

Design and possible futures: a methodology for scenarios in Rio's peripheries

Design e futuros possíveis: metodologia para cenários nas periferias cariocas

Paola de Lima Vichy¹ 

ABSTRACT

The future is influenced by historical transformations, especially technological and social, highlighting the importance of skills such as empathy, creativity, and resilience. Building on this, this article proposes a methodology for constructing future scenarios in the peripheries of Rio de Janeiro, with a focus on the regions of Praça Seca and Madureira. The methodology was developed through a theoretical review of prospective design, interviews with the founder of the NGO AMACE RJ, and visits to the NGO's unit in Praça Seca. The study involves the collaboration of students from an extension Design course and the active participation of the local community. The methodology aims to integrate academic knowledge and social practice, promoting the co-creation of scenarios based on local demands. By involving community and academic actors, the study seeks to create a more inclusive and sustainable future for urban peripheries.

Keywords: Prospective design. Futurology. Peripheries. Rio de Janeiro.

RESUMO

O futuro é influenciado por transformações históricas, especialmente tecnológicas e sociais, destacando a importância de habilidades como empatia, criatividade e resiliência. A partir disso, este artigo propõe uma metodologia para a construção de cenários futuros nas periferias do Rio de Janeiro, com foco nas regiões de Praça Seca e Madureira. A metodologia foi desenvolvida a partir de uma revisão teórica sobre design prospectivo, entrevistas com o idealizador da ONG AMACE RJ e visitas à unidade da ONG em Praça Seca. O estudo envolve a colaboração de alunos de uma disciplina extensionista de Design e a participação ativa da comunidade local. A metodologia busca integrar o conhecimento acadêmico e a prática social, promovendo a cocriação de cenários baseados nas demandas locais. Ao envolver atores comunitários e acadêmicos, o estudo visou criar um futuro mais inclusivo e sustentável para as periferias urbanas.

Palavras-chave: Design prospectivo. Futurologia. Periferias. Rio de Janeiro.

¹Universidade Estácio de Sá – Rio de Janeiro (RJ), Brazil. E-mail: paolavichy@gmail.com
Received on: 09/27/2024. Accepted on: 12/18/2024

INTRODUCTION

Future scenario planning has become an essential tool in various fields, particularly in design, due to the increasing uncertainties shaping contemporary societies. In Brazil, urban peripheries serve as emblematic examples of these uncertainties, as they face numerous social, economic, and environmental challenges. However, these areas also function as spaces of resistance, cultural production, and social innovation. In Rio de Janeiro, neighborhoods such as Praça Seca and Madureira, located in the city's North Zone, exemplify this paradox, simultaneously experiencing marginalization while playing a central role in significant cultural and community movements.

This study aimed to propose a prospective methodology for constructing future scenarios for the outskirts of Rio de Janeiro, with a focus on the regions of Praça Seca and Madureira. The methodology was developed based on theoretical research on prospective design and futurology, interviews with Renner Avillis, founder of the NGO AMACE RJ, and visits to the organization's unit in Praça Seca. The Multi Art, Culture, and Sport Association of Rio de Janeiro (*Associação Multi Arte Cultura e Esporte do Rio de Janeiro* – AMACE RJ) is a non-profit organization dedicated to promoting art, culture, and sports as instruments of social transformation. Founded in 2003, the NGO serves more than 1,000 people annually, offering courses and activities for individuals of all ages and social backgrounds.

This article falls within the field of prospective design, which involves developing future scenarios by identifying trends, uncertainties, and driving forces, always maintaining a critical perspective on the present. According to Manzini (2015), Social Design, a branch of Prospective Design, plays a strategic role in shaping desirable futures for marginalized communities. From this perspective, the designer is not merely a creator of objects or services but a mediator of social transformation processes, capable of integrating multidisciplinary knowledge and bringing together diverse actors in pursuit of a shared vision for the future.

This study aimed to foster collaboration between students in an extension course within an undergraduate Design program in Rio de Janeiro and the local community, facilitated by the work of AMACE RJ. Active community participation is essential, as the vision of the future must be constructed based on local experiences, expectations, and needs. This approach underscores the significance of people-centered design, as highlighted by authors such as Margolin (2002) and Lima (2016), who view design as a tool for empowering communities and promoting social inclusion.

The development of this methodology is justified by the need for a forward-looking approach to urban peripheries, where public policies are often reactive and short-term. This article aimed to contribute to a more structured and participatory approach, engaging the community and Design students as central actors in shaping a more inclusive and sustainable future. The methodology was developed based on Social Design principles and the perspective that the future is not a predetermined outcome but can be actively shaped through conscious actions in the present.

