

Service Design at the Service of Whom?

Implications in considering the natural
environment as a primary stakeholder
within the service design process

Alessandro Grati



POLITECNICO
MILANO 1863

Alessandro Grati
matr. 941957
M.Sc in PSSD
School of Design
Service Design - Assignment II
Prof. Daniela Sangiorgi

Cover Picture: Picture by Nicola Tonolini from a Safari in Campi Ya Kanzi
Luxury Lodge Website (<https://maasai.com/>)



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1. Introduction

In this paper the objective is to understand the reasons why design teams should consider the natural entities as primary stakeholders for new services development. Then, an example of design tools application practicing this behavior will follow. Finally a case study will be presented and mapped for a better comprehension of the process described.

2. Why considering the natural environment as a primary stakeholder of a new service development

Since the beginning of the User Centered Design (UCD) approach, the stakeholders definition has occupied a role of primary importance in the service design process. Several tools were developed for a better understanding of stakeholders' needs, desires and common grounds between them. These tools guarantee designer for the success of their service output.

The useful and positive involvement of stakeholders in co-design processes, made the designers believing even more in the creation of platforms that have made them collaborating between each other. With an effective exchange of data, stakeholders are able to integrate meaningful features in order to produce shared value.

Stakeholders are defined as an entity that can influence the firm, its services and products. They are directly or indirectly involved in the project of the firm. As C. Driscoll and M. Starik state: "Stakeholders have one or more of the following attributes: power to influence the firm; legitimacy of a relationship; and/or urgency of a claim." (Driscoll & Starik, 2004, p. 57)

The natural environment in which an organization (public or private) is set, holds coercive and utilitarian power thanks to the natural resilience limits. The sustainability definition expressed by C. Vezzoli is directly connected with the reaction of nature to our behaviors. As he sentences: "Sustainable development and Environmental sustainability [...] refers to a process that occurs: 1) within the limits of environmental resilience, i.e. its ability to absorb the effects of anthropic transformations without causing irreversible phenomena of degradation, 2) without compromising the needs of future generations while preserving their natural capital, 3) within a framework of equitable redistribution of resources according to a principle for to which everyone has the right to the same availability of global natural resources" (Vezzoli, *Design per la sostenibilità ambientale*, 2016, p. 2). If the human organizations exploit natural resources beyond the level of what the environment could afford, they have to face harmful consequences, as hurricanes and water-rise have shown. This leads to financial crisis, due to the costs needed to rebuild what the nature has destroyed. (Driscoll & Starik, 2004)

Nature and natural entities, in recent years, have started to be considered as living-beings with the same rights as humans. This moral and legal change in the anthropocentric consideration of our western society has been applied thanks to the indigenous communities that have a stronger and deeper relationship with their environment. (Knauß, 2018)

This leads to a legitimate consideration of the natural entity when a service that influence the part, even indirectly, has developed by a firm.

We do claim where it is already too late. It is harder to prevent than to cure. This mindset explains why media give more attention to the explosion of an industry than to the climate change. Nature claims the urgency of an action when the damage is already very big, causing too many losses to the company. (Driscoll & Starik, 2004).

3. Implications in considering nature as stakeholder using User Centered Design (UCD) tools

Involving nature in the design phase of a new product does not sentence a revolution in our present design world. As described by O. Botar, since the Bauhaus period, professors like W. Gropious and J. Itten were already monist of holistic and organicist ideologies. It demonstrates that since the beginning, designers understood the key role of the environment as benefit provider for the human life, when the design focus is shared completely with the natural entity (biocentrism). (Botar, 2016)

Service design has become an enabler for the various stakeholder to communicate between them, to participate in the service ideation with the aim of increasing the value and the effectiveness of the design output. Thanks to Service Design, the focus can be shared among the considered stakeholders. As Sangiorgi defines, service design integrated a new framework for moving from designing as a professionals' proposal to a design as collaborative experience among stakeholders, the "Inside Out by opening up innovation processes" (Sangiorgi, 2015, p. 343).

The aim is to make the service fruitful by all the ones involved in the design phase. If the natural entities would be considered as participants in this co-design process, design teams and other stakeholders would develop solutions that could bring value also to the environment.

