
7. **Size and space for approach and use**, ensuring that the design provides enough space to approach, reach, manipulate and use, regardless of the user's mobility, body size or posture.

*Universal design does not counter the trends of increasing individuality and personalisation of customers preferences. On the contrary, it sets the basis to meet unique expectations.*

The above principles can be implemented through practical strategies, which should fit the context and unique needs of each project.[113] Some generalised strategies are presented below. It is important to ensure that the selected universal design measures are harmoniously integrated in the overall design of the project.

### Strategies applicable to Building projects

- **Accessible entrances**, preferably zero-step, or with ramps, with wide doorways or automatic doors.
- **Clear and unobstructed pathways and corridors** of adequate width and free of obstacles and furniture.
- **Ramps and elevators** that provide comfortable vertical access in multi-story buildings for wheelchair users and others with mobility limitations.

[111] https://universaldesign.ie/about-universal-design

[112] The seven principles of universal design were developed in 1997 by the Centre for Universal Design of North Carolina State University. See also: https://design.ncsu.edu/research/center-for-universal-design/

[113] See also Dir. (EU) 2019/882, European Accessibility Act, C(2022)6456 – Standardisation request M/587, and European standards EN 17210:2021 and EN 17161:2019.

- **Accessible bathrooms** with features that accommodate wheelchair users and those with other mobility impairments.
- **Flexible and adaptable spaces** that can accommodate various needs and preferences, prioritising open plan spaces that provide ease of movement and navigation, and possibilities for furniture rearrangement to suit diverse needs.
- **Clear signage and wayfinding** that allow all users to navigate easily in the environment, regardless of their visual, cognitive, or language abilities, including for example tactile maps, auditory cues, high contrast and tactile paving, various languages, etc.
- **Adjustable and customisable furniture appliances**, such as height-adjustable tables and chairs with adjustable armrests, that address both right- and left-handedness.
- **Colour choices** that enhance visibility and comfort for individuals with visual impairments, by using contrasting colours to highlight important elements, such as steps.
- **Technology** that helps individuals to fully utilise an environment, such as audio and visual equipment and interfaces that assist blind or deaf individuals, or those who do not speak the native language.

*The ability of users to enjoy their environment is greatly enhanced by universal design approaches, which also contribute to the increased attractiveness of projects.*

### Strategies applicable to Open space projects

- **Universal access routes**, designed to ensure that individuals using mobility aids can navigate the space safely and easily. Factors to be considered are widths, slope gradients and surface textures of pathways, ramps and entrances, avoidance of obstacles and minimisation of level changes.
- **Clear and clutter-free pavements**, with a clear width of at least two meters free of street furniture or other obstructions.
- **Accessible pedestrian crossings**, with dropped kerbs and signal control that use sight, sound and touch to let pedestrians know when it's their turn to cross, especially along key routes to transport hubs, hospitals, schools, commercial centres, parks and others.
- **Traffic-calming measures** that create slow traffic and safer environments.
- **Clear signage and wayfinding**, placed within sight lines, using universal symbols, alternate languages, contrasting colours and tactile warning textures. Walls, fences and other landscaping features can also be used for wayfinding.
- **Inclusive lighting and equipment**, including accessible restrooms, resting areas with seating furniture, inclusive public transport stops, inclusive sports and playground equipment and others.

### Strategies applicable to Neighbourhood projects

- **Dense, mixed-use and transit-oriented environments**, that bring residential units, retail, services and green spaces closer together and enable shorter trips by walking, cycling and public transport. Reducing trip lengths accommodates better slower movements and reduces dependency on the private automobile, thus reducing mobility barriers for people with disabilities. See also Rec. 12 and Rec. 13.
- **Provision of affordable housing dedicated and adapted to the accessibility needs of people with disabilities or older people**, that face higher living costs and lower incomes compared to the general population.

*Universal design approaches bring benefits at different scales, from component details to the organisation of neighbourhoods. Investors shall take a broad view in order to reap all the benefits.*

### Design for all through public engagement

- **Collection of feedback at the earliest stages of design** by engaging local people with disabilities through site visits, workshops and discussions. The informed understanding of the full spectrum of access needs at an early stage of design can help avoid expensive interventions at later stages and lead to imaginative approaches of universal design.
- **Engagement with dedicated institutions or experts in disability inclusion** in order to access knowledge and expertise, and to contribute with data and evaluation of outcomes.
- **Leveraging accessible participation**, also harnessing the potential of digital tools, such as open-source platforms in order to collect information on the needs and preferences of persons with disabilities.
- **Employment of participatory mapping** in order to identify and monitor obstacles and other accessibility problems in open spaces.

## Impacts, benefits and challenges

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|---|---|
| Horizontal investment benefits | - **Growing demand.** Increasing legal requirements, growing awareness in the society, population ageing and other factors lead to higher demand for projects adhering to universal design.<br>- **Compliance.** Adhering to universal design, especially by means of innovative flexible solutions, can reduce the risk of non-compliance to changing legal requirements.<br>- **Flexibility.** By adhering to universal design, a high level of flexibility is guaranteed and the project can reach the broadest pool of potential users. |
| Investment challenges and mitigants | - **Lack of demand.** Project stakeholders and market participants may lack understanding or be unaware of the value of adhering to universal design. \| This can be mitigated by offering adequate visibility to the benefits offered by universal design to all users and communicating them widely.<br>- **Reliability.** Highly innovative features of universal design (e.g., digital ones) may pose challenges in terms of technical reliability. \| This can be mitigated by extensive testing before introduction and relying as far as possible on existing, established solutions and components instead of recreating completely new ones from scratch.<br>- **Capital expenditure.** Project designs integrating sustainable, aesthetic and inclusiveness principles may require higher initial capital expenditure for design and implementation. \| This can be mitigated by involving experts with good knowledge of the market for design services, who can then also help shape the specifications and the procurement procedures in the most cost-effective way. |
| Socio-economic impacts on community and users | - **Social cohesion.** Inclusiveness in design ensures that all members of the community benefit equitably from urban opportunities irrespective of their specific needs, thereby fostering a sense of community and social cohesion.<br>- **Physical well-being.** Projects developed in accordance with universal accessibility principles benefit all users and therefore enhance the quality of life of communities.<br>- **Creativity and innovation.** Inclusiveness often requires innovative solutions, possibly with high technological content.<br>- **Social justice.** Different capacities are often linked to disparities in economic condition and social status. Universal design helps overcome such divides in the society. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Together | Urban designers, Urban planners<br>Transport and mobility planners<br>Social experts, Accessibility experts | Conception | ■■■ |
| | | Design | ■■■ |
| | | Implementation | ■ |
| | | Use | ■■ |

# 12. DESIGN FOR PEOPLE-CENTRED MOBILITY

*An inclusive built environment supports easy and comfortable people-centred mobility, focusing on walking, cycling, public transport and shared mobility services.*

## Relevance to investors

*People-centred mobility improves the commercial viability and vitality of neighbourhoods by increasing the extent of active mobility modes, which increases dwell times and expenditure. Costs associated with traffic congestion, which can act as a deterrent to investment, are reduced by diversifying the choice of transport modes.*

## Description

Walking and cycling are zero-emission, low-cost and healthy forms of urban mobility. They also allow for rich sensory experiences that connect people to their community and surrounding spaces. Public transport is a fair and environmentally sustainable way of commuting, with street-level transport having a unique potential to address inclusiveness and support street life. The creation of safe, comfortable, and enjoyable public realm and streets can significantly encourage walking, cycling, the use of public transport and shared mobility services, as well as their combined multi-modal use, and can be achieved through diverse strategies, such as:

### Design for walking

- **Design for mixed-used, sufficient density and proximity**, supporting efficient and enjoyable walking and cycling trips. See also Rec. 13.
- **Provide active ground floors and frontages** that increase street safety though passive surveillance, while creating interesting and continuously changing street landscapes. See also Rec. 4.
- **Provide comfortable and safe street crossings**. Street crossing is one of the biggest challenges for pedestrians, and especially for particular social groups, such as children. The location and density of pedestrian crossings should be carefully chosen to support desire lines of movement. If the crossings are inconveniently located and detours are needed, then this is likely to lead to informal street crossing.
- **Provide continuous sidewalks across intersections**. Prioritising walking means designing for continuous and uninterrupted pedestrian movement. This can be achieved by extending the sidewalk surfaces at the intersections. Such changes make a significant change for pedestrians in terms of safety and convenience.
- **Avoid underground passages and footbridges** that increase the physical effort and time needed to cross the street, while often leading to unpleasant or unsafe environments.
- **Provide sufficient sidewalk widths**. Sometimes sidewalks get cluttered because of street equipment or high pedestrian volumes. In these cases, walking can become irritating and frustrating, especially for people with strollers, walkers or wheelchairs. It should be ensured that sidewalks are wide enough to comfortably accommodate the expected volumes of pedestrians.
- **Activate corners.** A dense street network offers many route choices to pedestrians leading to increased walkability. The denser the street network, the greater the number of corners. Corners act as significant reference points in neighbourhoods, helping people orient themselves or functioning as meeting places. Moreover, corners are characterised by high visibility and increased potential of through-movement, providing good opportunities for commercial activities. Wherever possible, corners should be activated as community spaces, cafés, shops or through other types of uses and activities.
- **Extend the curbs at the corner**, by widening the sidewalks and narrowing the roadways. The corners concentrate high volumes of pedestrian and vehicular traffic, posing greater threats to pedestrians. Curb extensions provide safer street crossings, they reduce the high speed of vehicles turning at the corner, and they provide additional space for social or commercial activities.
- **Provide small resting areas**, such as benches or chairs that can help people make a break and enjoy the street life.

*Streets and open public spaces designed around the convenience and safety of pedestrians increase the flow*

*and dwell time of people through an area, thus boosting the level of passing trade for shops and services. A greater allocation of pedestrian friendly surface area extends the length of commercially viable ground floor street frontage. Safe walking spaces also foster a sense of community that is a valuable feature of residential neighbourhoods.*

### Design for cycling

- **Provide efficient cycling infrastructure** that might include dedicated cycling lanes and bike paths or mixed traffic streets where bikes safely co-exist with motorised vehicles or pedestrians. Cycling infrastructure must accommodate different speeds and types of bikes, including cargo bikes and special types of bikes for people with mobility constraints,[114] and align to the following five key principles:
  1. Cohesion – providing well-connected networks that link identified origins and destinations.
  2. Directness – creating short and fast routes that avoid detours.
  3. Safety – segregating or otherwise controlling the behaviour of cyclists and other types of street users and taking the necessary measures in high-risk areas of intersecting traffic.
  4. Comfort – optimising wayfinding, comprehensibility and minimising stops or nuisance.
  5. Attractiveness – providing cycling routes through interesting urban environments, green and blue spaces, avoiding dark and deserted areas.
- **Provide adequate facilities that support cycling**, such as safe and secure bike parking spaces in open spaces and buildings, recharging points for e-bikes, bike-sharing stations, canopies to protect bikes from rain, repair shops, and racks on buses, trams and trains.

*Cycle paths that are well connected and safe help provide both a recreational amenity and alternative mode of commuting, which improves the attractiveness of residential areas and reduces costs associated with traffic congestion. Cycle networks also increase the radius of interaction by residents in their urban environment, thereby spreading economic benefits from consumption expenditure and other exchanges.*

### Public transport

- **Plan for multi-modal transport**, allowing for an efficient combination of mobility options, with public transport being the backbone of sustainable mobility, complemented by active modes, such as walking and cycling, and shared mobility services.
- **Focus on efficient street-based public transport.** Unlike travelling underground with the metro or in a private car, street-based public transport allows passengers to remain connected to their urban surroundings. Low-level buses and trams can be easily and quickly accessed from the level of the street, especially supporting passengers with strollers, walkers, luggage, etc. Additionally, street-based transport allows people to intuitively work out how the public transport routes work and where the stops are. This makes commuting feel easy and safe, especially for those who do not have access to technology or are not familiar with the place, such as children, older citizens, newcomers etc.

*The integration of high intensity public transport services with cycling and walking networks improves the potential for high density development and hence a greater return on investment. Efficient public transport services reduce the need for costly parking facilities.*

## Impacts, benefits and challenges

Horizontal investment benefits

- **Increased asset value.** The availability of fast, pleasant, and reliable mobility options, both individual and shared, are an important driver of land and asset value.
- **Attractiveness.** Convenient and safe organisation of space for mobility, especially soft modes, improves the attractiveness of public areas and neighbourhoods and acts as catalyst for commercial activities.
- **Reputation.** As mobility directly affects almost any citizen, highly innovative and socially inclusive mobility systems demonstrate strong commitment to fostering sustainability and high quality of life in cities.

[114] See also European Declaration on Cycling (C/2024/2377) https://eur-lex.europa.eu/eli/C/2024/2377

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|---|---|
| Investment challenges and mitigants | - **Public opposition.** Any significant intervention in the use of public space, such as limitations on the use of individual motorised vehicles, risks being challenged by some groups. \| This can be mitigated through consultation and public engagement processes that aim to achieve the best compromise and legitimate the final decision, even if it disadvantages some groups in the short-term.<br>- **Increased complexity.** Mobility services, especially shared ones, need to be carefully planned and managed in order to provide an efficient, cost-effective and convenient level of service. \| This can be ensured by careful planning and monitoring, including the collection of feedback from users. |
| Socio-economic impacts on community and users | - **Social justice.** People-centred mobility allows everyone to participate in society, particularly those who may not have access to private cars.<br>- **Local economic growth.** Sustainable mobility options like walking, cycling, and public transport support vibrant, walkable communities where people spend more time and money locally, fostering economic growth.<br>- **Climate and environment.** Sustainable mobility options lead to reduced greenhouse gas emissions, noise levels and air pollution compared to individual car usage.<br>- **Optimal use of land.** Walking, cycling and public transport support compact high-density developments that utilise scarce urban space more efficiently, requiring less infrastructure per capita compared to low-density developments. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Together | Architects, Urban planners<br>Transport and mobility planners | Conception | ■■■ |
| | | Design | ■■■ |
| | | Implementation | ■ |
| | | Use | ■■ |

# 13. DESIGN FOR MIXED-USE, DENSITY AND PROXIMITY

*Mixed-uses, sufficient density and proximity are fundamental conditions of thriving, equitable and healthy districts.*

## Relevance to investors

*A balanced and dense mix of uses sustains aggregate property value over the long-term through increased amenities, reduced transport costs and greater resilience to property market fluctuations. The viability of commercial uses is improved by streets and public spaces that are animated throughout the day.*

## Description

The urban planning paradigms that dominated the past century often resulted in separated zones and functions, and car-oriented urban environments characterised by low densities, sprawling cityscapes, and lack of vitality. Today, it is acknowledged that density, proximity and the fine-grain mix of uses are necessary to address contemporary urban challenges.

The **compact city model** is characterised by higher densities and continuous urban development delimited by defined boundaries, where the regeneration, reuse and repurposing of existing assets is prioritised and urban extensions are considered only when justified due to the expected population growth.

The compact city model relates to, and partly overlaps with, the concept of the **15-minute city**, that proposes the organisation of neighbourhoods in ways that allow citizens to meet most of their everyday needs within a short walk or ride from their home. Both approaches aim at creating vibrant and economically viable urban environments that facilitate citizens' access to services and employment opportunities, reduce the need for private car use, and render infrastructure investments more cost efficient.

### Mix of uses and activities

The **mix of land uses** reduces the distances between the vertices of the "home-work-services" triangle. This can be achieved by mixing residential, commercial, and community infrastructure at neighbourhood, block or building level. Monofunctional blocks and discreet functional zones should be avoided. Single land-use zoning is at the root of many modern urban challenges, such as spatial segregation, private car dependence and traffic congestion.

