Challenges and Contributions of Collaborative Design Methodologies in Design for Territories

Carla Rodrigues and João Neves

CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa, Portugal

ABSTRACT

Over the last decades, territories have shown a continuous transformation and adaptation to social and economic relations in order to respond to global challenges. It is therefore indisputable the significance that regions, especially inland territories, play in promoting sustainable development and improving people's living conditions. In the inland territories of the country, it is possible to notice a special attention from municipalities to employ more integrated and innovative approaches, which confirms the importance of defining and adopting strategies to tackle challenges. These concerns highlight the need to better understand the interaction of communities, regional actors, companies and academic and public institutions as a factor for sustainable regional development. It also appears evident in this context, in addition to technology and science, the importance of the emergence of new knowledge practices that broaden processes of thinking, of developing new ideas and of generating innovative solutions. This approach enables us to view design as a practice or methodology which, besides connecting objects with social customs and standards, analyses and develops projects involving the participation of various individuals in a given design process. The ability to lead, analyse and interpret problems is increasingly intrinsic to the practice of design with the aim of solving and testing new ideas for a sustainable society. With this reflection we intend to understand how design can contribute to the development of innovative projects that foster the regional creative sector. To this end, this article analyses territory as a design object and examines how collaborative methodologies, focused on design and targeted at local communities, play an active role in the processes of solving the challenges of these territories. At present, inland territories have been found to have the ability to stand out for their innovative and creative profile, thus becoming excellent environments to sharpen the creation of concepts and projects supporting the idea of doing design for and with society. This document also aims to highlight the importance of the co-creation method applied to territory as an enabler of the relationship between people and places. The involvement inherent to the collaborative process provides a better understanding of the context and local needs, and allows the emergence of innovative solutions, thereby facilitating an integrated and sustainable development of the territory. In light of this, it is important to stress that the new paradigms of design are currently oriented to social concerns through an interdisciplinary and systemic vision, based on a holistic view deriving from more strategic approaches. In short, this article attempts to identify some collaborative practices for the definition and resolution of problems, as well as to understand the territorial dynamics and to better grasp the existing relationship between collaborative methods in design and territory management. It is our intention, as ultimate goal, to investigate the feasibility of these methods and their integration in the regional strategies of inland territories with the purpose of supporting and promoting territorial innovation.

Keywords: Design methodology, Design for territories, Co-creation, Inland territories

DESIGN, TERRITORY VALORISATION AND CO-CREATION
UNDERSTANDING TERRITORY

The design theme for territory may be approached from different angles depending on the context to which it belongs. For this reason, it is essential to note that the term 'territory' used here is concerned with local identity - counties, cities and regions, in the country inland - as an expression of the geographical space construed as an integrated place of skills, knowledge, culture, material and environmental assets.

Over the centuries, the concept of territory has taken on distinct meanings, according to the evolution of geographical thought and the applicability in different areas of knowledge, such as geography, ethology, architecture, anthropology, environmental psychology, amongst others. However, it should be pointed out that the territory cannot be restricted to a concrete dimension. It is where social networks and relations involving different contexts and scales are established.

Raffestin (1993) appears as one of the pioneers in presenting reflections on territory and in understanding geographic space taking into account the political nature of the territory. He thus argues that the territory is a product of the space, displaying power relations. It is exercised by people or groups and is intrinsic to all social relations. It is also a field of forces, a web or a network of social relations projected into space.

> Territory is built upon space, as the result of an action performed by a syntagmatic actor – an actor who carries out a programme – at any level. By appropriating a space, in a concrete or abstract way – for example, through representation – actors 'territorialize' the space.
> Territory is thus a space where actions have been projected, as energy or information, consequently showing relations marked by power.
> (...) It is clear that territory is supported by space, but it is not space. It is a production from space (Raffestin, 1993, p. 143).

In addition, Saquet (2006) considers nature to be an inherent part of territory. He also regards territory according to a political, economic and cultural approach, tied to the power relations of a given social group.