The role of the designer in this process is resumed by Meroni & Sangiorgi: "an actor in the design process whose task is to listen and facilitate discussions between actors, [...] to bring proposals to the discussion table that are capable of going beyond what the user community could have imagined; proposals that are provocative (that is, are able to provoke discussion) and that motivate in such a way as to be open to discussion." (Meroni & Sangiorgi, 2011, p. 5). Design teams are called to analyze, map, actively listen, understand, connect and integrate, communicate and concretize proposals for the sake of all the members who've been asked to participate in the process, Nature included.

In order to support this complex co-design process, several tools have been developed in the recent years. They have been listed and described in the servicedesigntools.org website, an open repository of maps, resources and tutorials curated by Oblo Design (<http://oblo.design/>), Master in Service Design (<https://www.servicedesignmaster.com/>) and Service Innovation Academy (<http://www.serviceinnovationacademy.com/sia/>).

In the next paragraphs, the data collected by a research conducted for a policy analysis in the Snake Island-Laotie Mountain National Nature Reserve (Zhou, Wang, Lassoie, Wang, & Sun, 2014), will be translated into visual contents using service design tools. The objective is to actualize the possibility to consider non-human entities' needs and goals for a sustainable service design future framework.

In the policy analysis conducted in China, researchers defined the stakeholders by the interest, influence and proximity of the entities in the geographical space. This analysis is in line with a criteria set out by Driscoll and Starik on the direct influence of a firm on the land that it occupies (Driscoll & Starik, 2004).

They identified the stakeholders of the considered zone by a desk and in-place ethnography research. Then, researchers listed the goals, activities and actions, influence and the key relationships with other stakeholders (fig. 1).

Table 5
Interest-influence relationships among stakeholders.

Stakeholder	Goal/Interest	Activities and actions	Influence	Key relationships with other stakeholders
Natural resources	Maintaining themselves and living in the SILMNNR	—	—	Being used and damaged by local residents and local enterprises , and being protected by LSILMNNRA and MEPPRC
LSILMNNRA	Conserving natural resources	Restricting illegal hunting, and improving public environmental awareness, and planting trees, and touring for public observation and research	Population of GS being increased, and the phenomenon of illegal hunting being reduced, and local communities' environmental awareness being increased, but management level being low with limit power	Being subordinate to MEPPRC , and restricting local residents and enterprises' utilization activities, and trying to relieve the conflicts with local governments
Local residents	Living and producing for their families	Agriculture and sea food production, and daily life	Reducing habitat, and increasing pollution, and weakening ecosystem functions	Being restricted from using natural resources by LSILMNNRA , and obtaining job opportunities from local enterprises and services from local governments
Local enterprises	Getting more profits with less investment	Opening factories to produce	Reducing habitat, and increasing pollution, and weakening ecosystem functions	Being restricted from using natural resources by LSILMNNRA , and providing job opportunities for local residents , and paying taxes and rents to local government annually
Local Government	Improving local socioeconomic development	Attracting investments for increasing financial revenue, and constructing basic facilities	Reducing habitat, and increasing pollution, and weakening ecosystem functions	Supporting local residents and enterprises exploiting natural resources , and conflicting with LSILMNNRA's protection
Scientists	Doing research and offering suggestions	—	Most of their suggestions based on changing the size and functional zones	Providing professional suggestions for MEPPRC
MEPPRC	Conserving natural resources	Making policies, and planning the scale and functional zones, and relieving conflicts between stakeholders, and investing finance, and providing management and technological trainings for staff	Enhancing the management level of SILMNNR, and making the protective actions more scientific and professional, but putting economic development ahead of conservation based on the current conditions in China	Making policies and guidelines for LSILMNNRA , and relieving the conflicts between LSILMNNRA and local governments

Fig. 1: Table 5, Zhou, Wang, Lassoie, Wang, & Sun, 2014, p. 299

• Stakeholders Map

The stakeholder Map permits to have a fast understanding of the influence held by the various stakeholders between and upon each other. It “gives an overview of network relations” (Giordano, Morelli, De Götzen, & Hunziker, 2018).

This map (Fig. 2) applies the three rules of the stakeholder recognition written in the paragraph before: power, legitimacy and urgency. (Driscoll & Starik, 2004)

Power is translated in the level of influence of one entity; legitimacy and urgency are translated in the interest of the same entity in the output of the design process.

Since local organizations and inhabitants rely on Natural Resources to survive, these have a great influence on a possible service development. If the service damaged the environment above its resilience limit, the consequences would be irreversible.

The Stakeholders Map is a useful tool for the design team because it lists the different characters, pointing out how to interact with them in order to establish effective relationships with and between them.