*A blend of complementary uses at ground level helps maintain active public spaces and animated street frontages, thus enhancing property values.*

The mix of uses can also be achieved vertically at the building level through **"layering"**, which places different uses and housing types on top of each other. In this way it achieves a fine-grain mix of uses and users, thus reducing socio-spatial segregation, while exploiting the characteristics of different floor levels that vary in terms of access, visibility, noise and light conditions.[115] For example, ground-floors are ideal for commercial uses, because they are directly accessible from the street, highly visible and can be easily extended to achieve a larger floor surface. Moving up, the floors gradually differentiate in terms of accessibility, relationship to the ground plane, and daylight, with middle floors often being more suitable for offices and upper floors for housing.

In all spatial scales the mix of uses and activities must ensure the **mutual compatibility of uses**, ensuring that they benefit each other without undermining essential amenity levels, such as through noise or pollution. In case of negative effects, mitigation measures should be adopted, including spatial buffers that minimise conflicting uses, such as courtyards, greenery and others.

*The mix of uses based on layering helps exploit the potential of buildings by matching different types of needs and expectations with spaces of different characteristics. Moreover, it creates buildings which are vibrant and attractive to users and tenants.*

### Sufficient density

A **sufficient density of activities and people** improves access to services, encourages social interaction, and promotes diversity. It also enhances economic viability, decreases per capita resource consumption, and can be

[115] Sim, D. (2019). Soft City - Building Density for Everyday Life. Island Press.

efficiently supported by public transport, thus reducing car use and dependency. The **high-density benchmark** might differ depending on the context and character of each urban development. In existing developments, density increase can be achieved by regenerating and densifying unused or underdeveloped land, including former industrial sites, abandoned or inactive buildings, or low-density pockets within the existing urban fabric, for example, by increasing building heights or modifying existing buildings.

*Higher densities justify greater investment in public infrastructure such as public transport, which in turn increases the viability and attractiveness of urban areas. It also increases the catchment area for commercial activities. Compact cities also lead to reduced capital and maintenance costs for infrastructure and public realm assets.*

### Proximity

Proximity ensures that **key services are provided at neighbourhood level**, rather than city level. Locally accessible infrastructure and services reduce the barriers for vulnerable or lower income groups. This is of high significance especially in car dominated neighbourhoods with older people or children, who cannot easily travel independently. Proximity also reduces the need for trips outside the neighbourhood, thus minimising emissions, and supports walking and cycling, creating vibrant neighbourhoods.

In order to achieve proximity, green spaces, retail, schools, healthcare, offices and other key services should be accessed safely and conveniently within a 5-minute walking distance, which is equivalent to 400-450m. Depending on the context, the distance can be increased to a 10- or 15-minute walk.[116]

Proximity is supported by the development of **efficient public transport**. Residents should have easy access to low-capacity public transport within a walking distance of 500m and to high-capacity public transport within a walking distance of 1,000m, depending also on the catchment areas of the different types of transport.

*Mixed-use neighbourhoods are more likely to generate and sustain long-term value and attractiveness by structurally lowering the costs of accessing services and amenities.*

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Ancillary revenues generation**. Providing conditions which are favourable and attractive for commercial activities leads to higher demand and economic value and therefore to additional revenues to investors.<br>- **Attractiveness.** Mixed use, density and proximity typically correspond to increased vibrancy and attractiveness of neighbourhoods, therefore benefitting the local economy.<br>- **Untapped resources.** The densification of urban spaces relies on the exploitation of areas and assets which were previously idle, therefore opening up new sources of value. |
| Investment challenges and mitigants | - **Additional procedural efforts and time.** Interventions in complex, high density environments require managing a larger number of interfaces and interacting with a larger number of stakeholders. \| This can be mitigated by the careful planning and timely activation of all required procedures and interactions.<br>- **Additional investment costs.** Interventions in complex, high density environments can be expensive (compared to non-dense contexts), as well as the conversion of pre-existing assets (compared to reconstruction). \| This can be mitigated by carefully coordinating and planning the interventions and extracting maximal value from the new developments. |
| Socio-economic impacts on community and users | - **Physical and mental wellbeing.** Dense mixed-used developments are walkable, with amenities easily accessible within a short distance. This encourages physical activity and enhances social interaction.<br>- **Optimal use of land and space.** Compact mixed-use developments utilise land efficiently, accommodating diverse functions in proximity, requiring less infrastructure per capita than low-density developments.<br>- **Local economic growth.** Compact mixed-used districts support diverse and vibrant urban environments that attract businesses, residents, and visitors, leading to greater economic vitality for the neighbourhood.<br>- **Climate and environment.** Compact and mixed-use development reduces car dependency, contributing to climate change mitigation and improving air quality. |

[116] https://unhabitat.org/sites/default/files/2023/05/my_neighbourhood_publication_19.05.2359.pdf

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Together | Architects, Urban planners<br>Social experts<br>Public participation experts | Conception | ■■■ |
| | | Design | ■■ |
| | | Implementation | ■ |
| | | Use | ■■ |

## 14. PROMOTE AFFORDABILITY AND EQUITABLE ACCESS

*An inclusive project shall be affordable and accessible, offering equal opportunities, especially addressing the needs of the more vulnerable individuals and groups.*

### Relevance to investors

*Prioritising affordability and equal access may enhance investors' reputation linking them to social responsibility and awareness. A strong social orientation opens many opportunities in market segments of increasing size and relevance, including profitable partnerships with authorities. Investors can typically leverage on government subsidies for investments and count on reliable revenue streams during operation, as well as on a robust demand, even in periods of recession.*

### Description

Affordability and equitable access are fundamental conditions of inclusive environments. There are various practical ways to address them, depending on the type and context of each project.

#### Strategies applicable to Building projects

In buildings the focus should be on reducing planning, design, construction and maintenance costs without compromising quality, on delivering spaces with reduced maintenance needs that are affordable in the long term, and on designing for incremental expansion and adaptability, reducing both initial appropriation costs and future adaptation costs. Some examples are:

- **Provide more common spaces**. An effective way to reduce the size and cost of any functional unit without reducing quality is to place more amenities in common areas. For instance, consider providing common working, leisure and eating spaces, laundry spaces or outdoor relaxing areas. If designed well, shared spaces also foster a sense of community. Seen also Rec. 7.
- **Avoid oversized spaces** while focusing on flexibility. Higher densities also align to the model of compact urban development. See also Rec. 7.

  *Providing one common large area is more cost effective compared to providing multiple smaller areas, while increased densities lead to reduced costs for land acquisition and construction.*
- **Provide hybrid indoor-outdoor spaces,** such as verandas, balconies, and roof terraces that provide additional living spaces at low costs, while significantly improving the quality of smaller housing units. See also Rec. 2.
- **Design for incremental expansion**, starting with basic designs that foresee future increase in size, if needed, with additional units.

  *Hybrid spaces create additional exploitable spaces in inexpensive ways. Moreover, owners that can adapt their properties to their future needs do not need to purchase land or make further significant investment, reducing both initial appropriation costs and long-term adaptation costs.*
- **Use durable building materials**, aiming for high-quality structures and reduction of costs in the long-term, due to increased lifespan, while ensuring the future high aesthetic quality of the project.
- **Prioritise passive design strategies** that use building features, such as building location and orientation on site, building layout, thermal mass, insulation, shading and window design, in order to take advantage of natural resources of heating and cooling, such as sun and breezes, thus reducing dependency on mechanical systems.

  *High-quality structures and enduring materials reduce long-term maintenance costs for the owners. Passive design helps reduce initial construction costs and ongoing operating costs, making buildings more affordable.*
- **Adopt simple geometries and use standardised or prefabricated construction elements**. Complex geometries often account for higher labour costs. On the other hand, simple geometries are more cost-effective and more flexible to adapt to future needs. Standardisation further reduces complexity, labour costs, and construction time, while allowing for better quality control.

  *Simple geometries, standardisation and the use of prefabricated construction elements help reduce construction costs and achieve economies of scale.*
- **Adopt innovative working processes**, also exploiting the potential of technology and data, in order to eliminate inefficiencies in the entire planning, design and

construction process. Moreover, consider applying intelligent solutions during the operation phase in order to maximise efficiency, for example in order to adapt to the changing dynamics of occupancy trends or to control energy consumption.

*The optimisation of the above processes could free up time and reduce costs, and as such create space for societal impact.*

- **Consider the inclusion of affordable housing** providing significant economic benefits and sustaining communities in the long term. Affordable housing investors can benefit from subsidies and tax credits, and a steadily increasing demand.

  *Affordable housing investors can expect reliable revenue streams and a steadily high demand. Even in the case of recessions, the demand for affordable housing increases unlike conventional rental properties that become harder to fill.*

### Strategies applicable to Neighbourhood projects

Efficient urban planning can support affordability in a neighbourhood project in diverse ways. Some of these are:

- **Provision of adequate and high-quality urban services and amenities**, including green spaces, ensuring that they are evenly distributed and accessible by public transport, walking or cycling. Creating affordable neighbourhoods extends beyond the construction of buildings and open spaces; it means creating sustainable communities. This entails providing access to jobs, services and amenities.
- **Creation of mixed-income developments** that provide market-rate housing units and affordable housing units in a single project. Additionally, provide a **variety of housing unit types**. The fine-grain mixing of incomes and housing unit types reduces socio-spatial segregation and ensures that different groups of residents have equal access to the same resources and amenities.
- **Tackle transport poverty and reduce dependency on private cars** by providing efficient public transport services and supporting walking and cycling. Transport poverty describes situations where the lack of available, convenient, safe or affordable transport impedes access to work opportunities or essential services, and often correlates with disadvantaged regions and social vulnerabilities, lower incomes, people with mobility constraints, women or older people. See also Rec. 12.
- **Provide affordable housing in Transit-oriented Developments (TODs)**. TODs aim for high-density mixed urban developments within walking distance of transit. The provision of affordable housing options near transit stations ensures good connectivity, reduces financial burdens due to transport and dependency on private cars, and contributes to sustainable urban development.

  *The diversification of the offered housing units reduces risks related to changing demand and market trends. Urban environments that support walking, cycling and the use of public transport are characterised by commercial viability and vitality.*

### Promotion of affordability through cooperation and public engagement

- **Adopt and support cooperative models of project development and operation**, such as housing cooperatives where residents collectively own and manage the property, sharing responsibilities and decision-making processes.
- **Create partnerships** with NGOs, housing advocacy groups and community-based initiatives to leverage knowledge, resources and networks.
- **Set up community forums**, to provide opportunities for dialogue and collaboration between community members, policy makers, housing advocacy groups and housing developers, in order to identify needs, good practices, and potential solutions.

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Reputation.** Preparing projects that prioritise affordability and equal access delivers a strong message of social responsibility improving investors' reputation and aligning them to important values.<br>- **Visibility.** Prioritising affordability can increase the visibility of non-commercial investors, allowing them to enter networks of collaboration, enable cooperations etc.<br>- **Social impact.** The creation of assets that ensure affordability and equal access provides positive social impacts, which are explicit operational objectives for non-profit organisations that also have to be communicated to donors and other bodies. |

| | |
|---|---|
| Investment challenges and mitigants | - **Coordination effort.** The preparation of projects that prioritise affordability and equal access often require additional efforts and preparation time due to the involvement and coordination of multiple actors, also in different administrative units, and experts from different fields. \| This can be mitigated by allocating sufficient resources to project management and by the timely activation of all required procedures and interactions, taking care that all responsible parties are incentivised to, and rewarded from, contributing to the success of the project.<br>- **Lack of capacity and expertise.** Designing and planning for affordability and equal access requires specialised experts that are not traditionally part of project preparation teams. \| This can be mitigated through knowledge-exchange networks that provide access to expertise and by planning sufficient time and resources to identify and involve the right experts.<br>- **Lack of regulatory instruments.** The national legislation might not offer the appropriate instruments or incentives for ownership and management models that support affordability, such as housing cooperatives etc. \| This can be mitigated by relying on tested models applied in comparable contexts and assess as early as possible the legal basis of the envisaged models. |
| Socio-economic impacts on community and users | - **Quality of life.** Affordability provides stability and security to low-income individuals and households, reducing stress and providing healthier living environments.<br>- **Social cohesion.** The creation of mixed-income developments helps to avoid social segregation and ghettoisation, enabling people from various socio-economic backgrounds to live in the same neighbourhoods.<br>- **Social justice.** Designing for affordability helps reduce poverty and social disparities, supporting vulnerable individuals to have access to safe and decent housing and high-quality amenities. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Together | Architects, Urban planners<br>Social experts<br>Public participation experts | Conception | ■■ |
| | | Design | ■■■ |
| | | Implementation | ■ |
| | | Use | ■■ |

# 15. RESPOND TO THE NEEDS OF THE COMMUNITY AND SUPPORT VULNERABLE INDIVIDUALS

*Responding to the particular needs of the community with tailored solutions and supporting vulnerable individuals is fundamental for the creation of sustainable, fair and inclusive communities.*

## Relevance to investors

*Exploring, understanding and managing the needs of the community is essential for the preparation of effective planning and design proposals. This helps respond to current and perspective demand in the specific context and exploit underestimated assets and opportunities. Incorporating and suiting the needs of vulnerable people in investment strategies and schemes means taking a long view and designing inclusive, safe and enjoyable environments that are attractive for residents, visitors and businesses.*

## Description

Identifying and addressing the particular needs of each locality and building on its unique potential is essential for the preparation of efficient design and planning proposals. Additionally, supporting socially excluded or vulnerable groups and individuals is fundamental for the creation of fair and inclusive communities.

### Identify and address the particular needs of the community

Different cities and villages face diverse challenges, such as rapid population growth or ageing and population decline, deprived housing stocks, non-walkable low-density built environments, pollution, social inequalities, and others. Even within the same city, the challenges faced by the various districts and communities are quite diverse, requiring tailored solutions. Some ways to shape solutions targeted to the needs of each locality are:

- **Use the power of data to understand in detail the place's profile**, analysing demographic trends, the residents' socioeconomic profiles, natural assets, environmental challenges, building stock characteristics, cultural identity and others. Use fine-grain, disaggregated and spatially referenced data, and combine official datasets with data collected informally in order to understand in detail the neighbourhood's profile. This can help understand the potential of underestimated assets and the needs of different social groups.
- **Engage with the community to identify needs and preferences**, through physical events, such as workshops, discussions or neighbourhood walks, or digital platforms. Conduct systematic surveys, through questionnaires, interviews, focus groups or other means, in order to track community satisfaction over time, in order to address potential challenges at an early stage.

*Investors and developers can better understand and leverage on the characteristics of an urban area and the needs of the local community, in particular unexpressed ones. This helps spot opportunities and exploit the potential of underestimated assets. Synergies with local social policies and initiatives can also be a source of investment opportunities.*

Communities committed to social justice, fairness and inclusiveness put significant efforts to address the unique challenges faced by vulnerable individuals. The needs of older people, children and women are mainly in the focus of this Recommendation, although the needs of all groups should be carefully and systematically assessed and addressed during a project's preparation and operation.

### Design for ageing

Population ageing is one of the megatrends of this century with significant impact on cities, from public services and infrastructure to housing. The unique desires and challenges of older people significantly vary across age ranges. For example, people in their 60s might have just retired and seek an active life, whereas people in their 80s might face challenges related to loneliness and care needs. Some design strategies to support healthy and enjoyable ageing are:

- **Ensure autonomy and independence**, by creating walkable environments characterised by proximity, easy and safe access to public transport and easy wayfinding.

Ageing-in-place is also fundamental and can be achieved by creating living environments that can adapt to people's changing needs over time, allowing older people to continue living in their own homes.