> Territory is nature and society: there is no separation. It is economy, politics and culture; buildings and social relations; discontinuities; connection and networks; domination and subordination; environmental destruction and protection, etc. In other words, territory means heterogeneity and common features; historically shaped appropriation and domination. It is a historical and trans-scalar product and condition with multiple variables, determinations, relations and unity. It is a space for housing, production, services, mobility, disorganization, art, dreams - in short, life, both objectively and subjectively. Territory is procedural and relational, (im)material, containing simultaneously diversity and unity (Saquet, 2006, p. 83).

In this context, it is possible to define territory on the basis of the interaction of humans with space, resulting in kinds of usage or transformation

(Schneider, 2009). In view of this, territory comes to be considered as a value-creating resource which prioritises social relations, networks, culture, everyday life (Fernandes, 2009; Schneider, 2009).

Therefore, there is a recognition that the territory holds a special value. Its complexity and interdisciplinarity have given rise to various perceptions integrated in the economic, political and cultural aspects or even the interweaving of these factors showing the concept and dynamics of spaces that are always under construction. A collective and multidimensional construction, with multiple interacting territorialities comprising powers, behaviours and actions (Saquet, 2006).

> Territoriality is a social phenomenon which involves individuals who are part of groups interacting with each other mediated by territory. These mediations change in time and space. At the same time, territoriality does not solely depend on the local territorial system, but also on intersubjective relations. There are local networks of subjects which connect the local place with other places in the world and are connected to nature. Social action is local, territorial and means territoriality (Saquet, 2007, p. 115)

Territoriality refers to the relations between an individual or social group and its milieu of reference, expressing a feeling of belonging and a manner of acting in a given territory: a locality, a region or a country (Albagli, 2004). In sum, territoriality lends identity to the place, reflecting the territorial dynamics in all its range and in its multiple dimensions: cultural, political, economic and social.

In light of this, it is also important to clarify the concept of 'territorial capital' which is the synthesis of all the values and resources that characterize a territory (Villari & Parente, 2010). This conceptualization describes the place as an interwoven array of material sources and immaterial values, physical assets, human resources, activities, habits, know-how, expertise, cultural forms and governance structure of identity, externalization and communication (Maffei & Villari, 2006).

Territoriality thus assumes a significant commitment to providing the means to promote and enhance a territory. It is in this perspective that design plays a valuable role as a strategic actor in the development of the territory. In this context, new opportunities to reflect on theories and practices of territory design arise, considering the competition among territories, the goal of attracting people and investments, the ability to plan sustainable local development (Villari & Parente, 2010).

The role of the designer is to identify and recognise local creative manifestations, give visibility and promote cultural heritage using techniques involving innovation, aesthetics and creation, through cultural and artistic knowledge. Also within this context, Mozota (2003) describes design as a problem-solving activity, a creative activity, a systemic activity, and a coordinating activity.

RELATIONSHIP BETWEEN DESIGN AND TERRITORY

For decades, many disciplines have furthered the study on territory valorisation through different fields of intervention: territorial marketing, cultural

marketing, experience economy and major events. Nevertheless, in recent years research based on methodological foundations has emerged with a design approach focused on the promotion of territories, characterised by the participation of the local community and the concept of "territorial capital" (Parente & Sedini, 2017).

The interest in the relationship between design and territory has always been there, but since the first action-research experiences, the perspective of observation began to change: it moved from observing the territory as the design context to considering the territory as a design object (Parente & Sedini, 2017).

The notion of Design for Territories began to be outlined in the mid-1990s from an intense debate on economy, production and social transformation of large cities (Parente & Sedini, 2017). During this period, the Community of Politecnico di Milano played an important role, as it where some of the studies on this topic were initiated. These studies challenged the relationship between design and territory across different subject areas, according to a design approach integrating design research and field experimentation (Villari & Parente, 2010).