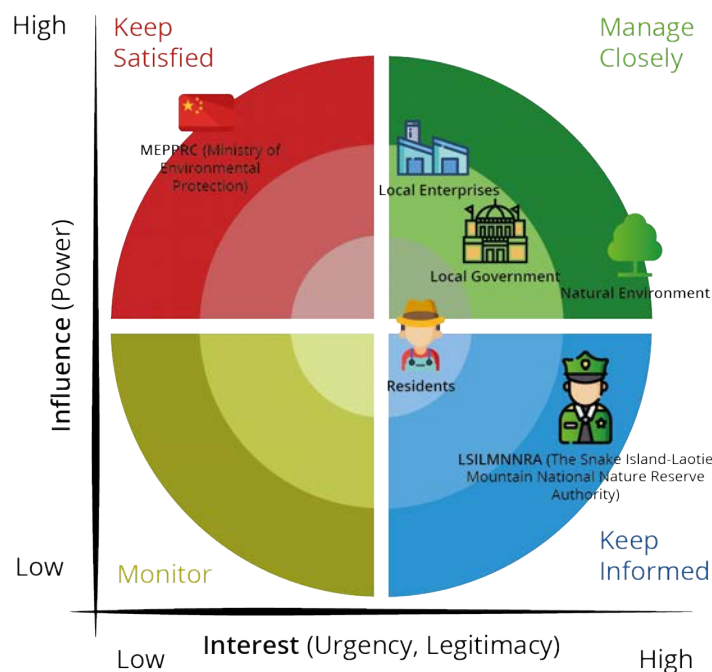


Fig. 2: Stakeholder Map based on Table 5, Zhou, Wang, Lassoie, Wang, & Sun, 2014, p. 299

• System Map

The System Map is a tool for representing the various flows of pivotal contents between the various stakeholders of the selected system. Morelli affirms that this representation of dynamics permits to clarify and define the units of influence of a whole group of stakeholders, explaining how the system works. (Morelli, 2006, p. 4)

In the Chinese Nature Reserve context, the map highlights how the natural environment provides resources that the locals take and exploit at their personal disposal. Natives do not consider Nature as an entity that needs to be given.

The LSILMN Nature Reserve is protected by renowned organizations too distant to be perceived as an authority or locals too powerless and lacking the resources to guarantee an effective management (Zhou, Wang, Lassoie, Wang, & Sun, 2014).

The flows help the design team understanding to which stakeholder address a future service, with the aim of introducing or changing an exchange between the actors.

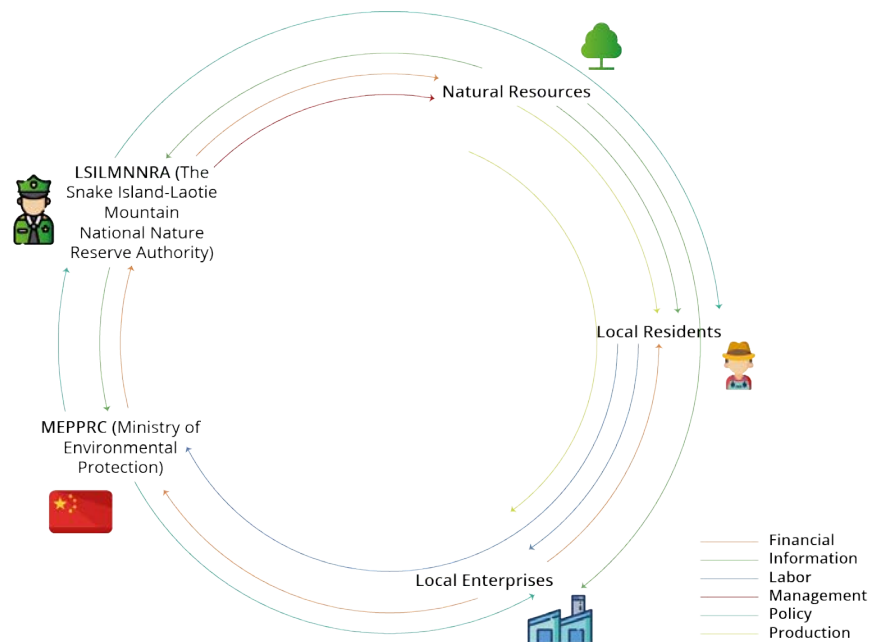


Fig. 3: System Map based on Fig. 6, Zhou, Wang, Lassoie, Wang, & Sun, 2014, p. 300

• Ecosystem Map

An Ecosystem Map (or Product Service Ecology Map) is a useful tool to summarize all the ecological system under study. This permits to have a comprehensive idea of all the stakeholders, with the aim of describing and fully understanding the various actors involved and their relationship with the surrounding context. (Forlizzi, 2013) Moreover, it is possible to detect the organizations that enter in contact with the selected environment, their roles and the value that they exchange with the “natural user”.