- **Improve health and wellbeing**, by making connections to nature, providing high-quality spaces for recreation and exercise and ensuring access to health services.
- **Avoid isolation and loneliness**, by designing environments that facilitate social interaction, promote participation of older people in decision-making during planning and design, and provide opportunities for intergenerational activities that enhance understanding and connectedness across generations.

*Under a rapidly shifting and aging demographic structure, investors can benefit from responding to the social and emotional needs and expectations of this segment.*

### Design for children

Urban planning has historically given less attention to children's needs, although the built environment significantly affects children's prospects, health, education, development and behaviour. At the same, children act as enablers of change. The active presence of children helps create positive perceptions of space and encourages adults to spend time in the same place, creating vibrant public spaces and lively neighbourhoods. Some ways to design children-oriented environments are:

- **Promote children's freedom of movement**, by creating safe and walkable neighbourhoods where children can move freely.
- **Create attractive and accessible mixed-use spaces** that integrate natural elements and are secured from automobile traffic, and which can be enjoyed simultaneously by children, families and the broader community.
- **Integrate playful interventions in urban regeneration projects**, in order to create fun, vibrant and attractive destinations.

*A convincing coverage of the needs of children can be a key decision factor for young families, with a cascade effect on business and services. In the long term, it underpins the sound and organic growth of cities and economies.*

### Design for women

Women's needs have also been historically neglected by urban planning, which has been traditionally led by male planners and city leaders. Discrimination against women in cities relates to higher poverty and unemployment rates, limited access to education, harassment and street violence, and unequal participation in decision-making. By designing and governing cities in a more equitable manner, significant enhancements can be made to improve women's quality of life. Some ways to achieve that are:

- **Create mixed-used districts**, that provide diverse services and economic activities close to home, reducing commute times and helping women to balance work and family life.
- **Ensure safety and security in public open spaces**, tunnels, pathways, passages or complex large-scale buildings, by providing ample lighting, long sightlines that improve visual awareness and by promoting passive surveillance.
- **Provide safe mobility options**, using gender disaggregated data for the study and design of mobility solutions, providing routes where women do not need to walk alone for a long time.
- **Promote engagement of women in decision-making**, by supporting the participation of women in urban governance at all levels by having female representatives on planning boards or through dedicated public consultation processes.
- **Create inclusive and restorative open spaces**, that promote women's physical and mental health, while benefiting the broader community.
- **Provide sanitation facilities designed for the unique needs of women,** including spaces for breastfeeding and baby changing rooms, taking into account that women are also often caregivers.
- **Use the built environment to recognise women's history and achievements**. Some remarkable examples include the Aspern[117] neighbourhood in Vienna, where all streets and public spaces are named for women, and the project "Les rues au féminin"[118] launched in 2009 by the National Council of Women of Luxembourg that seeks to increase the number of public spaces named after women. Both projects recognise that the naming of public spaces has a strong political dimension, as public spaces are carriers of memory. Memory is selective, thus deserving and committed women should not be forgotten and be visible in the public sphere.

[117] https://www.aspern-seestadt.at/en/business_hub/planning__reality/public_spaces

[118] https://www.rues-au-feminin.lu/en/

*Designing for vulnerable groups means designing for safety, proximity, walkability and easy access to public transport, and for high-quality recreation spaces that support social interaction. Such principles support vibrant and lively urban environments that are beneficial for all, thus increasing the attractiveness and long-term value of investments.*

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Ancillary revenues generation.** The creation of safe, inclusive and vibrant urban environments that benefit all social groups has an immediate positive effect on the level of local business activity.<br>- **Appreciation of asset value.** Addressing the needs of all social groups means creating assets of higher quality, that can be enjoyed by more people, thus addressing a broader client audience.<br>- **Reputation.** Addressing the unique needs of vulnerable or underrepresented social groups improves the reputation of investors that proactively contribute to fundamental societal transformations.<br>- **Social impact.** Identifying and addressing the unique challenges of communities or designing for vulnerable groups means providing positive social impacts, which can be an explicit operational objective for investors such as non-profit organisations. |
| Investment challenges and mitigants | - **Lack of capacity and experience.** Designing for the unique needs of all social groups requires expertise that is not traditionally included in project design teams, such as social experts or public participation experts. \| This can be mitigated by joining knowledge-exchange networks to access a wide pool of experts or by planning sufficient time and resources to find and involve the right experts. Consider that efforts will pay-off in the long-term, by increasing capacities and creating a pool of experts.<br>- **Additional procedural efforts and time.** Identifying and addressing the unique needs of a community and of vulnerable users requires increased efforts and time for the coordination of multidisciplinary teams, including designers, social experts and public participation experts. \| This can be mitigated by relying as far as possible on available information (including publicly available geospatial data and other non-conventional sources, beyond studies and surveys) and allocating dedicated time and resources to the set-up, management and coordination of the teams, possibly in synergy with the responsible authorities. |
| Socio-economic impacts on community and users | - **Quality of life.** Addressing the unique challenges faced by vulnerable or underrepresented individuals significantly improves their quality of life and their physical and mental well-being.<br>- **Safety.** Designing neighbourhoods and open spaces with a focus on children, women and older people supports the creation of safer urban environments.<br>- **Social justice.** Designing and planning for the unique needs of the different social groups, with a focus on vulnerable individuals, helps to reduce social disparities and exclusion. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Working Principles | **Designers and planners**<br>**Social experts, Mediators**<br>**Public participation experts** | **Conception** | ■■■ |
| | | **Design** | ■■ |
| | | **Implementation** | ■ |
| | | **Use** | ■■ |

# 16. ENGAGE WITH CITIZENS CREATIVELY

*Engaging with citizens means making use of creative approaches and techniques to unleash the creativity of communities, empowering them to shape projects.*

## Relevance to investors

*Engaging directly with citizens and communities can fundamentally increase the quality and attractiveness of projects in terms of responsiveness to local needs and context, as well as the long-term value of new developments. Investors can moreover benefit from accessing local knowledge, including informal one, and from identifying opportunities which would otherwise remain hidden.*

## Description

The NEB working principles encourage intense interaction with communities and stakeholders. To facilitate such interaction, many participation and engagement techniques exist, which suit different goals, complexity levels (both for the mediators and the participants), participant numbers, duration and budget. The choice of the right methods, their planning and execution are therefore challenging tasks which have to be carefully carried out by experts on the basis of the specific context.

The following list provides therefore only a glimpse of methods which can be used to involve citizens in the preparation and implementation of NEB projects. By being innovative (compared, for example, to more conventional round tables and similar), these techniques can be more attractive for citizens and help lower barriers to participation.

Only a short, basic description of each method is provided, keeping in mind that each method must be embedded in a framing event. In general, engagement events require thorough preparation in order to be successful and a full review of outcomes in order to be useful for the decision makers.

### Initial exchange, consultation

A key phase consists in initiating the exchange and dialogue with communities. Moreover, interaction has to be kicked off not only between citizens and decision makers but also among citizens within the community:

- **World Café** consists in a relaxed conversation on the given topic at small tables, in an informal setting. A moderator can also sit at the table. Ideas can be written down on the paper tablecloth and collected afterward. After some time (15-20 min.), the participants are asked to mix and change tables to run another round of conversation. This is a very simple method, which works well also with many participants and requires little moderation.
- **Fishbowl** serves to carry out a discussion in small but continuously changing groups, mainly on a specific topic. A small group of people (5-10) sits in a circle (the fishbowl) and discusses the topic, while other participants listen in an outer circle. When a listener wants to become active, she or he changes the place of one of the active participants in the inner circle, who will become listener to that or another circle.
- **Focus groups** is a relatively conventional method consisting of a professionally moderated group interview. It typically involves a small number (10-20) of participants with comparable socioeconomic background. Only one main question (plus few follow-up questions as needed) is discussed over a small amount of time (up to 1 hour). The goal is to collect the specific needs and views of each group with regard to the topic at stake.

*Interacting with citizens is not necessarily complex and can provide very useful insights for investors in order to grasp and understand the context in which they operate better than formal socio-economic surveys.*

### Idea collection and generation

A second fundamental task is collecting existing ideas and dynamically and collectively creating new ones. This represents an increased level of engagement compared to one-way consultation:

- **Open Space** is a flexible conferencing format, for large or very large groups, in which the participants, given the main topic, set the agenda and create a structure for the interaction (typically, a series of thematic, parallel round

tables). The exchange takes place freely, with participants being encouraged to move around and join the different tables. The results are eventually summarised and reported. This approach requires good moderators and facilitators and is particularly suitable to the identification of new ideas and the holding of open discussion on complex, possibly controversial topics.

- **Future workshop** is a creative format in which participants: i) first analyse critically the current situation, ii) then develop ideas freely and uncritically (similar to brainstorming), and iii) finally review the suggestions and discuss how they could be implemented. Different moderation techniques can be applied to phases i) and iii). This method helps generate ideas quickly and simply, and requires further work downstream, within a comprehensive participation process.
- **Brain-walking** is similar to the well-known brainstorming method but differs in the way in which it is carried out. Participants are asked to move around a large room or an open space and write down or sketch freely their ideas on flipcharts located in different positions. The informal setting facilitates cross-fertilisation of ideas and encourages the participation of less self-confident people.
- **World Café** (see above)
- **Focus groups** (see above)

*Public participation is a unique opportunity to identify new ideas and unconventional solutions, which can also lead to unexpected planning, design and investment opportunities.*

### Formulate proposals

The highest level of public engagement within a decision-making process consists in supporting the community to formulate concrete proposals. The proposals are then further considered, assessed, and refined. They eventually become an integral part of the decision process by the relevant bodies:

- **Disney Method** is based on three roles of participants: dreamers (optimistic and even utopic generation of visions), realists (pragmatic and results-oriented), and critics (challenging and conscious of risks, limits and gaps). As in a role play, participants are asked to take different roles in subsequent rounds (either with different roles acting at the same time or with the entire group taking the same role), until a usable idea or solution is identified, which is accepted by all. The method is very flexible and can be applied in combination with many other techniques.
- **Citizens' assembly** is based on inviting randomly selected citizens (20-30) from a given area to participate in workshops (possibly over more than one day) to deal with challenges and needs for that area. More than one group can be involved and work in parallel on the same topics. Experts also participate and contribute to the discussions. This method can be very resource consuming, both for the authorities and the participants, but it is highly representative and provides comprehensive insights and very reliable results.
- **Open space** (see above)
- **Future workshop** (see above)

*Taking over proposals formulated directly by the citizens is a powerful instrument for investors to gain the confidence of the community and create stable and durable relationships.*

## Impacts, benefits and challenges

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|---|---|
| Horizontal investment benefits | - **Visibility.** Interacting intensively with communities and stakeholders can give high visibility to projects and investors well before any construction activity starts.<br>- **Reputation.** Involving communities effectively – possibly making use of unconventional, attractive techniques and formats – imparts to investors and developers the reputation of responsible and engaged actors.<br>- **Social impact.** Public participation is key to providing concrete and lasting social impacts by aligning and responding to the actual needs of the communities. |
| Investment challenges and mitigants | - **Additional procedural efforts and time.** Effective and comprehensive public participation inevitably requires time and effort (including the involvement of additional experts). \| The time and effort can be optimised by careful planning, also running the public participation in parallel to other activities. The additional costs can be mitigated by relying on experts that run the process effectively and are able to reach consensual outcomes rapidly.<br>- **Additional complexity.** Involving actively and credibly citizens and stakeholders, possibly in different phases of project preparation and implementation, increases the interfaces and the number of relationships to be |

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|---|---|
| | managed. \| This can be mitigated by introducing systematic and professional relationship management and relying on the services of experts in this field. |
| Socio-economic impacts on community and users | Public participation by itself does not provide immediate impacts but is a fundamental pre-requisite to enable and create beneficial socio-economic impacts. However, the process itself can also provide, indirectly, benefits to the community. For example:<br>- **Place identity – sense of belonging.** Public participation requires that citizens receive and are helped to grasp a large amount of information on the project and its context. This can be an occasion for citizens to significantly expand their knowledge and understanding of the place they live in, and eventually develop deeper bonds with their environment.<br>- **Social justice.** Public participation empowers communities and individuals to express their views, preferences and needs. When efficiently prepared and executed, inclusive public participation processes give the opportunity to marginalised or underrepresented citizens to advocate for their rights. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Working Principles | **Designers and planners**<br>**Social experts, Mediators**<br>**Public participation experts** | **Conception** | ■■■ |
| | | **Design** | ■■ |
| | | **Implementation** | ■ |
| | | **Use** | ■■ |

# 17. MAKE THE BEST OUT OF THE PARTICIPATORY PROCESS

*Participatory processes are complex endeavours that provide huge opportunities but shall also address many challenges in order to be successful.*

## Relevance to investors

*Public participation offers unique insights into the needs and challenges of communities. This helps investors prepare projects according to actual needs and expectations and eventually capture value, to the benefit of both sides. Moreover, public participation is key to increasing the acceptance of projects and establishing a reputation of a socially considerate investor, positively perceived by both the final users and the authorities responsible for planning and permitting.*

## Description

Public participation consists of complex, two-way processes that cover many events and activities and can stretch over long periods. The participants are called to deal with large and complex projects, possibly in challenging environments or against a background of conflicting needs. For these reasons, public participation needs to be timely, carried out in a professional manner and effectively linked to the overall decision making. While no single solution fits all situations, some general good practice recommendations are listed below.

### Addressing the audience

- **Involve all relevant stakeholders.** Public participation fundamentally addresses individual citizens. However, other stakeholders should also be involved, like associations representing specific groups of citizens, representatives of local initiatives, providers of social services, and so on. Public bodies need to be involved as well, because they have some stake in the project, or can provide information on specific topics. In any case, the focus must remain on the local community and avoid capture by particular interests.
- **Involve children and young adults.** Public participation activities often deal with complex issues which require some knowledge and understanding. Nonetheless, children and young adults can be involved by running dedicated events tailored to their abilities and using participation techniques suitable to them. This applies mainly to topics immediately related to the needs of young citizens but can also provide new insights on major decisions, which would otherwise be considered only from an adult's perspective.
- **Target underrepresented groups** which would otherwise struggle to bring forward their needs and ideas. Such groups may be small or not well organised or suffer from other obstacles (disabilities, language, lack of confidence with institutions and public activities, lack of time, etc.). However, they can be primary beneficiaries of many decisions and it is therefore fundamental to understand their needs and collect their input.

*Identifying and liaising with the right target groups allows investors to focus their efforts where they want to provide impacts. Keeping all groups involved ensures that no group is accidentally harmed or disadvantaged.*

### Preparation and planning of the participation process

- **Ensure sufficient resources, including time and availability of all relevant experts.** Public participation is an investment, the benefits of which typically exceed the costs. Beyond ensuring that the resources correspond to the size and complexity of the project at stake, it is essential to ensure that sufficient internal and external experts are available. As needed and where possible, key decision makers should also attend and participate actively, in order to give to the events the right weight and recognition of the process.
- **Rely on experts in public engagement**, in order to provide a clear basis for decision and further action. These experts will organise and manage the process, run the actual events, act as facilitators and mediators and elaborate the outcomes. The expert team will also be responsible for linking with the other experts, in the first instance with the designers and planners but also others. In particular, a close interaction with the communication team is essential not only to ensure a broad reach of the engagement but also to provide coherent messages to the public, including those citizens who are not willing or able

to engage actively but will eventually be affected by the project.