Some of these investigations identified new ways of conceiving the relation of design with territory, paving the way for a path of challenges and opportunities fulfilled in 'design in the territory'; 'design of the territory'; 'design for territories'. These three approaches have highlighted territory variations, enabling the expansion of scientific knowledge from conceiving territory as the context of the project, then territory as the object of intervention, and ultimately territory as a relational system. Initially, territory is considered as a design context in which design, essentially product design, acts with its own logic, using innovative materials and interpreting local know-how in original ways, leading to the definition of the concept of "design in territory".

New forms of relationships have emerged with the aim of promoting local cultural products, environmental, historical and cultural resources or the collective imagination bound to the idea of a specific place (Parente & Sedini, 2017). These products or services initiated a dialogue with their places of origin, presenting themselves as a practice of 'design of the territory', highlighting the role of design in the conception of products as enhancers of the values of a place, strengthening its identity and visibility.

Subsequently, under the influence of this line of thought, territorial development is associated to a concept of self-sustainability of territories (Magnaghi, 2000), adopting as a paradigm the notion of 'territorial capital', a structured and complex set of tangible and intangible resources which represent the system of values, constraints and opportunities of a territory, thus placing it at the base of the process of 'design for territories' (Parente & Sedini, 2017).

In this sense, when addressing the topic of design and territory, it is clear that the relationship uniting and integrating them is one where design has a resolute approach. It establishes links by playing a strategic and systemic role connecting knowledge, places and people, and imagines innovative solutions to meet the challenges between the local and the global dimensions.

TERRITORY VALORISATION

The competitiveness of territories still relies heavily on traditional resources (capital, labour and raw materials), so the usual methodologies are being critically analysed in order to examine their effectiveness in the face of contemporary complexity. It is thus understandable the need to adopt approaches of innovative dynamics to respond to complex problems and achieve better results. In other words, territories featuring a positive attitude towards innovation and the use of intangible input – such as knowledge, for example – become more competitive in a world increasingly marked by internationalisation and globalisation (Natário et al., 2012).

Villari and Parente (2010) share this reflection describing territory valorisation as an introduction of innovations at local level, with changes capable of affecting both artefacts (products and services) and processes (technical and organisational) to generate value for a territory in the long-term. The valorisation of a territory should not only be seen in terms of its infrastructure development, but also with of its human, social and knowledge capital.

In this sense, Maffei and Villari (2004) state that, when operating towards the territory valorisation, design "defines the intervention actions, looks for characteristics of the place, aims at the creation of identities, applies selective hypotheses, combines typologies, functions, materials, colours (...)".

It should be noted that each place or region has different characteristics – social, economic, cultural, political and institutional – which can influence the ability to produce knowledge, learning and territorial innovation. As such, it is likely that territories compete with each other using their own tangible or intangible resources as a value system. In this perspective, design can be considered as a strategic lever for the creation of local design processes which combine skills, know-how and creative resources in order to build new means of value creation for communities. Following on from this, the design perspective according to Krucken (2009) is fundamental in visualising opportunities to add greater value to resources, making their social and environmental content explicit, and to develop innovative products and services.

> Because time is real, and the future unpredictable, the challenge of carving a path into the future calls for a different way of thinking than the old, mechanical methods of strategic planning. In order to anticipate wholly new industries like the personal computer industry, it's not enough to make predictions based on old assumptions. You need to imagine alternative scenarios based on new assumptions (Ogilvy, 2002).

RESEARCH ON COLLABORATIVE METHODOLOGIES FOR 'DESIGN FOR TERRITORIES'

Recent years have seen the emergence of new instruments and participation methods in the construction of public policies, which have been introduced in local and supralocal government agendas worldwide (Abreu, 2019).

For Bonfim (1995), methodology is the study of methods, techniques and tools and their applications to the definition, organization and resolution

of theoretical and practical problems. Therefore, it is a tool that takes into account the context of the project to assist the designer (Carvalho et al., 2019). In view of this, it becomes relevant to grasp how co-creative processes can bring value to territories.