Furthermore, by integrating an NGO with a strong local presence and an academic institution, this proposal sought to foster dialogue between theoretical knowledge and social practice, generating solutions that not only address market needs but also promote social transformation. As Abramo (2012) observes, urban peripheries are spaces of resistance and innovation, where alternative practices emerge that challenge the exclusionary logic of large cities. In this context, the creation of future scenarios for these regions should go beyond the mere extrapolation of global trends, emphasizing the recognition and valorization of local singularities.

METHODOLOGY

The research method adopted in this study follows a qualitative, exploratory, and prospective approach, with scenario construction as a central tool for investigating possible futures and identifying opportunities and challenges within the creative economy of Rio de Janeiro's peripheries. The use of prospective methodologies, commonly referred to as foresight, is justified by the need to anticipate trends and develop appropriate strategies in a context characterized by uncertainty and rapid social and technological transformations. According to the World Futures Studies Federation (WFSF), futures studies integrate art and science, emphasizing imagination and creativity in envisioning multiple potential futures. In this regard, the research aimed not only to map possible development trajectories but also to provide methodological guidelines applicable to other similar urban contexts.

The choice of a qualitative method is justified by the nature of the study, which requires a deep understanding of specific social contexts and their creative dynamics. According to Chrispino (2001), scenario building is not only intended to explore possible futures but also serves as a practical tool for evaluating the adequacy of current policies and their potential consequences. Furthermore, the prospective method enhances strategic decision-making by anticipating risks and identifying opportunities that may not be evident through purely quantitative or descriptive analyses.

The first phase of the research consists of a literature review focused on analyzing scenario construction concepts and their application in creative and social contexts. Authors such as Godet (1993) and Schwartz (1996) provide a fundamental theoretical foundation for futurology, while Cross (2011) and Bonsiepe (2012) offer a broader understanding of design's role as an agent of societal transformation. Literature on creative economy is also considered essential for contextualizing the sector's significance in peripheral regions. In this stage, concepts such as the "creative class," proposed by Florida (2012), and the notion of "innovation in the peripheries," presented by Silva (2019), were examined, highlighting how vulnerable areas can serve as fertile grounds for innovation and social transformation. The literature review provided a foundation for identifying methodologies applicable to the construction of prospective scenarios within creative economy in peripheral contexts.

The second phase of the research focuses on identifying a partner to assist in building the scenarios. The NGO AMACE, located in Rio de Janeiro, was selected. AMACE is a non-profit organization that develops projects in various areas,

including art, culture, and sports, offering activities such as circus, theater, cinema, singing, dancing, visual arts, and sports. The organization emphasizes comprehensive education, promoting autonomy, a variety of tools, and ethical action. Additionally, it aims to train individuals for social mobility and to serve as agents of culture and social transformation. With its diverse projects, AMACE's operating model aligns with the vision that urban peripheries are true laboratories of innovation. As Bonsiepe (2012) explains, design has the capacity to integrate science and technology into everyday life, providing solutions that directly impact the quality of life and autonomy of communities. The work of the NGO exemplifies this by combining social design initiatives with sustainable practices that are culturally relevant to the local context.

Based on the case study of the NGO AMACE and the methodological concepts and models of scenario building, a future-oriented methodology focused on the realities of Rio de Janeiro's peripheries was developed. The proposed methodology combines forecasting techniques and prospective design tools, adapted to address the social, cultural, and economic characteristics of these areas. Its objective is to provide both a practical and theoretical foundation for organizations to develop innovative strategies based on possible futures. The methodology emphasizes co-creation activities with the community, in which various local actors (residents, community leaders, entrepreneurs, and design students) collaborate in constructing future scenarios. This participatory process, grounded in design thinking principles, is crucial to ensure that specific projects align with the needs and aspirations of the community while anticipating potential barriers and opportunities.

THEORETICAL FRAMEWORK

1. Prospective design as social innovation

Contemporary society is marked by rapid and profound transformations driven by technological advances, cultural changes, and economic reconfigurations. In this context, the concept of Prospective Design emerges as a promising approach for constructing future scenarios, particularly when applied to specific social contexts, such as urban peripheries. The construction of futures, as discussed by theorists such as Michel Godet (1993) and Peter Schwartz (1996), involves the development of scenarios that not only anticipate possible developments but also prepare communities and organizations to navigate uncertainties and changes. Godet (1993) emphasizes that the prospecting process should be regarded as a strategy for mapping trends and identifying cause-and-effect relationships between events, ultimately fostering social and technological innovations.