- **Link formal and informal participatory processes.** Permitting authorities are required to formally consult the public during specific steps, e.g., at least during the Environmental Impact Assessment and possibly in other steps, also depending on national legislation. However, planning authorities and project investors and developers often carry out further public engagement activities on an informal, voluntary basis. Creating a coherent public participation process by linking the formal and informal activities and coordinating among the parties can greatly increase the impact and the reach of the public engagement.
- **Use a mix of open and dedicated participation methods and events.** While public participation has to, by definition, be open to all, it may be useful in some cases to target specific groups by inviting them to dedicated activities. These have many advantages: underrepresented groups can be better involved; interaction with small groups is better organised and managed; discussions in small groups can be more effective and comfortable for participants. This does not mean that critical voices must be excluded or ignored – they have to be taken on board but at the same time carefully managed by participation experts and mediators.
- **Make a good use of digital and in-person tools, including on-site activities.** Digital solutions help make easily available large amount of information to a large audience, collect ideas and suggestions, run surveys, run decision processes, and so on. However, discussion and exchange are typically better carried out in person, as online discussions can be easily dominated by a limited number of users and produce biased outcomes.

*Public and private investors can shape informal public participation processes according to their needs and capabilities and also showcase their own expertise and competence.*

### Running the activities

- **Clarify aims and goals realistically.** At each stage and at the beginning of each event or activity, it is fundamental to clearly communicate the aims and the goals. This helps participants to be focused, creates a climate of reciprocal trust, and ensures commitment also beyond the single steps.
- **Provide the "big picture"** and make clear what has happened before and what will happen afterwards. This provides context and helps the participants understand how their efforts and their ideas will feed the overall decision process, thereby also strengthening their motivation.
- **Ensure full transparency**, even if it entails costs and implications (follow-up enquiries etc.). Beyond legal requirements of free access to information, citizens will expect to be given full clarity. This will help target the really important topics and foster trust and openness.
- **Make the outcomes visible**. Once the process has come to an end and the project is implemented, it is important to communicate how the public participation process has influenced the outcomes. This will greatly increase the acceptance and legitimation of the project. Moreover, it will help establish long-term trust and a culture of active engagement, which will benefit all following projects and initiatives.

*Public participation is, after all, a great exercise of communication and public relations, which benefits both the community and the investor.*

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Visibility.** Intensive interaction with communities and stakeholders can generate high visibility for projects and investors well before any construction activity starts.<br>- **Reputation.** Involving communities effectively strengthens a reputation of sensitivity to local needs among investors and developers.<br>- **Social impact.** Public participation is key to providing concrete and lasting social impacts by aligning and responding to the actual needs of the communities. |
| Investment challenges and mitigants | - **Additional procedural efforts and time.** Effective and comprehensive public participation inevitably requires time and efforts (including the involvement of additional experts). \| The time and efforts can be optimised by careful planning, including the running of public participation in parallel with other activities. The additional costs can be mitigated by relying on experts that can manage the process effectively and ultimately reach |

| | |
|---|---|
| | consensual outcomes rapidly.<br>- **Additional complexity.** Actively involving citizens and stakeholders, possibly in different phases of project preparation and implementation, increases the interfaces and the number of relationships to be managed. \| This can be mitigated by introducing systematic and professional relationship management and relying on the services of experts in this field. |
| Socio-economic impacts on community and users | Public participation by itself does not provide immediate impacts but is a fundamental pre-requisite to enable and create beneficial socio-economic impacts. However, the process itself can also provide, indirectly, benefits to the community. For example:<br>- **Place identity - sense of belonging.** Public participation requires that citizens receive and are helped to grasp a large amount of information on the project and its context. This can be an occasion for citizens to significantly expand their knowledge and understanding of the place they live in, and eventually develop deeper bonds to it.<br>- **Social justice.** Public participation empowers communities and individuals to express their views, preferences and needs. When efficiently prepared and executed, inclusive public participation processes give the opportunity to marginalised or underrepresented citizens to advocate for their rights. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Working Principles | **Designers and planners**<br>**Project Managers**<br>**Communication experts** | **Conception** | ■■■ |
| | | **Design** | ■■ |
| | | **Implementation** | ■■ |
| | | **Use** | ■■■ |

## 18. FACILITATE KNOWLEDGE EXCHANGE AND DISSEMINATION

*The facilitation of knowledge exchange and dissemination pushes local-scale initiatives beyond their locality and increases the reach of transformative solutions.*

### Relevance to investors

*Facilitating knowledge exchange and dissemination can be achieved through the creation of partnerships, participation in knowledge-exchange networks and effective communication of the project's innovative solutions. Such approaches help increase investors' visibility and improve their reputation, broaden their audience reach and provide increased business opportunities in new sectors and markets.*

### Description

Multi-level engagement aims at connecting formal institutions and informal networks at local, national or international level in order to enhance knowledge dissemination, increase the reach of transformative solutions and push local-scale initiatives beyond their localities. Some ways to facilitate knowledge exchange and dissemination, raise awareness and drive positive change in the project's immediate context and beyond are:

- **Create partnerships and promote collaborations** between cities, villages and regions, private companies, cultural and academic institutions, NGO's, citizens' initiatives and other entities that are active at local, national or international level. Collaborations with partners that have complementary expertise can facilitate the implementation of complex projects requiring specialised knowledge. They also broaden the project's reach and provide increased access to funding opportunities. Partnering with well-known and impactful organisations or individuals, or entities focused on environmental sustainability and social responsibility also improves the public image of investors and developers.
  *Collaborations with partners facilitate market expansion, by providing access to new regions or sectors, helping investors broaden their reach and client base. Partnering with well-known and socially responsible organisations leverages investors' reputation, attracting clients who share the same values.*
- **Act as role model or demonstrator** by integrating distinct elements that raise curiosity, induce reflection and learning about new ideas, stimulate creativity, raise awareness on environmental or social challenges, or encourage behavioural change. Consider integrating learning activities that increase the project's educational impact, for example by providing guided tours in selected parts of the project, tangibly demonstrating innovative solutions.
- **Participate in knowledge-sharing events**, such as conferences, discussions, workshops and seminars to engage stakeholders, illustrate the approaches and solutions adopted in the project and foster dialogue. Moreover, organise or participate in informal events, such as festivals, walks or games, that help local communities become familiarised with, and learn from, the project.
- **Launch marketing initiatives** to disseminate the project's innovations to a broader audience by using traditional media, such as TV, radio, or newspapers, and digital platforms, including social media, websites and blogs. The increased visibility of an innovative project beyond its immediate context can help establish new best-practices and influence long-term political or administrative decision-making, for example regarding budget allocation, the reshaping of planning processes, etc.
  *Exposing the project's innovative solutions to a wider audience increases visibility and fosters collaborations and client inquiries. Participating actively in networks helps connect to new business partners and development opportunities.*
- **Document and disseminate the process of preparing and operating the project** to communicate "procedural" innovations that cannot be easily conveyed by other means. Consider creating visually appealing content, including also Augmented Reality (AR) / Virtual Reality (VR) techniques, or videos, infographics and animations that communicate complex ideas in easily graspable formats.

- **Measure systematically the project's impacts and performance**, in order to evaluate the efficiency of the project's adopted development or operating approaches, share findings with partnering organisations and contribute to the continuous improvement of the adopted solutions.
- **Use digital platforms to connect citizens, private and public institutions**, such as for example by bringing together data and services from various government agencies, private sector partners and crowdsourcing to enhance urban living and governance.

*The collection and preparation of data and information, and their communication in appealing and incisive digital formats, can be a distinguishing factor. While ensuring transparency, it provides visibility and contributes to acceptance and recognition.*

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Reputation.** Creating partnerships with reputable organisations and disseminating socially and environmentally responsible solutions adopted by the project enhances the reputation of investors.<br>- **Visibility.** The exchange and dissemination of knowledge through diverse activities increases the visibility and reach of projects, providing access to new markets and sectors, and increasing the potential client base.<br>- **New business opportunities.** Partnering with individuals and organisations with complementary expertise allows the undertaking of ambitious projects, the successful implementation of which would not have been feasible otherwise. |
| Investment challenges and mitigants | - **Additional procedural efforts and time.** The active participation in knowledge-exchange networks and events, the effective communication of the project's innovations and the integration of educational activities require additional efforts and time, as well as the involvement of additional experts, such as communication experts. \| This can be mitigated by planning the necessary actions early enough in the process, by preparing them in parallel to other activities and by relying on experts with specific experience in education or communication, as needed.<br>- **Coordination effort.** The need to coordinate various stakeholders at different levels and at different stages leads to additional coordination efforts. \| This can be mitigated by bundling and streamlining communication activities (partnership management, knowledge-exchange, marketing, etc.) through a single dedicated unit, possibly sharing resources across projects, partners, institutions, etc. |
| Socio-economic impacts on community and users | - **Creativity and innovation.** The creation of partnerships and the exchange of knowledge stimulate creativity and can lead to highly innovative and impactful solutions.<br>- **Education.** Knowledge exchange and dissemination and collaborative working are intrinsically linked to education, increasing the reach of innovative and transformative solutions beyond their immediate contexts thus helping to establish new best-practices. |

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4. https://knowledgesharing.eurocities.eu/

| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Working Principles | **By definition this Recommendation addresses all competences** | **Conception** | ■■■ |
| | | **Design** | ■■■ |
| | | **Implementation** | ■■ |
| | | **Use** | ■■ |

# 19. EMPLOY TRANSDISCIPLINARY APPROACHES OF DESIGN AND PLANNING

*Transdisciplinarity encourages thinking outside discipline silos, leading to innovative and efficient solutions to complex problems.*

## Relevance to investors

*Transdisciplinary working pushes boundaries and leads to the shaping of highly innovative and impactful solutions that tackle complex problems. It helps investors to implement ambitious projects of high overall quality and attractiveness, to adopt more efficient working processes, and broaden their reach in new markets and sectors.*

## Description

Transdisciplinarity encourages thinking outside the thought processes of single industries and addresses challenges from wider societal, technical, economic and environmental perspectives. It promotes collaborations across disciplines that look into new forms of knowledge intersections and convergences.

The collaboration of designers with citizens, artists, social experts, technology firms, technicians or material suppliers, for example, can lead to the development of new design concepts, materials or building techniques. Such cross-disciplinary collaborations can push boundaries, embrace creativity and generate high-impact innovative solutions. This recommendation highlights the value of selected aspects of transdisciplinary working in the built environment sector.

### Engaging with artists and cultural enablers

The **collaboration of citizens and designers with artists and other cultural enablers** has great potential to create highly innovative solutions that bring social, economic and aesthetic benefits to communities.

Art and culture initiatives, especially those that are open to the public, have the power to honour local identity, to connect and engage communities, and to raise sensitivity on contemporary issues, like social inclusion and climate change. At the same time, they can act as catalysts for urban transformation by changing negative stereotypes and improving neighbourhoods' reputation.

*Arts and culture have an enormous potential to transform the image of buildings, open spaces and neighbourhoods and to increase their attractiveness in fast and low-cost ways.*

### Sociology for better understanding of human behaviour and urban phenomena

**Urban sociology** allows for a better understanding of how people interact with and use their physical environment, supporting more informed planning and design. At the neighbourhood scale, urban sociology can help us better understand challenges such as poverty, segregation, crime and others, and thus prepare efficient strategies to tackle them.

**Ethnographic research** can be particularly useful in the preparation of open space and complex building projects. It focuses on understanding "everyday urban life", its logic and spatial patterns, through the perspectives of different people and social groups. It uses mappings, drawings, interviews, photography, video recordings, and other forms of data collection.

An example includes analysing how a park is used, mapping the trajectories of pedestrians to identify desire lines of movement, observing how spaces are occupied by different groups during different days and times, in which parts people feel safer, where and when potential illegal activities tend to develop, etc. Such observations often shake up stereotypical ideas taken for granted about how buildings, open spaces and neighbourhoods are used and should be designed.

Finally, the input of social experts focused on the unique needs of specific social groups, such as women, LGBTQ+ individuals, older people, children, people with disabilities and others, is highly significant during the preparation of built environment projects.

*Sociology and ethnography can help understand the needs of the users and how they interact with their physical surroundings, helping investors prepare well designed projects that are fit for purpose and conducive to a better allocation of their resources.*

### The potential of technological advances

The **intersection of design, construction, technology and artificial intelligence** already transforms the built environment sector. In urban planning the increased capacities of modern-day computational systems allow the storage and analysis of disaggregated data and provide a whole new range of data sources and analysis techniques that allow the detailed understanding of cities in support of evidence-based decision-making.

Similarly, in buildings, computational and data-driven design has a wide range of applications, from performing analyses, simulations, comparing options and employing 'best fit' algorithms, to monitoring and measuring impacts, and visualising results in informing ways, thus improving the overall efficiency, accuracy, and effectiveness of the design and construction processes.

*There is enormous potential arising from the intersection of technology with design and construction, which can benefit investors and developers by increasing the final quality of their projects and improving the efficiency of the whole project development process.*

### Design and end user engagement

Although there is a growing recognition of the significance of engaging communities and end users in the project preparation, design and planning experts often do not manage to exploit the creativity that end users can contribute as co-designers of their own living spaces. Yet, nowadays, thanks to the increased digitalisation of the society, people tend to be well informed and self-educated.

The need for **systematic engagement of architects and planners with communities and end users** requires the close collaboration of design professionals with public engagement experts. This should eventually also lead to the transformation of the architectural and planning professions which should become more multidisciplinary themselves, equipping architects and planners with new "soft" skills, such as teamwork, collaborative decision making and process facilitation. Such a paradigm shift also requires giving recognition to design professionals that often work more modestly and 'under the radar', prioritising local and user-centric design approaches.

*The engagement of end users in the design process leads to increased opportunities for personalisation and higher end user satisfaction, thus improving the project's overall quality and attractiveness.*

## Impacts, benefits and challenges

| | |
|---|---|
| Horizontal investment benefits | - **Capital cost savings and operational cost savings.** Depending on the nature of the project and the working approach, transdisciplinarity can lead to optimal allocation of resources and to reduced operating costs. For example, the use of evidence-based design methods or the adoption of technological systems for the energy management of assets during their operation can lead to increased efficiency and accuracy.<br>- **Appreciation of asset value.** Transdisciplinary approaches can lead to impactful solutions that increase the overall quality of assets, including aesthetics, functionality or durability, sometime in fast and low-cost ways (for example, through the involvement of arts).<br>- **Reputation and visibility.** The creation and adoption of innovative design, construction or management solutions that also have high environmental and social impacts can improve investors' reputation and increase their visibility. |
| Investment challenges and mitigants | - **Additional investment costs.** Investing on transdisciplinary working might lead to increased investment costs, due to the hiring of additional experts or the experimentation with new methods or technologies. \| This can be mitigated by looking for alternative sources of capital (e.g., grants, donations, partnerships, etc.), by distributing investments over longer timeframes or aiming for innovations that can benefit multiple investments simultaneously.<br>- **Lack of capacity and experience.** Transdisciplinarity requires the collaboration of experts with diverse expertise that are not traditionally part of project preparation teams, such as social scientists, communication and facilitation experts, and others. \| This can be mitigated by allocating sufficient resources (also from publicly funded technical assistance programmes) to involve the right experts, utilising knowledge-exchange networks to access wider pools of experts (including research programmes) and considering that efforts will pay-off in the long-term by developing multidisciplinary teams and networks that could be used also in future projects. |

| | |
|---|---|
| | - **Untested innovative solutions.** Transdisciplinary working might lead to innovative but not well-experimented solutions, resulting for example in the adoption of design measures or organisation models with an unknown level of reliability and effectiveness. \| This can be mitigated by ensuring that risks are commensurate to the financial and technical capacities of the involved parties and that the overall quality of the project does not compromise even if parts of it prove to be less efficient than initially estimated.<br>- **Coordination effort.** Working across disciplines requires increased coordination efforts among professionals with diverse backgrounds and used to function in diverse working environments. \| This can be mitigated by allocating sufficient resources to project management and applying dedicated mediation, communication and coordination techniques to facilitate smooth collaboration across disciplines. |
| Socio-economic impacts on community and users | - **Quality of life.** Transdisciplinary working and the engagement of stakeholders and end-users in the project preparation processes ensures that the adopted solutions are grounded to the needs and priorities of the society.<br>- **Optimal use of resources.** Transdisciplinary working can lead to highly efficient technical and design solutions that address complex and multi-dimensional problems within the built environment sector. Such solutions may not have been possible within traditional disciplinary silos.<br>- **Creativity and innovation.** Transdisciplinary working can push boundaries and foster creativity and innovation. |

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| NEB Core Value | Key competences | Key project development stages | |
|---|---|---|---|
| Working Principles | **Depending on the scope of the competition** | **Conception** | ■■ |
| | | **Design** | ■■■ |
| | | **Implementation** | ■ |
| | | **Use** | ■ |

# 20. INTEGRATE NEB VALUES AND PRINCIPLES IN ARCHITECTURAL DESIGN COMPETITIONS

*The integration of NEB values and principles in architectural design competitions can lead to holistically designed projects of outstanding quality, while helping transform architectural practice in general.*

## Relevance to investors

*Architectural design competitions provide a professionally driven process to identify best solutions for the defined needs. The integration of NEB values and principles in design competitions can help select architectural proposals that are characterised by high aesthetic quality while targeting significant environmental and social impacts. They can help investors further increase the quality and attractiveness of their assets, improve their reputation, increase their visibility and ensure that the projects will be well-received by the local communities.*

## Description

Architectural design competitions are some of the most efficient ways to foster high quality and creativity in built environment projects. They provide formal, professionally driven procedures, that enable the identification of the best solution for the defined needs. They produce high-quality outcomes that benefit end-users and communities, including some of the most culturally significant buildings across the world. Architectural design competitions are also very popular within the architects' community as they provide opportunities for ambitious and innovative projects.