Through a bibliographic research, consisting of a literature review, we show some tools and concepts which have allowed us to assess how collaborative methodologies with a design focus and centred on the local community play an active role in the processes of solving the challenges of a territory.

The co-creation paradigm has been gaining over the years more relevance. Increasingly, people, as individuals with opinions and motivations, have had influence in the development of Design (Sanders & Stappers, 2008) and in marketing management. This influence goes from the most informative phase to the ideation and design of activities (Sanders & Stappers, 2008).

Moreover, a participatory approach entails the involvement of stakeholders in the process of planning, implementing and evaluating projects (Slocum, 2003). Therefore, concepts such as co-creation and co-design emerge. Co-creation is perceived as a process which involves creativity in a collective way and co-design comes from co-creation where designers and people with different skills work creatively in the design development process.

Co-creation is usually defined in a pragmatic and operational manner and oriented toward problem-solving efforts in specific situations where actors try to create more legitimate, socially just, and efficient processes or to remedy conflicts and problems by applying co-creation as a governance instrument.

Participatory techniques are considered tools used to implement methodologies and are logically integrated into the method (Gomes et al., 2019). There are several mechanisms that foster participation, such as: brainstorming; buzz groups; plenary sessions; debates and interactive discussions; interactive or cooperative games; role plays; case studies; documentaries and films.

Within the new forms of design acting through collaborative methodologies, we highlight in this article three research studies that identify themselves as bound to a territory. These are studies that consider and value the identity origin, the geographic, cultural and social aspects of the products or services, according to Krucken (2009).

The article entitled *Mapping Intangibilities in Creative Tourism Territories through Tangible Objects: a methodological approach to developing creative tourism offers*, by Cabeça et al. (2019), addresses cultural mapping through objects as a tool for regional actors to discover what is 'so special' about their places, a way to connect tourism offers with the community where they take place (Cabeça et al., 2019).

> To trace, acknowledge, and place cultural assets, therefore, is a powerful instrument to communities. Making the intangible visible, cultural mapping collects significant cultural information, traditions, stories, values, and expectations that locate people in their places, and in the world-at-large. It is also a powerful governance mechanism, involving communities in a bottom-up process of actively determining a place's identity. Place-based and involving a participatory interaction, cultural

mapping promotes social cohesion and is thus a 'first step in a longer journey toward cultural sustainability' (Jeannotte, 2016, p. 41 apud Cabeça et al., 2019, p. 42).

In this perspective, cultural mapping stands as an important tool to recognise and track the cultural assets of a given community, as well as to engage participants in participatory actions. Cabeça et al. (2019) argue that emotional connections can be created through cultural mapping. It is important to understand the emotional impact of territories, and what emotions arise when participating in local creative activities. This can help in designing an emotional landscape that serves to connect both communities and visitors to places.

> Cultural mapping, in the creative tourism context, is a means towards sustainability and local development. Regional cultural resources and community engagement are sources of development and financial income to the local. Mapping cannot be done without involving communities: the patrimonial value of intangible heritage cannot be a mere part of the political and ideological rhetoric or an external desperate attempt to avoid the extinction of certain cultural expressions (Cabeça et al., 2019, p. 48 apud Cabeça, 2016).

The paper Allen & Queen (2018) - *Critical Placemaking: towards a more critical engagement for participatory design in the urban environment* - introduces the basis for novel forms of participatory design research that build on elements of placemaking, participatory design, co-creation and critical action to engage in a mutually critical and evaluative process between designers and users through the mapping process.