In this context, WFSF, one of the most recognized associations in the field of futures studies, defines the discipline as a combination of art and science, emphasizing the importance of imagination and creativity in envisioning potential futures. According to WFSF (n.d.), futures studies involve a multidisciplinary approach aimed at understanding the complex relationships that shape events and, consequently,

promoting innovations across various fields. This aligns directly with the objective of prospective design, which does not aim to predict the future precisely but seeks to construct plausible visions that assist society in navigating future uncertainties and complexities.

Furthermore, Design is inherently a transdisciplinary profession that leverages creativity to solve problems and co-create solutions. According to the World Design Organization (WDO, 2018), the role of the designer extends beyond the creation of objects or services to include critical reflection on human activities and their social and technological impacts. Cross (2011) emphasizes that the knowledge and values of designers are essential in shaping the artificial world we inhabit. However, it is equally important that design projects consider contextual issues, both global and local. Social, economic, and political structures directly influence design practice, making it a valuable tool for shaping desirable and sustainable futures.

2. Creative Economy in urban peripheries

Within Creative Economy, forward-looking design plays a key role in integrating innovation and creativity into vulnerable sectors, such as urban peripheries. Creative economy, as defined by John Howkins (2001), encompasses industries that generate value from creative ideas, including the arts, media, design, and technology. In marginalized urban areas, such as the peripheries of large cities, this creative potential often emerges in response to social and economic challenges. Richard Florida (2012) argues that creative economy can serve as a catalyst for development in underdeveloped regions, provided there is support for local talent development and the establishment of adequate infrastructure.

In urban peripheries, such as those in Rio de Janeiro, there is significant creative potential that remains largely untapped. Studies by Silva (2019) reveal that, despite limited resources, communities in these areas have developed innovative solutions to local problems, positioning themselves as hubs of social and cultural innovation. This creative environment functions as a true “innovation laboratory,” where new forms of cultural expression emerge and adapt to local needs and conditions. However, the connection between creativity in these peripheries and the market remains limited, creating an opportunity for the application of prospective design methodologies to identify specific opportunities and challenges in these regions.

Constructing future scenarios in vulnerable contexts requires an approach that considers not only local challenges but also global trends in areas such as technology, demographics, and geopolitics. According to Hamel and Prahalad (1994), futurology is a multidisciplinary endeavor that involves analyzing changes, trends, and uncertainties to understand the complex interactions between various social factors. These authors stress that constructing future scenarios is not an attempt to predict the future, but rather to create an informed and creative vision of the potential paths society may follow, enabling more informed decisions in the present.

Another important aspect of the literature on prospective design is its social impact. According to Bonsiepe (2012), Design plays a crucial role in integrating science and technology into everyday life, particularly in contexts of social vulnerability. He argues that design has the potential to serve as a catalyst for change, promoting solutions that improve people's quality of life and directly address the challenges faced by marginalized communities. This underscores the importance of the utopian component in Design, as highlighted by Bonsiepe, as only by envisioning ideal futures can design be firmly grounded in social needs.

Manzini (2015) expands this discussion by introducing the concept of Design for social innovation, which involves the co-creation of solutions with local communities, positioning design as a tool for social transformation. According to Manzini, design should be participatory and user-centered, generating solutions that are both sustainable and socially just. This approach is especially relevant in urban peripheries, where innovation often emerges from necessity and challenging conditions. Design can, therefore, provide tools for these communities to shape their own futures, grounded in a deep understanding of their local realities.

However, the literature on the social impact of Design still presents significant gaps, particularly regarding the integration of prospective design methodologies in projects focused on low-income areas. While the creative potential of peripheral neighborhoods is widely acknowledged, few studies explore how prospective design can be systematically used to structure and explore this creative process. Additionally, there is a lack of practical and market-oriented guidelines to guide the application of these methodologies in specific contexts, such as the peripheral neighborhoods of Rio de Janeiro.

The ongoing research aims to address these gaps by developing methodological guidelines applicable to design projects focused on constructing future scenarios in Rio de Janeiro's outskirts. The study proposes an approach that combines futurology tools, such as trend analysis and foresight, with local needs to foster more inclusive and sustainable development in these regions. The integration of NGOs and community initiatives in the process is crucial to ensure that the proposed solutions are deeply aligned with local realities and can have a lasting impact.

Finally, by connecting the emerging creativity of the peripheries to the creative economy and prospective design, the research aims not only to identify future opportunities and challenges but also to promote the social and economic inclusion of these communities on the global stage.