In this respect the integration of NEB values and principles in the preparation and conduct of architectural design competitions led both by the public and the private sector has a very strong potential to inform architectural practice in general, and to lead to enduring, innovative, and environmentally and socially responsible solutions.

*Architectural design competitions provide a process of selecting optimal solutions for the given needs, helping investors shape projects characterised by design excellence.*

### Competition brief

The efficient preparation of the competition brief is highly significant because it includes all instructions for competitors participating in the design competition, such as the definition of the competition's objectives, the evaluation criteria, the eligibility criteria and others. At this stage it is possible to enhance alignment to NEB values and principles in the following ways:

- **Set up a multidisciplinary team of experts to prepare the competition brief**, related always to the specific project type, context and scale. The team of experts might include designers, planners, social experts, sustainability or ecology experts, accessibility experts, public participation experts, and others. It is suggested that the team also includes representatives of the city or municipality.
- **Engage with the local community and stakeholders** already from that early stage, in order to efficiently set the competition's scope, objectives and draft evaluation criteria tailored to the local needs.
- **Require the multidisciplinary composition of the competing teams**, that should combine competences that are necessary to tackle the competition's objectives, while addressing all NEB values and principles.
- **Set up competitions for young architects or students**, in order to support and give opportunities to local youths to express themselves.

*The engagement of professionals with diverse expertise, as well as representatives of the city administration and local community, helps to correctly set the scope and terms of the competition , maximising the potential for highly innovative and impactful design proposals.*

### Evaluation criteria

Setting evaluation criteria that address all NEB core values and working principles simultaneously supports holistic thinking and design. The evaluation criteria should be tailored based on the characteristics and needs of each project, but some examples include:

Criteria on "Beautiful":

- employment of original and innovative aesthetic language that serves contemporary needs (e.g., circularity, sufficiency, etc.)
- integration of local materials and construction techniques
- fostering local identity and a sense of belonging
- preservation and promotion of tangible and intangible heritage
- improvement of connection to nature

Criteria on "Sustainable":

- contribution to circularity (reuse of buildings, open spaces, structural elements or materials, use of biobased materials, design for modularity, adaptability and disassembly, etc.)
- contribution to climate mitigation and adaptation
- protection of existing green and blue infrastructure, or creation of new, and integration of Nature-based Solutions
- fostering of biodiversity

Criteria on "Together":

- reinforcement of physical and cognitive accessibility
- contribution to walkability and sustainable multi-modal mobility
- design for density, mixed-use and proximity
- design for affordability
- response to the particular needs of the community
- design for vulnerable groups (women, children, older people, migrants, etc.)
- promotion of social innovation

Criteria on "Working principles":

- level of engagement of communities during the preparation of the design proposal
- collective asset governance and organisation models
- degree of collaboration and knowledge sharing implemented during the project design and foreseen during the project's execution and operation
- educational potential of the project, due to its design process and during its operation

*The inclusion of evaluation criteria that address all NEB core values and working principles increases the possibilities that the winning proposals will be highly innovative and aesthetically appealing, but also sustainable and socially inclusive.*

### Jury composition

The competitors should be guaranteed a professional evaluation of their submitted work through a transparent process. In this respect the majority of the jury members shall be qualified design professionals related to the competition task, including, for example, architects, landscape architects, urban designers and urban planners. Some actions that can further reinforce alignment to the NEB values and principles are:

- **Include jury experts outside the design industry,** such as social experts, ecologists, accessibility experts, public participation experts and others, depending on the scope of each competition.
- **Include in the jury representatives of the community or end users** or add in the evaluation grid an element of public voting, allowing the broader public to support their preferred projects.

*The involvement of experts from diverse disciplines in the jury ensures the multi-dimensional evaluation of the project. The involvement of community representatives in the evaluation of proposals increases the possibility that end users will embrace the project and reduces possible opposition risks by the community during the project's implementation.*

## Impacts, benefits and challenges

Horizontal investment benefits

- **Appreciation of asset value.** The integration of criteria that address the NEB values and principles in architectural competitions leads to top quality projects of high cultural, environmental and social value.
- **Reputation and visibility.** The preparation and execution of ambitious architectural design competitions, and the implementation of projects characterised by design excellence, innovation and environmental and social responsibility can increase the visibility of investors and improve their reputation.
- **Procedural gains.** The inclusion of community and end user representatives in the preparation of the competition brief and during the evaluation of proposals increases the possibility that the project will be embraced by the community and by future users and pre-empts potential objections.

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| Investment challenges and mitigants | - **Additional procedural efforts and time.** The integration of NEB criteria in architectural design competitions requires additional efforts and time for the preparation of the contest tenders and the evaluation of the submitted proposals. \| This can be mitigated by looking for inspiration and guidance from similar projects, or via knowledge-exchange networks and partnerships. It is also important to plan for efficient time and resources for the preparation of the competition.<br>- **Coordination effort.** The integration of NEB criteria in architectural competitions requires the dynamic and potentially challenging collaboration among diverse professionals, as well as the collaboration among representatives of the city, the community and the organising entity. \| This can be mitigated by allocating efficient resources to project management and using mediation techniques to facilitate communication among stakeholders. |
| Socio-economic impacts on community and users | - **Quality of life.** The integration of NEB values and principles in architectural design competitions provides opportunities for communities to participate in defining needs and evaluating projects that transform their localities.<br>- **Creativity and innovation.** Architectural competitions promote innovation and design excellence. The integration of NEB criteria can further push the limits of the proposed solutions, prioritising inclusiveness, environmentally sustainability, community representation and transdisciplinarity.<br>- **Education.** The integration of NEB values in architectural design competitions supports the creation of a new generation of architects driven by social and environment responsibility. |

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# Annex II

# The NEB Core Values and Working Principles

## Beautiful

The aesthetic in the built environment is multifaceted and complex. Multifaceted because it can be perceived very differently by individuals, based on their identity, cultural background, and past experiences, but also depending on the specific context in time and space against which the perception takes place. It is complex because it goes well beyond visual quality and personal taste and it has strong cultural, political and social dimensions.

Above all, beauty can **neither be measured nor quantified**. While there are architectural and planning features, patterns and other objective characteristics which can indicate the adherence to desirable paradigms and standards of good design, the assessment of beauty remains an intangible issue. Nonetheless, experts and experienced professionals can carry out an assessment based on their broad knowledge of the aesthetic debate in different contexts and their understanding of what societies and communities tend to experience as beautiful.

The NEB, also in line with the Davos Baukultur, does not therefore aim to provide a clear definition but interprets aesthetic quality from the impacts it can achieve. The NEB Compass refers to a beautiful project as a project able "to (re)activate the qualities of a given context while contributing to our **physical and mental well-being**; to connect different places and people and foster a **sense of belonging** through meaningful collective experiences; and to integrate **new enduring cultural and social values** through creation".

Similarly, the Davos Baukultur introduces the principle "Beauty" focusing on the relationships that beauty is able to activate: "High-quality Baukultur takes into account the sensory perception and understanding of the relationship between objects, spaces and people, increasing people's life satisfaction and quality of life. It emphasises the need for positive aesthetic appreciation and a fulfilling relationship between people and the place."[119]

NEB recognises that the aesthetic of our living spaces has a profound impact on our **physical and mental wellbeing**. Empirical studies suggest that the aesthetic characteristics of our surroundings significantly influence our wellbeing, highlighting for example the positive impact of nature on physical and mental health, linking areas rated as more scenic to better health outcomes or linking access to green spaces with increased life expectancy. Overall, access to aesthetically enriching environments improves quality of life, while aesthetically unappealing surroundings have adverse effects.

The aesthetic of the built environment has also a strong impact on communities, their **sense of belonging**, **identity** and **pride**. Living spaces considered to have a high aesthetic value are esteemed, embraced and protected. People are attracted by them, want to spend time in them and to "own" them. In this respect spaces of high-aesthetic quality support social cohesion and community building. On the contrary, living in aesthetically blighted areas can signal social disempowerment, exacerbating the negative effects of social marginalisation.[120]

Moreover, although the aesthetic of the built environment shapes us, we also **shape aesthetic norms** with our position and choices related to the preparation of built environment projects. In the absence of wide public dialogue on the topic, beauty in architecture is often "cosmeticised" through popular and easy definitions that value "new", "big" or even luxury constructions, over the aesthetic of the "collectively-shaped", "small", "reused" or "unpolished" that serves modern social and environmental

[119] Swiss Federal Office of Culture, The Davos Baukultur Quality System – Eight criteria for a high-quality Baukultur, 2021. Available at: https://davosdeclaration2018.ch/wp-content/uploads/sites/2/2023/06/2022-06-17-174034-dbqs-en.pdf

[120] See: Irvin, S. On the Well-being of Aesthetic Beings. In Fox H. et al. (Eds), Oxford Handbook of Mental Health and Contemporary Western Aesthetics. Oxford University Press. 2023. Available at: https://philarchive.org/rec/IRVOTW

priorities. In this context NEB intrinsically links the aesthetic dimension with the social and sustainable ones, valuing aesthetically buildings and open spaces for the principles they encompass, rather than for the properties of the final projects themselves.

From an investment perspective, beauty – and quality in general – can certainly be important determinants of investment decisions.[121] However, the relevance of such aspects, and their relationships with the other parameters that drive investment behaviours make it challenging to identify clear relationships and draw general conclusions.

Considering its immaterial and non-quantifiable essence, beauty is addressed in terms of investment decisions through instruments which rely on expert judgment:

- The main instrument for encouraging, promoting and eventually assessing aesthetic quality, both in architecture and planning, are **architectural design and planning competitions**, which are quality-based and solution-oriented selection procedures for architectural services. While the specific rules and procedures are typically laid out at national or even regional or local level, it is acknowledged that architectural competitions are the best way to achieve quality in the built environment.[122] Recently, growing attention has been given to the need to include and target sustainability aspects in architectural competitions, in line with the NEB ambition of integrating core values in a holistic approach.[123]
- **Building certification schemes** (see also Sec. Sustainable in Annex II ) are also enlarging their scope well beyond sustainability aspects to include aesthetic quality in their assessments. For example, DGNB has introduced an additional level of certification called "Diamond" which is awarded to certified projects (at least at level "Gold" or "Platinum") that demonstrate outstanding quality in terms of building culture and design.[124] The projects applying for the award are assessed for design quality by an independent commission. The assessment is based on defined criteria for the design and architectural quality of buildings.
- Finally, there are **other approaches** by which aesthetic quality in the built environment is encouraged and the aesthetic dimension is assessed. An example is the German "Gestaltungsbeirat" (EN: Design Advisory Board), which consists of architects, landscape architects, urban planners, heritage experts and other professionals, providing non-binding recommendations to municipal decision makers on topics related to architecture and urban planning.[125, 126] In this way, informed decisions on issues of aesthetic relevance can be taken (planning, permitting etc.), especially in small administrations which may have high ambitions in terms of "Baukultur" but cannot draw on permanent in-house experts.

The "Building Better, Building Beautiful Commission" in UK[127]

A notable example of institutional engagement with beauty in the bult environment is the **Building Better, Building Beautiful Commission.** This was an independent body that advised the UK government on how to promote and increase the use of high-quality design for newly build homes and neighbourhoods. The Commission eventually defined three aims for the system as a whole (**Ask for Beauty; Refuse Ugliness; Promote stewardship**) and proposed 8 priorities of reform: [128]

1. **Planning**: create a predictable level playing field

2. **Communities**: bring the democracy forward

[121] See, for example: Ahlfeldt, G. and Pietrostefani, E., "Quality sells" – High-quality Baukultur as a success factor for the construction and real estate industry, Swiss Bundesamt für Kultur (BAK), 2022. Available at: https://www.bak.admin.ch/bak/de/home/baukultur/service/publikationen.html

[122] International Union of Architects (UIA), UIA Competition Guide for Design Competitions in Architecture and Related Fields, 2020. Available at: https://www.uia-architectes.org/wp-content/uploads/2022/02/2_UIA_competition_guide_2020.pdf

[123] See, for example: City of Hamburg, Guidelines for sustainability-oriented architectural competitions (Leitfaden Nachhaltigkeitsorientierte Architekturwettbewerbe, LeNA, in German), 2011. Available at: https://nbn-resolving.org/urn:nbn:de:kobv:109-opus-149154

[124] See https://www.dgnb.de/en/certification/specific-applications-of-the-dgnb-system/dgnb-diamond

[125] For a description, see for example: https://www.stadtmarketing.eu/gestaltungsbeirat/ (in German)

[126] For an example, see the case of North Rhine-Westphalia: https://www.aknw.de/baukultur/gestaltungsbeiraete (in German)

[127] See https://www.gov.uk/government/groups/building-better-building-beautiful-commission.

[128] See in particular: Living with Beauty - The report of the Building Better, Building Beautiful Commission, 2020. Available at: https://assets.publishing.service.gov.uk/media/5e3191a9ed915d0938933263/Living_with_beauty_BBBBC_report.pdf Building in Beauty, Report of the Building Better, Building Beautiful Commission, 2020 and Knight Frank, 2020. Available at: https://content.knightfrank.com/research/1931/documents/en/building-better-building-beautiful-commission-building-in-beauty-2020-7018.pdf

3. **Stewardship**: incentivise responsibility to the future

4. **Regeneration**: end the scandal of left behind place

5. **Neighbourhoods**: create places not just houses

6. **Nature**: re-green our towns and cities

7. **Education**: promote a wider understanding of placemaking

8. **Management**: value planning, count happiness, procure properly

In parallel with the activities of the Commission, the UK government started publishing relevant guidance, in particular the National Design Guide.[129] Worth mentioning in the UK context is also the non-governmental initiative **BIMBY (Beauty-In-My-Back-Yard)** initiative, which provides a toolkit supporting communities, planning authorities, and developers in making informed decisions on the aesthetic dimension of neighbourhoods and individual homes.[130]

[129] See https://www.gov.uk/government/publications/national-design-guide

[130] See https://www.bimby.org.uk/

## Sustainable

The sustainability core value of NEB can rely on a broad and well-established ground of **policies, regulatory instruments, standards and practices**, which have been developed over the last decades in response to the growing negative impacts of human activities on climate and environment. As such, this is the core value with the largest reach, which mainly translates in concrete measures and quantifiable positive impacts.