The author contextualizes the map, which lends itself to exploration with the potential to visualize interconnectedness and change in a very real, tangible way. Through dynamic and speculative interactions, maps have the potential to show the implications of action (design or otherwise) throughout a system. The map then can become a feedback loop within the design process to test ideas with immediate adjustment and flexibility. (Allen & Queen, 2018, p. 401)

> We found that the 'authority' of the map being used to tell alternative stories to the official ones that citizens are usually exposed held powerful, energizing and engaging potential. By making the tacit explicit, the map provided a critical tool in the construction of knowledge.
>
> (...) we are considering how these different manifestations of the map can serve as primary interfaces which allow users to navigate communities as complex social and physical terrains composed of collective histories, personal accounts, historic photographs and archival documents situated within the more typical dimensions of space and time to discover meaningful interactions in the current landscape and speculate on their influence for future scenarios (Figure 2). The map provides the project with a provocative framework through which to explore the "shared authority" of writing a community's history. (Allen & Queen, 2018, p. 402)

Allen & Queen (2018) argue that there is no assumption of physical intervention in critical placemaking, and similar to participatory design, the designer, user, and policymaker are engaged in mutual discovery and exchange. At its core, critical placemaking privileges interaction and conversation through mediated design interactions.

The article by Hidalgo (2018) under the title *Dotmocracy and planning poker for uncertainty management in collaborative research* provides an exploratory approach to two co-creation methods derived from digital culture, applied to collaborative research ideation and management. Specifically, it describes and analyses the use of dotmocracy (from participatory design) and planning poker (from agile frameworks) for decision-taking and uncertainty management in the early definition of collaborative research processes.

The author advocates the possibility of using dotmocracy and planning poker as tools to conduct decision-making processes by finding consensus in a visual way while rendering more explicit the degree of agreement and the perceptions of risk in relation to scientific activities. He holds that the use of these two methods is beneficial in managing uncertainty and in improving collaborative decision-making mechanisms.

> Dotmocracy (or 'dot voting') is intended as a collaborative selection technique that generates a shared view in which the team's wisdom about its priorities emerges through the individual perceptions of each member, where each vote is represented by a dot sticker. (...)
>
> Planning poker (or 'scrum poker'), on the other hand, constitutes a specific example of Agile techniques adopted by software developers for planning and coordinating workflows, as a consensus-based, gamified technique for estimating the effort behind specific tasks. In planning poker participants of a group make estimates iteratively by playing numbered cards face-down to the table (instead of speaking them aloud), and when cards are revealed the different estimation of tasks are discussed (Hidalgo, 2018).

CONCLUSION

Based on the study carried out, the notions of place and cultural assets appear to be useful elements for creativity. Taking this into account, we identify cultural mapping as a tool, a methodology and a process at the service of creativity. This method enables building links between people and places and is beneficial when it is developed with the involvement of the community.

Moreover, we have also found that this method is recognised as a means for sustainability and local development when applied in the context of creative tourism.

It should also be stressed that participatory processes point to an increasingly systemic and interdisciplinary action, in which the designer must have a holistic (of the whole and each stage) and systemic view processes.

In this context, some contributions of the designer have emerged, such as: recognising the political and aesthetic potential of a place; giving visibility

to the values of local communities; promoting collective participation, participatory democracy, the interaction of design with the various actors in the territory, building alliances, involving stakeholders. This stems from a view where partnerships and networks are essential to develop territorial projects, with the ability to positively transform places.

We have equally concluded that through knowledge, local know-how and the capacity of local actors, it is possible to develop potential means of the territorial capital for the benefit of local development.

Finally, we believe that the co-creation process, when applied to the processes of solving the challenges of a territory, may come to be considered as a strategy for territorial development.

We therefore suggest the relevance of broadening the scope and breadth of the analysis of this topic, in order to further explore it in future research.

ACKNOWLEDGMENT

REFERENCES

Abreu, J. (2019). *Inteligência Territorial- Governança, Sustentabilidade e Transparência* (Idioteque (ed.); Número 1ª Edição).

Albagli, S. (2004). *Territórios em movimento: cultura e identidade como estratégia de inserção competitiva*. Sebrae. Albagli, Sarita.