This tool permits to create a focus on a particular entity and understand which are the other groups or individuals’ relationships we can work on to change or add new value (Fig. 4). The design team can now decide which of these activities could be enhanced by a new service adoption and which are the agents they need to involve.

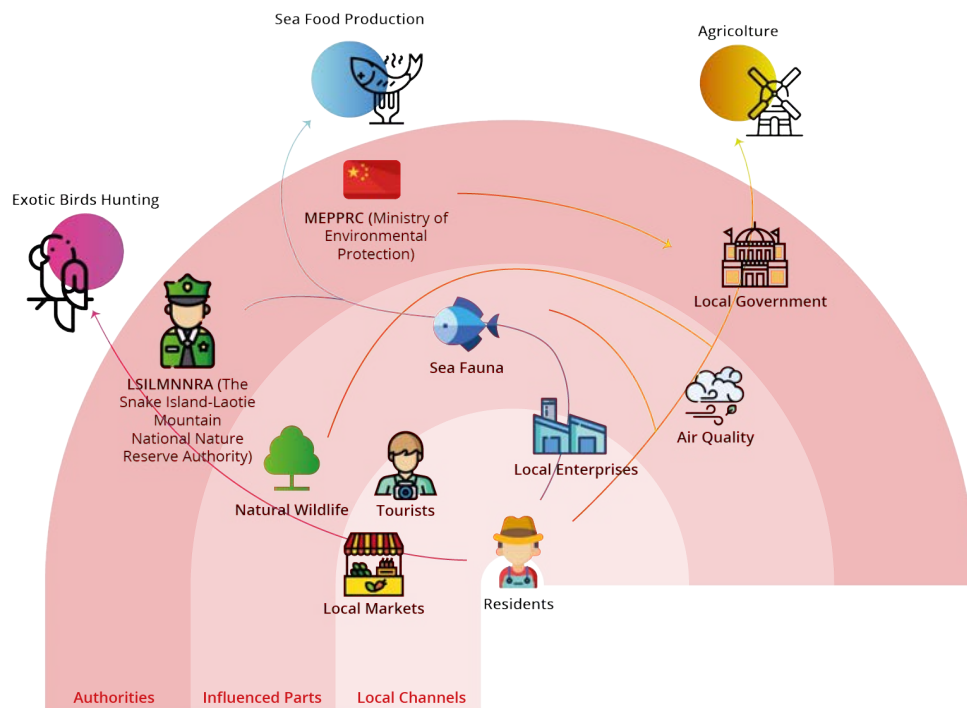


Fig. 4: Ecosystem Map based on the research of Zhou, Wang, Lassoie, Wang, & Sun, 2014

4. The Sustainable Product Service System (S.PSS) involvement

Conceiving a new service with the UCD tools involving the influenced natural environment as one of the primary stakeholders of the whole process, leads us to a systemic view of the service adoption. The service enters in a system of relationships and actors that influence each other following a dynamic flow.

For an effective implementation of the natural environment conservation level, design teams should operate in the social context with the Butterfly Effect¹ mindset. Every new service adoption produces a change in the socio-economic context where it is accepted. Thus, it not enough to respect the resilience limit of the natural environment. Considering Nature as a stakeholder, service design teams are forced to develop solutions that bring value to Natural entities in an active manner.

The S.PPS model describes how organizations could conceive a product-service ecosystem with win-win solutions for them and for the environment. It enhances the level of importance of stakeholders' interactions, transforming this multiple exchange experience into the engine of the value creation for the whole considered eco-system. The environmentally or socio ethically benefits are guaranteed by the organizations' economic interest, thanks to the switch from the consumer economy to a sharing economy model (Vezzoli, et al., 2018). Thus, with less resources is possible to satisfy more people, respecting the principles of the sustainable development stated in the previous paragraphs.

Service designers are asked to develop these new interactions between the stakeholders. Assigning to nature a pivotal role in the UCD process, together with the S.PPS model framework and the service design approach and tools, companies and citizens could strengthen their level of satisfaction and switch their role to an active one in the protection and improvement of the environmental conditions.