The **built environment** is particularly affected and challenged by the "green transition" towards more sustainable investment models. This is mainly the result of intrinsic characteristics of the built environment (high consumption of resources, long-term horizon, immediate proximity to people and communities and therefore immediate relevance for them, etc.) as well as of the sheer size of the sector and the resulting inertia against transformation.[131]

At the same time, sustainability considerations are most suited to uncover "win-win" situations, in which the strive for sustainability is expected to reduce impacts on climate and environment and bring about immediate socio-economic benefits. It could also bring direct benefits to investors and users in terms of cost savings (e.g., from reduced energy consumption) and reduced risk.

The following table summarises the hierarchy of activities and instruments which define the sustainability pledge in the built environment and links them to the NEB.

| **Activity – Instrument** | **Description of instrument** | **How do NEB investments link to it?** |
|---|---|---|
| **Framing – New Leipzig Charter and the Urban Agenda for the EU** | The New Leipzig Charter[132] was signed in 2020, updating the original Leipzig Charter of 2007. It is the "**key policy framework** document for **sustainable urban development** in Europe", embodying the principles underlying the Urban Agenda for the EU. | - The New Leipzig Charter introduced many of the **key values and principles** that are also the basis of the NEB broad understanding of "sustainability".<br>- It defines three dimensions of **urban transformation – just, green and productive** – with the aim of guaranteeing a high quality of life for everyone.<br>- It also introduced key principles of **good urban governance** (urban policy for the common good; integrated approach; participation and co-creation; multi-level governance; place-based approach), which are reflected in the NEB working principles.<br>- Finally, the Charter highlights the importance of ensuring adequate **policies and funding** for cities. |
| **Defining – EU Taxonomy** | The EU Taxonomy[133] defines **"sustainable" economic activities** (in the meaning that they are "aligned with a net zero trajectory by 2050 and the broader environmental goals other than climate").<br>Directly relevant economic activities for the built environment are grouped under "**Construction and real estate activities**" and include:<br>Construction of new buildings,<br>Renovation of existing buildings, | - NEB projects can enormously benefit from being **Taxonomy aligned** and should target this, in terms of substantial contribution to one of the EU's environmental objectives and adherence to the Do No Significant Harm criteria.<br>- This can give investors and developers the **confidence** of creating assets or investing in assets which will be immediately recognised as "sustainable" by all actors in the market.<br>- Moreover, NEB projects may well include **activities which are (currently) not covered by the Taxonomy**. |

[131] See for example the World Green Build Council: https://worldgbc.org/

[132] https://ec.europa.eu/regional_policy/en/information/publications/brochures/2020/new-leipzig-charter-the-transformative-power-of-cities-for-the-common-good

[133] https://finance.ec.europa.eu/sustainable-finance/tools-and-standards/eu-taxonomy-sustainable-activities_en

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| | Demolition and wrecking of buildings and other structures. | |
| **Measuring and reporting – EU Level(s) framework** | As the Taxonomy defines a common language for sustainable economic activities, the EU Level(s) measuring and reporting framework[134, 135, 136] provides a **common language for sustainability performance of buildings**. | - The Level(s) framework can help investors to implement NEB values and principles in order to **monitor and report** the sustainability performance of their projects throughout their full lifecycle.<br>- Therefore, the Level(s) framework helps ensure that the claim of sustainability is backed by **objective, tested and recognised indicators**.<br>- While the Taxonomy provides a snapshot, Level(s) helps to establish a continuous **stream of information**.<br>- This **supports and documents** the paradigm shift and the achievement of ambitious sustainability goals that characterise NEB projects. |
| **Assessing – Building certifications** | Sustainable buildings certifications[137] have become a common tool to measure and recognise **objectively and independently** the **characteristics and quality of buildings** (but also open spaces and neighbourhoods) with regard to sustainability.<br>"Sustainability" is intended in a **broad sense** (covering environmental and climate aspects, social and governance issues, etc.), with each certification provider setting a slightly **different focus**. | - The certification of buildings (and neighbourhoods) provides an **independent seal of the "quality"** of projects with regard to sustainability.<br>- Certifications are **established and recognised instruments** in the built environment and therefore offer comfort to involved parties.<br>- By addressing not only the physical characteristics of the projects but also the quality of the **related processes and other non-physical aspects**, they support the fundamental NEB ambition of inducing a systemic change.<br>- NEB aims for a **broad coverage** across all core values and working principles and for a high level of ambition that may go **beyond** what is typically the scope of certification schemes.<br>- In particular, the **societal and behavioural dimensions** of NEB intrinsically act beyond the boundary of the project, therefore linking the sustainability of individual assets to the sustainability of the society at large. |
| **Disclosing and reporting – Reporting standards** | Different frameworks exist which support companies and investors in disclosing, monitoring and reporting their performance against different sustainability aspects.[138]<br>The UN Principles for Responsible Investment (UN PRI)[139] are internationally recognised standards. | - **Transparency** is a fundamental dimension in the financial industry, which is largely based on **trust** among market participants.<br>- This requires that disclosures related to impacts and non-financial aspects, similar to financial reporting, are **complete, consistent, timely and objective**, among others.<br>- Current disclosure frameworks are generally focussed on **sustainability** aspects, but are being extended towards other dimensions, especially social ones. |

[134] https://environment.ec.europa.eu/topics/circular-economy/levels_en

[135] For the link between NEB and Level(s), see European Commission, Directorate-General for Environment, Level(s) and the New European Bauhaus, 2022. Available at: https://data.europa.eu/doi/10.2779/104409

[136] It is noted that while Level(s) is focussed on circularity, it addresses all sustainability aspects of buildings.

[137] See, for example: DGNB (https://www.dgnb.de/en), BREEAM (https://bregroup.com/products/breeam), LEED (https://www.usgbc.org/leed), WELL (https://standard.wellcertified.com/well).

[138] The most widespread general reporting initiatives are: GRI (Global Reporting Initiative, the most widely used reporting standard on abroad range of sustainability and related topics, https://www.globalreporting.org/); CPD (Carbon Disclosure Project, a global disclosure system focused on environmental aspects, https://www.cdp.net/en). Initiatives specific for real estate are: GRESB (a for-profit ESG assessment and benchmarking service for real estate and infrastructure investments, https://www.gresb.com/nl-en/); EPRA (European Public Real Estate Association reporting guidelines, https://www.epra.com/sustainability/sustainability-reporting/guidelines); INREV (European Association for Investors in Non-Listed Real Estate Vehicles, https://www.inrev.org/guidelines/module/sustainability#inrev-guidelines).

[139] https://www.unpri.org/investment-tools/private-markets/real-estate

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| | On the EU side, sustainability reporting is regulated by the Corporate Sustainability Reporting Directive (CSRD)[140] and the related European Sustainability Reporting Standards (ESRS).[141] | - Therefore, the NEB core value "**sustainable**" is currently well addressed and the value "**together**" is becoming more relevant in current standards.<br>- However, the value "**beautiful**" is not covered and it remains a challenge to address it formally and quantitatively.<br>- Similarly, the NEB **working principles** are not captured by existing standards, nor is the overall holistic aspect of NEB. However, existing practice and standards related to **process quality** may offer a basis for developments in this direction. |

The NEB aims at seizing and amplifying existing investment concepts and paradigms related to sustainability, putting an emphasis on the **societal dimension** and on the **role of individuals** in the transition towards more sustainable communities. Accordingly, all sustainability areas are touched by the NEB ambitions and any NEB investment is oriented to the highest sustainability standards in all of them.[142]

Across all areas, NEB puts a particular focus on **circularity**, which is expected to be a key aspect in all NEB projects. **Circularity** links the **minimal consumption of value and resources** (including energy) in a project not only to technical solutions but also to the **active role and the behavioural change of all actors** involved in the cycle of design, production, use and discarding of an asset or a service.

Moreover, NEB links sustainability to the **natural ecosystems**, fostering the **restoration and expansion of nature** and the preservation and promotion of **biodiversity**. As for circularity, this is based not only on technical considerations but on fundamental **paradigm shifts and societal changes**. In terms of achievable impacts in the built environment, aspects related to natural ecosystems are however typically secondary or indirect.

The following table exemplifies how NEB links to some of the main sustainability areas, as relevant for the built environment.

| Sustainability areas | How do NEB investments link to it? |
|---|---|
| **Circularity** | Circularity is the cornerstone of the NEB understanding of sustainability. From a built environment perspective, the circular transition is urgently needed in order to reduce impact (mainly, resource consumption and waste), while retaining the value of products and assets within the system and creating additional value in terms of environmental, economic and social benefits.[143] The NEB vision aims at implementing circularity as a holistic concept incorporating the social and aesthetics dimensions, also beyond the material dimension. For example:[144]<br>- **Manufacturing**: Materials are manufactured locally using local skills and resources. Rethinking of business models to use less and mainly recycled materials or adopting product take-back schemes.<br>- **Design**: Designing for operational and social needs, focusing on the multi-use of spaces, design for flexibility, adaptability, reuse etc.<br>- **Construction**: Refurbishment of existing buildings is prioritised compared to new construction, also considering their cultural and social value for the communities. New buildings are constructed using |

[140] Dir. (EU) 2022/2464, building on and expanding Dir. 2014/95/EU (Non-Financial Reporting Directive, NFRD).

[141] Delegated Regulation (EU) 2023/2772 supplementing Dir. 2013/34/EU as regards sustainability reporting standards.

[142] The aspiration for sustainability (and other core values as well) has however to be aligned to the specific context and take into account the existing constraints. A typical case occurs in the presence of heritage, see for example: ICOMOS, European Quality Principles for EU-funded Interventions with potential impact upon Cultural Heritage – Manual and Recommendations & Selection Criteria 2020. Available at: https://openarchive.icomos.org/id/eprint/2436/ and https://openarchive.icomos.org/id/eprint/2440/

[143] See, for example: Circular Buildings Coalition, Towards a Circular Economy in the Built Environment – Overcoming Market, Finance And Ownership Challenges, 2023. Available at: https://www.circularbuildingscoalition.org/resources

[144] World Green Building Council, The Circular Built Environment Playbook, https://worldgbc.org/article/circular-built-environment-playbook/

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| | modular elements to make them easier to repair and maintain, disassemble and relocate or refurbish for reuse, also in line with community needs.<br>- **Operation**: Technology is used to enhance operational efficiency. Building facilities are equitably shared and contribute to the resilience of communities.<br>- **Retrofit**: Most materials are locally sourced and procured which supports the economic resilience of the local community, including the direct involvement of the communities.<br>- **Disassembly, reuse and recycling**: End-of-life considerations are part of the full design process enabling opportunities for disassembly, reuse and recycling, especially within the communities. The value of recovered building products is fully understood, and upcycling opportunities are available.<br>- **Aesthetics**: Simplicity and "imperfectness" are valued, avoiding the use of unnecessary structural and decorative components and promoting the reuse of materials and structural elements. |
| **Climate change mitigation and adaptation** | - Climate change is the **cornerstone of current environmental challenges**. It relates to all sectors and is accordingly tackled at EU level by many policies and rules.[145]<br>- Regarding **mitigation**, the built environment has a particular role in reducing energy consumption and GHG emissions through energy efficiency, as laid out in the Energy Performance of Buildings Directive (EPBD)[146, 147] and in line with the Energy Efficiency First ("EE1") principle.[148]<br>- **Climate change adaptation** (also denoted as "resilience") is an important topic for buildings and urban areas, with significant complementarities and synergies with circularity, mitigation[149] A climate resilient urban environment can also help to mitigate the impacts of climate change to vulnerable groups of people.<br>- From a NEB perspective, tackling climate change means applying appropriate **technological and design solutions** but also going beyond them. For example, technological solutions for mitigation and adaptation can be complemented by **social measures at community level** which aim at reducing collectively energy consumption and lessening the negative impacts of climate change on most vulnerable groups.<br>- Moreover, the NEB approach can help pursue structural mitigation and adaptation measures which have an **aesthetic value** and are integral part of the design of buildings, open spaces and neighbourhoods. Especially for open spaces and neighbourhoods, technical solutions can be complemented by design and planning measures, as well as behavioural ones.<br>- Finally, NEB calls for the protection against the impacts of climate changes to be **inclusive and affordable**, avoiding by all means that only privileged groups in the society can benefit for example from having good access to clean energy and living in resilient homes and neighbourhoods. |
| **Sustainable mobility** | - **Sustainable mobility** is a key factor in the efforts towards a sustainable and climate neutral society.[150] It can help societies to move away from **motorised individual transport** that is a key source of emissions and a key consumer of resources. In cities, motorised individual transport is also responsible for large consumption of public space and dedicated infrastructures.<br>- From a NEB perspective, sustainable mobility is interpreted as a key element of **sustainable living** in neighbourhoods and **human-centred urban planning** overall.<br>- NEB puts the fundamental sustainability dimension of mobility in relation to its **aesthetic and social aspects**. |

[145] See https://commission.europa.eu/energy-climate-change-environment/topics/climate-change_en

[146] See https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings_en

[147] Directive (EU) 2024/1275 on the energy performance of buildings (recast). Available at: https://eur-lex.europa.eu/eli/dir/2024/1275.

[148] See Commission Recommendation (EU) 2021/1749 on Energy Efficiency First. Available at: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32021H1749

[149] See, for example: European Commission, Directorate-General for Climate Action, EU-level technical guidance on adapting buildings to climate change, 2023, https://data.europa.eu/doi/10.2834/558395 and the related Best practice guidance, https://data.europa.eu/doi/10.2834/585141

[150] See in particular: COM(2020) 789 final, Sustainable and Smart Mobility Strategy – putting European transport on track for the future, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52020DC0789.

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| | - While there is a clear trend towards creating architecturally outstanding major public transport infrastructure, the integration of **aesthetic quality in the basic mobility features** of roads and open spaces is still developing.<br>- Regarding the social dimension, the shift towards sustainable mobility is being accompanied more frequently by social considerations, like **inclusive mobility**, **reduction of mobility poverty**, etc.[151] |
| **Protection of Biodiversity and ecosystems** | - The protection of nature and in particular the **reversion of ecosystems' degradation and of biodiversity loss** is a key challenge in the EU.[152] Biodiversity is also a central contributor to resilience against the effects of climate change, including extreme climate events that can be catastrophic.<br>- From a **NEB perspective**, the restoration, preservation and expansion of nature and ecosystems is an integral element of interventions in the built environment.<br>- Beyond their intrinsic value in terms of biodiversity, natural elements can contribute significantly to the aesthetic quality of **buildings** as well as to the quality of the local microclimate, to the benefit of the residents and the community.<br>- **Urban open spaces** can benefit enormously from including natural components, in terms of attractiveness and functionality. **Green open spaces** like parks can also benefit from including areas which explicitly target biodiversity (e.g., natural meadows).<br>- Finally, the fundamental planning of **neighbourhoods** is pivotal in bringing nature into densely built areas with very large extension of impervious surfaces.<br>- In all this, NEB strongly links biodiversity to the **social dimension**, for example by interpreting green areas as places of encounter, education, community work, etc. |

Finally, it is important to highlight the importance of monitoring and reporting the performance of buildings comprehensively over their life cycle (**life-cycle assessment, LCA**). This is particularly relevant with regard to the climate impact of buildings in all their phases, construction, use and end-of-life. While the Level(s) framework, mentioned above, includes an indicator for the life cycle **Global Warming Potential (GWP)** of buildings,[153] a harmonised framework for such assessment is still lacking.[154] The recast EPBD also introduces the indicator '**life-cycle GWP**' that quantifies the global warming potential contributions of a building along its full life cycle.