Allen, T., & Queen, S. G. (2018). Critical Placemaking: towards a more critical engagement for participatory design in the urban environment. *DRS International Conference 2018*, *1*. https://doi.org/10.21606/drs.2018.675.

Cabeça, S. M., Gonçalves, A. R., Marques, J. F., & Tavares, M. (2019). Mapping Intangibilities in Creative Tourism Territories through Tangible Objects: a methodological approach for developing creative tourism offers. *Tourism & Management Studies*, *15*(SI), 42–49. https://doi.org/10.18089/tms.2019.15si05.

Carvalho, V. J. de, Maciel, R. C., & Mourão, N. M. (2019). A Dinâmica Metodológica do Design Contemporâneo em Contextos Territoriais. Em Blucher (Ed.), *Anais do 13º Congresso Pesquisa e Desenvolvimento em Design (2018)* (pp. 1792–1806). https://doi.org/10.5151/ped2018-3.3_ACO_01.

Fernandes, D. (2009). Territorio e territorialidade: algumas contribuções de Raffestin. *Perspectivas em Políticas Públicas*, *II*(4), 59–68.

Gomes, J., Antão, J., & Pimentel, F. (2019). Manual de Processos Participativos e de Gestão Democrática. *Gabinete de Intervenção em Saúde (GIS)*, 1–34.

Hidalgo, E. S. (2018). Dotmocracy and Planning Poker for Uncertainty Management in Collaborative Research: Two Examples of Co-Creation Techniques Derived from Digital Culture. *Proceedings of the Sixth International Conference on Technological Ecosystems for Enhancing Multiculturality*, 833–839. https://doi.org/10.1145/3284179.3284325.

Krucken, L. (2009). *Design e territorio: valorização de identidades e produtos locais*. Studio Nobel.

Maffei, S., & Villari, B. (2004). *Designer as a Learnign Enabler for Strategic Design Processes in Local Development. Evidences form ME. Design research case studies*.

Maffei, S., & Villari, B. (2006). Design for local development. Building a design approach for the territorial capital resources based on a situated perspective. Em *CUMULUS Working Paper* (G, Vol. 4, Número 1).

Mozota, B. B. de. (2003). Design management: using design to build brand value and corporate innovation. Em *Nucl. Phys.* (Vol. 13, Número 1). Allworth Press.

Natário, M. M., Pedro Almeida Couto, J., & Fernandes Roque de Almeida, C. (2012). The triple helix model and dynamics of innovation: a case study. *Journal of Knowledge-based Innovation in China*, 4(1), 36–54. https://doi.org/10.1108/17561411211208758.

Ogilvy, J. A. (2002). Creating Better Futures. Scenario Planning as a Tool for a Better Tomorrow. Em *Scenario planning as a tool for a better*. Oxford University Press, Inc.

Parente, M., & Sedini, C. (2017). Design for Territories as Practice and Theoretical Field of Study. *The Design Journal*, 20(sup1), S3047–S3058. https://doi.org/10.1080/14606925.2017.1352812.

Raffestin, Claude. Por uma Geografia do. Poder. Tradução de Maria Cecília França. São. Paulo (SP): Ática, 1993.

Sanders, E. B.-N., & Stappers, P. J. (2008). Co-creation and the new landscapes of design. *International Journal of CoCreation in Design and the Arts*. https://doi.org/10.1080/15710880701875068.

Schneider, S. (2009). Território, ruralidade e desenvolvimento regional. Em *Las Configuraciones de los Territorios Rurales en el Siglo XXI* (Vol. 1, Número 1, pp. 67–108). Pontifícia Universidad Javeriana.

Villari, B., & Parente, M. (2010). Design, system, territory: a multidisciplinary didactic activity to enhance places. *Connected 2010 - 2nd International Conference on Design Education*, JULY, 2000–2004. https://www.d4t.polimi.it/wp-content/uploads/2019/02/12_Connected_369-bst.pdf.