5. The Campi Ya Kanzi Experience

Another example of the environmental conservation originating from the influence of non-western communities, is the Campi Ya Kanzi resort.

Luca Belpietro built the award-winning eco-lodge in the Chyulu Hills in Kenya. This camp is the only luxury safari lodge on a Maasai-owned reserve.

The camp has been built and is maintained by employing only local Maasai people, using local materials and resources. They declared that not a single tree has been cut for its construction.

Maasai communities living in the proximities of the eco-lodge retained most of their traditions, lifestyle and lore. They coexist with the surrounding wildlife, perceiving their presence as part of the whole natural system.

The tourist services development created a fulfilling experience for the people deciding to live a different holiday, sharing safaris and stories with the Maasai community in a luxury and zero emission lodge.

The ecosystem map (fig. 5) points out that for every action actuated by their activities, there is a reaction impacting a particular natural entity. In light of this analysis the team developed other services (e.g. REDD+ Carbon Project), they decided the technologies to adopt and how to generate more value for the local community (e.g. Maasai Conservation Trust) and for the customers (e.g. Eco-Learning Experience).

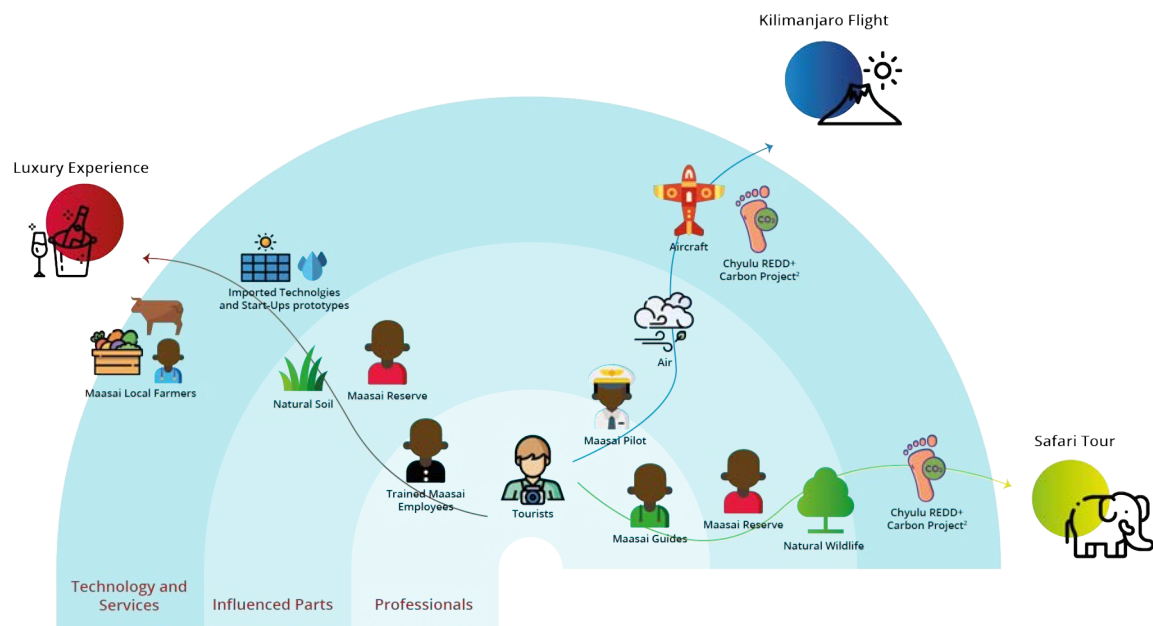


Fig. 5: Ecosystem Map of the Campi Ya Kanzi Experience based on the data collected on the official company website

6. Conclusions

Thanks to the design method, the complexity of considering nature as a main character is discerned into various development opportunities able to generate value through a win-win strategy for all the considered stakeholders. Service design should be at the benefit of all the affected actors for improving the quality of their activities without leveling the ones of the others.

Design teams are called to map and design the whole system: the infrastructure for creating connections between the various stakeholders. The exchange of informations between the involved parts is fundamental for declaring the needs and for the development of opportunities, also the ones claimed by the nature as an actor dramatically affected by human activities.

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Website reference for the presented case study

1. <http://maasaiwilderness.org/maasai/>
2. <https://maasai.com/>

Website reference for the service design tools

1. <https://servicedesigntools.org/>