For NEB, the need for a Life-Cycle-Assessment can be interpreted from a broader perspective, requesting that the **socio-economic impacts** of NEB-aligned projects are monitored and reported. This could build upon existing methods, especially for quantifiable direct impacts, and to more recent developments in impact reporting practice, for example as established in the context of the UN Sustainable Development Goals.[155]

Sustainability in the construction sector is expected to be further supported by the upcoming revised **Construction Products Regulation (CPR)**[156] and the **Carbon Removals and Carbon Farming (CRCF) Regulation**,[157] which will also address carbon storage in long-lasting products, including bio-based construction products such as timber.

[151] See, for example: European Platform on Sustainable Urban Mobility Plans, Topic Guide, Addressing Gender Equity and Vulnerable Groups In SUMPs, 2020, and: Practitioner Briefing Social Impact Assessment: Tools, Methods and Approaches, 2021. Available at: https://urban-mobility-observatory.transport.ec.europa.eu/sustainable-urban-mobility-plans/expert-corner-sump-reference-materials_en

[152] COM/2020/380 final, EU Biodiversity Strategy for 2030 - Bringing nature back into our lives, https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex:52020DC0380. See also: European Commission, Directorate-General for Environment, An advocacy toolkit for nature – Biodiversity loss, nature protection, and the EU strategy for nature, 2022. Available at: https://data.europa.eu/doi/10.2779/52585.

[153] The calculation method for LCA for buildings is defined by the standard EN 15978, to which Level(s) extensively refers to.

[154] Considerable efforts have already been carried out on this regard, by the RICS, Professional standard - Whole life carbon assessment for the built environment, 2023 (Effective from 1 July 2024). Available at: https://www.rics.org/profession-standards/rics-standards-and-guidance/sector-standards/construction-standards/whole-life-carbon-assessment

[155] See, https://sdgimpact.undp.org/

[156] According to the revised Construction Products Regulation climate footprint information will have to be declared mandatorily for construction products. The revised regulation also integrates safety and circularity aspects, while promoting the digitisation of the construction ecosystem through Digital Product Passports. See also: https://single-market-economy.ec.europa.eu/sectors/construction/construction-products-regulation-cpr/review_en

[157] The Carbon Removals and Carbon Farming (CRCF) Regulation will provide an EU-wide voluntary framework for certifying carbon removals, carbon farming and carbon storage in products. See also: https://climate.ec.europa.eu/eu-action/carbon-removals-and-carbon-farming_en

Finally, the **ETS2**[158] and the **Social Climate Fund (SCF)**[159] are expected to serve equally the NEB values of sustainability and inclusiveness. ETS2 is a new emissions trading system that will address the $CO_2$ emissions from fuel combustion in buildings, road transport and additional sectors. All emission allowances will be auctioned and a share of the revenues will be used to support vulnerable households, micro-enterprises and users affected by energy and transport poverty through the Social Climate Fund.

### Sustainable buildings certifications[160]

While "**zero-energy**" and "**zero-emission**" buildings are already part of the state of the art,[161] a precise definition of a broadly "sustainable" or "green" building does not exist yet. A series of green or sustainable building certification systems have however emerged over the past decades to provide to market actors reliable and recognised evidence of the quality of a building from a sustainability viewpoint.

From an investment perspective, such certifications play a key role in assessing and systematising the **performance of projects** at the asset level, typically over the entire lifecycle. Therefore, they link general ESG considerations and objectives with the physical, actual characteristics of projects.

While each certification system can have a different scope, focus and understanding of the ESG factors, the systems mainly strive to cover the **environmental and social dimensions**, often with additional focus on other aspects like **health and well-being**. Different methodological approaches are used, mostly reliant on a mix of quantitative and qualitative (ordinal) criteria and different aggregation methods.

Different set of criteria and evaluation schemes are applied to different types of buildings (e.g., residential, commercial, etc.) and different types of projects (new construction, renovation, etc.). The outcome is often expressed not just as a pass-fail certification but on an ordinal **scale of excellence**.

The ambition to cover more than the environmental dimension has led to a continuous evolution towards assessing the "quality" of buildings in an **increasingly broader sense**. Notably, certifications are now also striving to cover the aesthetic quality of buildings, although as an additional element outside the core evaluation. Similarly, the original focus on sustainability performance of buildings has been extended, for example to cover the performance of districts, for which other aspects (use of space, mobility, etc.) can be relevant.

[158] https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/ets2-buildings-road-transport-and-additional-sectors_en

[159] https://climate.ec.europa.eu/eu-action/eu-emissions-trading-system-eu-ets/social-climate-fund_en

[160] See, for example: Urban Land Institute, INREV, PRI: Mapping ESG, A Landscape Review of Certifications, Reporting, Frameworks and Practices. Available at: https://www.unpri.org/download?ac=18437 and UN-Habitat, Building Sustainability Assessment and Benchmarking - An Introduction, 2017. Available at: https://unhabitat.org/building-sustainability-assessment-and-benchmarking

[161] https://energy.ec.europa.eu/topics/energy-efficiency/energy-efficient-buildings/nearly-zero-energy-buildings_en

## Together

The third NEB core value covers a broad range of concepts related to the way people live together in communities. The basic ambition addresses the physical, social and economic inclusion of all members of the society, therefore focussing on **equality and accessibility**. It also targets **affordability** for all, regardless of gender, racial or ethnic origin, religion or belief, ability, age or sexual orientation. The second level targets the broader concept of **social justice**, to be achieved not only by specific, temporary solutions at project level but through institutional setups, governance and business models, and structural safeguards. The third and highest level of ambition refers to fundamentally equitable societal models based on **solidarity and cooperation**.

A part of these ideas and ambitions can be to a large extent directly linked to the physical characteristics of the built environment. It requires that buildings, open spaces and neighbourhoods are designed and planned in a way which is fully accessible and does not exclude any member of the community from an **unconstrained use** of all the spaces, and therefore ensures to all members the possibility of a **complete and active participation** to the life of the community.[162]

This reasoning has led to the establishment of the concept of "**universal design**". With this term a strategy is meant, which makes environments (but also products, processes, communication channels, events, etc.) accessible to and usable by everyone – particularly people with disabilities – to the greatest extent possible.[163, 164] A significant amount of experience has been collected and guidance issued on inclusiveness by international organisations and local governments and mandatory accessibility requirements on the building environment have been introduced in most countries.[165, 166]

### The fundamental rights of citizens

Many aspects of the NEB core value "Together" are strictly related to the concepts of inclusion and avoidance of discrimination. In this regard, the fundamental personal rights of citizens are enshrined at EU level in the **EU Charter of Fundamental Rights**, adopted in 2000.[167, 168] The European Commission introduced in 2020 and 2021 five strategies "to create the conditions for everyone to live, thrive and lead regardless of differences based on gender, racial or ethnic origin, religion or belief, disability, age or sexual orientation", under the priority of building a **Union of Equality**.[169] This is a key element of the overall policy for justice and fundamental rights of the European Commission.[170]

With specific regard to the built environment, the assurance of accessibility by removing physical and virtual barriers is a fundamental requirement of the **Convention on the Rights of Persons with Disabilities** (UNCRPD) of 2006.[171] At EU level, the full inclusion of people with disabilities is a key policy priority.[172] The Commission issued the **Strategy for the Rights of Persons with**

[162] For an overview of the state of play in EU, see European Accessibility Resource Centre, Accessible EU Report – Accessibility of the Built Environment in the European Union, 2023. Available at: https://accessible-eu-centre.ec.europa.eu/accessibility-built-environment-european-union_en

[163] See, for example: Council of Europe, Achieving full participation through Universal Design, 2009. Available at: https://rm.coe.int/16805a2a1e and Commission for Architecture and the Built Environment (CABE), Inclusion by design Equality, diversity and the built environment, 2008. Available at: https://www.designcouncil.org.uk/fileadmin/uploads/dc/Documents/inclusion-by-design.pdf

[164] For an example of how considerations on inclusiveness can inform the design process, see Royal Institute of British Architects (RIBA), inclusive Design Overlay to the RIBA Plan of Work, 2023. Available at https://www.architecture.com/knowledge-and-resources/resources-landing-page/inclusive-design-overlay-to-riba-plan-of-work

[165] For an example of a national initiative addressing Universal Design, see: Irish Centre for Excellence in Universal Design (CEUD), https://universaldesign.ie/. For an example of national guidelines, see: German Federal Ministry for Housing, Urban Development and Building, Guidelines to barrier-free construction (Leitfaden Barrierefreies Bauen, in German), 2016. Available at: https://www.bmwsb.bund.de/SharedDocs/downloads/Webs/BMWSB/DE/publikationen/bauen/leitfaden-barrierefreies-bauen. For an example of guidelines produced by an international organisation, see UNICEF, Toolkit on Accessibility. Available at https://accessibilitytoolkit.unicef.org/

[166] At EU level, see the standard CEN/CLC/JTC 11, Accessibility and usability of the built environment. Available at: https://standards.cencenelec.eu/

[167] https://commission.europa.eu/aid-development-cooperation-fundamental-rights/your-rights-eu/eu-charter-fundamental-rights_en

[168] The EU Charter is consistent with European Convention on Human Rights, see https://www.echr.coe.int/documents/d/echr/convention_ENG.

[169] https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights/union-equality_en

[170] https://commission.europa.eu/strategy-and-policy/policies/justice-and-fundamental-rights_en

[171] https://social.desa.un.org/issues/disability/crpd/convention-on-the-rights-of-persons-with-disabilities-crpd

[172] See: European Commission: Persons with disabilities - Employment, Social Affairs & Inclusion. Available at: https://ec.europa.eu/social/main.jsp?catId=1137

**Disabilities 2021-2030**,[173] building on its predecessor, the European Disability Strategy 2010-2020, and contributing to the implementation of the European Pillar of Social Rights.[174] Moreover, the European Commission has been supporting activities helping to remove barriers for people with disabilities and others (e.g. the older people).[175,176] The consideration of accessibility requirements is also an obligation in EU public procurement rules.

Beyond being accessible, the physical built environment has also to be shaped in a way which is explicitly and actively inclusive, as a key element to the creation of prosperity for the society at large.[177] This means that buildings and open spaces are shaped and organised in ways which enable and foster the **participation of all groups in the community** which would otherwise not fully and freely use and enjoy their environment. An example of a non-physical barrier which can be significantly lowered, although certainly not eliminated, by means of physical solutions, is gender.[178]

The high ambitions of the "Together" core value address however further aspects which are only partly dependent on the physical characteristics of the built environment. Such **immaterial qualities** refer to the way in which buildings, spaces and related resources are fundamentally used, organised, and governed to the benefit of all members of the society and how they can help resolve social issues in terms of **cohesion, redistribution and equity**.[179] This puts the efforts in the built environment directly in relation to the promotion of fundamental human rights and how their assertion contributes to the creation of value and prosperity. [180]

The issues of social cohesion, equity and social justice and their linkages to the way human environments, especially urban ones, are conceived and organised is indeed addressed by global, national, and local policies for urban development, starting from the **Sustainable Development Goals** (see box below).[181,182] In the field of architecture, ever greater efforts are being made to make the built environment more **people-centred**, by integrating sustainability issues with cultural, social and economic ones.[183]

From a NEB perspective, the ambitions of the core value "Together" link to and rely on ambitions and goals formulated in the other two core values, in line with the **holistic and horizontal** approach of the NEB. For example, the ambition of ensuring the well-being of the individual is anchored in the core value "Beautiful" but then interpreted in the core value "Together" from a societal perspective. Similarly, the ambition to establish fully circular built environments is expressed by the core value

[173] European Commission, Directorate-General for Employment, Social Affairs and Inclusion, Union of equality – Strategy for the rights of persons with disabilities 2021-2030, 2021. Available at: https://data.europa.eu/doi/10.2767/31633

[174] https://op.europa.eu/webpub/empl/european-pillar-of-social-rights/en/

[175] For an overview, see: https://accessible-eu-centre.ec.europa.eu/accessibility-standards-european-level_en

[176] See also Dir. (EU) 2019/882, European Accessibility Act, C(2022)6456 – Standardisation request M/587, and European standards EN 17210:2021 and EN 17161:2019.

[177] World Bank, Inclusion Matters – The Foundation for Shared Prosperity, 2013. Available at: http://documents1.worldbank.org/curated/en/114561468154469371/pdf/Inclusion-matters-the-foundation-for-shared-prosperity.pdf

[178] For example, see: World Bank, Handbook for Gender-Inclusive Urban Planning and Design, 2020. Available at: https://documents1.worldbank.org/curated/en/363451579616767708/pdf/Handbook-for-Gender-Inclusive-Urban-Planning-and-Design.pdf and UN-Habitat, Gender Issue Guide Urban Planning and Design, 2012. Available at: https://unhabitat.org/gender-responsive-urban-planning-and-design and ARUP, Cities Alive Designing cities that work for women, 2022. Available at: https://www.arup.com/insights/cities-alive-designing-cities-that-work-for-women/

[179] For governance, see for example: UrbanA Project, Deliverable D5.2, Governance for sustainable and just cities, 2021. Available at: https://urban-arena.eu/wp-content/uploads/2021/08/822357_Deliverable_D5.2-Comprehensive-report-on-all-results-of-WP5.pdf

[180] For example, see: Human Rights Cities in the European Union, Human Rights Cities in the EU – A Guide to Support Local Authorities in Making Human Rights Part of People's Daily Life, 2022. Available at: https://fra.europa.eu/sites/default/files/fra_uploads/fra-2022-guide-human-rights-cities_en.pdf and European Union Agency for Fundamental Rights, Human Rights Cities in the EU – A Framework For Reinforcing Rights Locally, 2021. Available at: https://fra.europa.eu/sites/default/files/fra_uploads/fra-2021-human-rights-cities-in-the-eu_en.pdf

[181] For example, see: United Nations Conference on Housing and Sustainable Urban Development (Habitat III), New Urban Agenda, 2017. Available at: https://habitat3.org/wp-content/uploads/NUA-English.pdf and United Nations Conference on Housing and Sustainable Urban Development, (Habitat III): The Right to the City and Cities for All, 2017. Available at: https://habitat3.org/wp-content/uploads/Habitat%20III%20Policy%20Paper%201.pdf

[182] At EU level, see in particular the "Cities of Equality" thematic area under the Urban Agenda for the EU: https://www.urbanagenda.urban-initiative.eu/partnerships/cities-of-equality

[183] European Commission, Directorate-General for Education, Youth, Sport and Culture, Towards a shared culture of architecture – Investing in a high-quality living environment for everyone, 2021. Available at: https://data.europa.eu/doi/10.2766/88649

"Sustainable" but finds a strong justification and motivation under the core value "Together" with regard to the societal implications – and benefits – of a circular society.

Moreover, the NEB framework strongly links inclusion and social justice with the **cultural dimension**, which is a key horizontal aspect across all NEB core values. This reflects existing EU policies and efforts on this relationship.[184]

Finally, another relevant horizontal aspect is the discussion on the introduction of a possible "**Social Taxonomy**".[185] For its advocates, this new EU taxonomy should complement the Environmental Taxonomy, which focuses on environmental sustainability of economic activities and links immediately to the NEB core value Sustainable, as addressed above.

A Social Taxonomy could focus on "social investments" and help to redirect private capital towards **socially valuable activities**. According to the main ideas floated so far, it could introduce **three objectives**: 1) Decent work (including value-chain workers); 2) Adequate living standards and wellbeing for end-users; and 3) Inclusive and sustainable communities and societies.

From a NEB perspective, the Social Taxonomy could provide a clear and recognised **framework** for investors willing to create NEB aligned projects. In particular, the proposed second and third objective would immediately correspond to NEB values and principles: the "well-being" objective would link strongly to the NEB core value Beautiful, and the "inclusive communities" one would link to the core value Together.

However, as the ideas have not been picked up further for now and it is recognised that the introduction of a Social Taxonomy is a challenging task, for example with regard to the definition of the social **"do no significant harm" (DNHS)** criteria, this aspect is not further addressed in this guide.

### SDGs and the built environment[186]

The built environment, as the place where people live and societies develop, is a key area of sustainable development. Accordingly, it plays a central role in the United Nations **Sustainable Development Goals** (SDGs):

*The **built environment, planning, architecture and design**, interact with **every goal**. And most crucially: not just on an aspirational level or as future potential, but through realized buildings, settlements and cities all over the world. Architectural **solutions** are already there, everywhere, contributing to sustainable communities and quality of life. However, the built environment is also a part of the current **challenges** – a major consumer of energy and natural resources, and producer of waste. Furthermore, how we build can exacerbate inequalities and affect health.*[187]

The alignment with, and contribution to, the SDGs are therefore also major concerns for investors and other actors in the **construction ecosystem**.[188] While the SDGs are universal and placed at the top of the policy hierarchy, they have an intrinsically practical nature and can directly be interpreted at a very operational level.[189]

From a NEB perspective, the link to the SDGs is particularly broad and offers many contact points across all NEB core values and working principles. Depending on the specific angle (sustainable buildings, strong communities, innovation, etc.) a different

[184] See, for example: European Commission, Directorate-General for Education, Youth, Sport and Culture, From social inclusion to social cohesion – The role of culture policy, 2019. Available at: https://data.europa.eu/doi/10.2766/851458 and https://culture.ec.europa.eu/policies/selected-themes/cohesion-and-well-being

[185] Platform on Sustainable Finance, Final Report on Social Taxonomy, 2022. Available at: https://finance.ec.europa.eu/system/files/2022-08/220228-sustainable-finance-platform-finance-report-social-taxonomy_en.pdf

[186] https://sdgs.un.org/goals

[187] Royal Danish Academy – Architecture, Design, Conservation, An Architecture Guide to the UN 17 Sustainable Development Goals, Volume 1, 2018 and Volume 2, 2020. Available at https://royaldanishacademy.com/publications

[188] See, for example: United Nations Global Compact, RICS, Advancing Responsible Business in Land, Construction and Real Estate Use and Investment Making the Sustainable Development Goals a Reality, 2018. Available at: https://www.rics.org/about-rics/responsible-business/un-sustainable-development

[189] For concrete operational examples, see the link between the SDGs and the main building certification systems: DGNB: https://static.dgnb.de/fileadmin/dgnb-system/de/system/systemabgleich/systemabgleich-neubau-gebaeude-version-2023-und-sdgs.pdf, BREEAM: https://files.bregroup.com/breeam/sdg/BREEAM_SDB_A4%20_BRE_115430_0720_web.pdf and LEED https://www.usgbc.org/resources/synergies-between-leed-and-sdgs

mapping of the goals against the NEB can be carried out. In particular, the human dimension behind all SDGs resonates strongly with the NEB core value "Together".

Although all SDGs are of relevance to the NEB, the following SDGs can be considered as most closely intertwined with the NEB overall goals in the built environment:[190]

**11) Sustainable Cities and Communities**: *Sustainable built environments can make human settlements inclusive, safe and resilient. Sustainable cities provide access to high-quality housing and public infrastructure to all citizens, promoting harmonious social, environmental and economic development.*

**3) Good health and well-being**: *Sustainable built environments promote human health by encouraging healthy lifestyles, protecting us from harm and not contributing to environmental pollutants. Sustainable buildings in cities – both inside and outside at a building and community level – can promote health, wellbeing and productivity as well as generating social value.*

**12) Responsible consumption and production**: *Sustainable built environments are made up of circular buildings that optimise resource use, result in zero waste to landfill, and support the regeneration of nature. They operate as part of a closed-loop system with circularity principles embedded across the value chain, at a building and city scale.*

Other particularly relevant SDGs to NEB are: 5) Gender Equality, 7) Affordable and clean energy, 9) Industry, Innovation and Infrastructure, 10) Reduced inequality, 13) Climate action.

[190] The following definitions are taken from: https://worldgbc.org/sustainable-development-goals/

## Working Principles

The NEB working principles apply across the system of core values presented above and define the way in which the NEB should work, while yielding knowledge and insights that can be transferred to other projects. They consist of three strands: participatory process, multi-level engagement and transdisciplinary approach. Each of them has immediate relevance for investors and developers.

| Working principle | Investment relevance |
|---|---|
| **Participatory process** | The participatory process is a key element of investments in the built environment by linking the project to the community.<br>- For public sector investors, a **comprehensive process of public engagement**, beyond the legal requirements of public consultation, is good governance practice and is often dictated by the public character of the projects.<br>- For private investors, the incentive to liaise with the community is weaker, although it is also an element of **good governance** (in the context of ESG, see also Sec. 2.1.3) and can significantly facilitate the **acceptance of the project** by the relevant decision bodies (permitting etc.) and the community in which the project is located. |
| **Multi-level engagement** | NEB calls for engagement of the project owners "horizontally (with peers) and vertically (with others operating at a different scale)", as indicated in the NEB Compass.<br>- This principle is of key relevance for public sector investors, which are naturally expected to place their projects in a broader policy and institutional framework and gain from **exchange, networking and cooperation**.<br>- For private sector investors, engaging across levels can be a key element of **stabilisation and strategic placement**, especially for larger investors who are active at a large scale, possibly an international one. For small investors, multi-level engagement can provide strong **support to growth**. |
| **Transdisciplinary approach** | The NEB holistic approach implicitly requires that knowledge and know-how from different fields is deployed and integrated. This is equally relevant to public and private investors.<br>- Multidisciplinary is already a prerequisite for many projects, for example when projects have a specific purpose (e.g., buildings with social or cultural function) or when it comes to advanced features (e.g., sustainability).<br>- However, the NEB ambition calls for **higher integration of formal and informal knowledge**, including specific local ones, and goes beyond technical disciplines, addressing in particular social, artistic and design expertise which would typically not be included in a conventional project preparation process. |

From the three working principles, multi-level engagement and transdisciplinary approach refer mainly to horizontal attitudes, modii operandi and strategies that should inform the way the project owners organise the project and act in general. The **participatory process**, on the other hand, consists of concrete steps and activities that are an integral part of the project preparation and operation. A thorough engagement with citizens and communities is a fundamental prerequisite to create projects that have high impacts and are transformative. Therefore, higher attention is given in this guide to the participatory process.

**Public participation** is a key component of general stakeholder management (see also Sec. 4.5 for more details on NEB stakeholders) and is a fundamental step in public decision-making.[191] In turn, **stakeholders' management** is becoming a central concern of most organisations, including private enterprises in the context of their corporate social responsibility efforts.[192]

Public consultation activities constitute one or more formal **mandatory steps** in the preparation of major projects. A fundamental part of such activities addresses the impacts and implications of projects on the environment, in line with the basic principles

[191] See, for example, OECD, Guidelines for Citizen Participation Processes, 2022. Available at: https://doi.org/10.1787/f765caf6-en

[192] See, for example: AccountAbility, AA1000 Stakeholder Engagement Standard, 2015. Available at: https://www.accountability.org/standards/aa1000-stakeholder-engagement-standard/

originally laid down by the Aarhus convention, see box below. However, national legislation can require additional formal consultatory or participatory steps, for example for issues related to spatial planning.

Beyond legal requirements, public participation and citizens engagement can cover a much broader field of mainly **informal activities**, which aim at fundamentally rethinking the governance of decision-making processes.[193] The extent and depth of the informal activities can vary significantly depending on many factors, like the type and size of project, the sector, the context, and certainly the capacity of the involved parties and the resources available.[194, 195]

By way of example, the European Investment Bank (EIB) applies **Environmental and Social Standards** in its operations that include stakeholder and citizens engagement.[196] The specific standard covers "public participation in decision-making processes" as one of its three pillars and aims to "adopt an inclusive and systematic approach to engaging constructively with stakeholders, namely persons and/or communities who are directly or indirectly affected by a project, or those who may have interests in a project and/or the ability to influence its outcome, either positively or negatively".

The EIB standard requires among others the preparation and implementation of a **Stakeholder Engagement Plan**, also specifying the minimal requirements for such plan, and the execution of "**meaningful consultation**", intended as an inclusive, informed two-way process. Beyond the standard, the EIB also issued a more detailed guidance note providing recommendations to project promoters on how to meet the EIB's requirements regarding stakeholder engagement in operations financed by the EIB.[197]

### The right to public participation – The Aarhus Convention

The need of involving citizens in decision making has accompanied the political discussion on sustainable development from its very beginning. The resolutions from the UN Conference in Rio de Janeiro of 1992 and the resulting **Agenda 21** highlighted the need for comprehensive public participation in political decision-making as a key prerequisite for sustainable development.[198] The **Aalborg Charter of European Cities** of 1994 further promoted direct-democratic methods for decision processes in cities.[199] Finally, the **Leipzig Charta** (2007) and the **New Leipzig Charta** (2020), further encouraged public administrations to involve citizens in integrated urban planning.[200]

The "**Aarhus Convention**" (UNECE Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, 1998)[201] has a distinct place as the leading international agreement on environmental democracy which was instrumental in introducing **public's right to participate** in public decision-making. The EU and its 27 Member States are all Parties and have over the years adopted its requirements.

The Aarhus Convention was the first international agreement to introduce a **legal framework** for citizens' rights. Its focus is on ensuring access to environmental information, participate in decision making on specific activities affecting the environment (e.g.,

[193] In the field of urban design, see for example the "urban maestro" project, see https://urbanmaestro.org/

[194] For an overview on public participation practice, see for example: CIVITAS, Involving Stakeholders Toolkit on Organising Successful Consultations, 2011. Available at: https://civitas.eu/sites/default/files/Results%20and%20Publications/Brochure_STAKEHOLDER_CONSULTATION_web.pdf

[195] National or regional authorities or other relevant bodies often produce guidance on public participation, see for example: A Guide for Inclusive Community Engagement in Local Planning and Decision Making, Department of Rural and Community Development, Ireland, 2023. Available at: https://www.gov.ie/en/collection/bcc24-a-guide-for-inclusive-community-engagement-in-local-planning-and-decision-making/ and Manual for Good Public Participation, Federal Ministry of Transport and Digital Infrastructure, Germany, 2014. Available at: https://bmdv.bund.de/SharedDocs/EN/Articles/G/manual-for-good-public-participation-in-the-planning-of-major-transport-projects-in-the-transport-sector.htm

[196] Standard 2 - Stakeholder Engagement, in: European Investment Bank, Environmental and Social Standards, 2022. Available at: https://www.eib.org/en/publications/eib-environmental-and-social-standards

[197] European Investment Bank, Guidance note for EIB Standard on Stakeholder Engagement in EIB Operations, 2020. Available at: https://www.eib.org/en/publications/guidance-note-for-eib-standard-on-stakeholder-engagement-in-the-eib-operations

[198] https://sustainabledevelopment.un.org/outcomedocuments/agenda21

[199] https://sustainablecities.eu/the-aalborg-charter/

[200] https://ec.europa.eu/regional_policy/en/information/publications/brochures/2020/new-leipzig-charter-the-transformative-power-of-cities-for-the-common-good

[201] https://unece.org/environment-policy/public-participation/aarhus-convention/text

during the preparation of plans, programmes and policies relating to the environment), and ensuring access to justice in cases where such rights are not respected or when environmental law is breached.

By doing so, the Aarhus Convention puts on a solid practical basis the right of citizens to be involved formally and systematically in matters of general relevance, therefore increasing **transparency** of administrative procedures at all levels, and making general governments more accountable towards citizens.

The **European Union** has transposed the principles of the Aarhus Convention through a series of directives:[202]

- **Access to Environmental Information Directive** (Dir. 2003/4/EC), which ensures that environmental information is systematically made available by the authorities to the public;
- **Public Participation Directive** (Dir. 2003/35/EC), which provides for public participation in respect of the drawing up of certain plans and programmes relating to the environment;
- **Strategic Environmental Assessment (SEA) Directive** (Dir. 2001/42/EC) on the assessment of certain plans and programmes on the environment;
- Directive 1997/11/EC on **Environmental Impact Assessment (EIA)**;
- **other** directives, like the Water Framework Directive (Dir. 2000/60/EC).

Finally, the "**Aarhus Regulation**" (Reg. (EC) No. 1367/2006), introduced to the implementation of the Aarhus Convention to the EU's institutions, bodies, offices and agencies by, or on the basis of, the EC Treaty.

The different levels of engagement with citizens, and stakeholders in general, are typically modelled through the so-called "**ladder of participation**".[203]

| Level | Type of participation and engagement | NEB Ambition (indicative) |
|---|---|---|
| **1) Inform** | Inform citizens and relevant stakeholders about the project | Ambition I (to consult) |
| **2) Consult** | Invite citizens and stakeholder to express their suggestions and concerns about a delivered solution | |
| **3) Involve** | Integrate citizens and stakeholders' inputs (suggestions and concerns) in the design and implementation of the final outcome | Ambition II (to co-develop) |
| **4) Collaborate** | Co-create the project with citizens and stakeholders, collaborate with them as peers | |
| **5) Empower** | Allow citizens and stakeholders to be the project owner themselves, shift the power of decision to them | Ambition III (to self-govern) |

It is also common to organise the interaction with different stakeholders by making use of a **stakeholder engagement map**, which organises stakeholders along two dimensions: **interest and influence**. In general, the higher the level of interest and influence, the higher the level of engagement required. Stakeholders with low influence are therefore monitored, kept informed and, for the more interested ones, consulted. At the same time it is necessary to collaborate closely with stakeholders with high influence, anticipating and managing their needs and eventually empowering those with highest interest.[204] Stakeholders relevant to NEB projects are also addressed again in Sec. 4.5.

[202] https://environment.ec.europa.eu/law-and-governance/aarhus_en

[203] The concept of "ladder of participation" was originally introduced by Arnstein, S. R. (1969). 'A Ladder of Citizen Participation', in Journal of the American Institute of Planners, Vol. 35, 4: 216-224. The definitions reported here are taken from the NEB Toolbox.

[204] The use of a stakeholder map is also recommended by the NEB Toolbox.

In practical terms, the engagement with citizens is a **complex process** which extends over time and requires a significant amount of effort and resources and the involvement of experts with dedicated experience in such activities. For this reason, the creation of a **Citizens/Stakeholder Engagement Plan** is a key step in the preparation of projects with significant social components, as in the case of NEB. Such plan lays out tasks, responsibilities, timelines and resources needed to carry out the participatory process.[205] In any case, even if digital tools can simplify and optimise some parts of the process, the participatory process is fundamentally based on extensive and intense human and personal interactions between the involved parties.[206]

Finally, it is worth mentioning that the engagement with citizens and stakeholders can be particularly challenging for built environment **high-impact projects in urban contexts**, as often the case for NEB aligned projects. The reasons are manifold: the inevitably high density and the resulting large number of individuals affected; the large diversity of social groups involved, often with conflicting interests; the large number of interest groups and other associations, influencing and possibly distorting the balance between groups; the many interlinked layers of relevant administrative entities (vertically – state, region, city, district – and horizontally – different departments responsible for different sectors, aspects, project stages, etc.). It follows that the expectations on the public participation process are particularly high and can be decisive for the success or failure of a project.

[205] For an example, see: LIFE UrbanProof Project, Deliverable A1.1: Stakeholder Engagement Strategy and Communication Plan, 2016. Available at: https://urbanproof.eu/images/pdf/d_a1.1_stakeholders_engagement_strategy.pdf

[206] For example, see: World Bank, A Guide to Community Engagement for Public-Private Partnerships, 2019. Available at: https://www.ppiaf.org/documents/5776