3. Concepts of Futurology

According to the WFSF, one of the leading academic institutions in this field, futures studies is a scientific discipline that integrates both art and science. Its primary objective is to stimulate imagination and creativity to explore potential futures while elucidating the cause-and-effect relationships that shape them. The WFSF also emphasizes the significance of social and technological innovations that arise from this reflective process. However, as noted by Polacinski,

Schenatto, and de Abreu (2009), early approaches to the future were associated with magic and divination. It was only with the development of sociology, particularly in the 20th century, that futures studies began to gain prominence as a scientific field, adopting more rigorous methods and focusing on the analysis of social and technological changes.

The article by Kristóf and Nováky (2023) presents a detailed historical review of the development of futures studies over the past century. Their analysis indicates that the discipline began to consolidate after the First World War, driven by the emergence of national planning systems in capitalist countries and the influence of institutions such as the RAND Corporation. In the 1960s and 1970s, the establishment of academic journals, international federations, and professional societies contributed to legitimizing the field, which increasingly expanded its focus to social issues and post-industrial transitions. In the following decades, the discipline continued to mature, with the refinement of forecasting methods and the introduction of new global modeling tools, particularly following the 1973 oil crisis.

Throughout the 1990s and 2000s, futures studies increasingly focused on global challenges, including the transition to neoliberalism, technological advancements, and environmental issues. The launch of the Millennium Project in 1996 marked a significant milestone in this context, providing a global platform for analyzing complex and collaborative futures. During this period, several universities began incorporating the discipline into their academic programs, further solidifying its institutionalization. In the 2010s, global economic crises and the COVID-19 pandemic led to a greater emphasis on practical, business-oriented forecasting, while sustainability became more prominent in discussions about the future.

In Brazil, the development of future scenarios gained prominence in the 1980s, particularly among state-owned companies such as Petrobras and Eletrobrás, which required long-term planning. In the academic sphere, authors such as Hélio Jaguaribe and institutions like BNDES played key roles in promoting these practices. Although initially confined to the business sector, scenario techniques have increasingly spread to academic environments and specialized consultancies in recent years. The work of Buarque (2003), along with other academic publications on future forecasting, has been instrumental in expanding the use of these tools, particularly in the planning of public policies and business strategies.

In conceptual terms, the literature identifies several expressions related to futures studies, including "foresight," "futures literacy," "futures thinking," and "anticipation." Each of these terms provides a distinct perspective on how to approach and prepare for the future. Additionally, numerous NGOs, institutes, and laboratories are dedicated to analyzing future trends and scenarios, both internationally and in Brazil. Institutions such as *Instituto para o Futuro*, the Copenhagen Institute for Futures Studies, and the Global Futures Intelligence System offer valuable insights and support regarding technological and social changes. In Brazil, initiatives like the *Lab de Tendências da Casa Firjan* serve as key references in anticipating impactful developments for businesses and industries.

Peter Bishop and Andrew Hines (2012), leading experts in long-term planning, emphasize five fundamental aspects of futures studies: interdisciplinarity, anticipation of future scenarios, identification of trends and challenges, development of strategies to manage uncertainties, and a variable time horizon. These elements are essential for scenario construction and highlight the dynamic and comprehensive nature of futures studies. According to Hamel and Prahalad (1994), futurology is not about predicting the future but rather about building a vision grounded in a deep understanding of trends in lifestyles, technology, and geopolitics, with imagination as a key component.

In the Brazilian context, the work of futurists such as Lala Deheinzelin offers an optimistic and creative perspective on the future. In *Desirable New World* (*Desejável Mundo Novo*; 2012), she emphasizes that perceptions of the future influence its creation, arguing that dreams and inspirations from the past have shaped the present and that today's choices will define the world of tomorrow. Her vision contrasts with the dystopian depictions of the future often portrayed in mass culture, presenting a more positive and realistic outlook. This perspective aligns with the objective of this study, which focuses on constructing future scenarios for urban peripheries.

Finally, understanding the history of futures studies, alongside key concepts discussed by authors such as Bishop, Harari, and Deheinzelin, provides a strong foundation for constructing scenarios in the context of Rio de Janeiro's periphery. By integrating these concepts with participatory and collaborative methodologies, this article aimed not only to explore future challenges but also to contribute to the creation of a more inclusive and sustainable future.

DEVELOPMENT

Actors involved

The construction of prospective scenarios for the peripheries of Rio de Janeiro necessitates the active involvement of various actors, particularly those who can integrate academic knowledge, practical experience, and social sensitivity. In this context, the involvement of undergraduate Design students from an extension course in Rio de Janeiro is especially significant. These students not only enhance their creative and methodological skills but also collaborate as co-creators with the community, fostering an interdisciplinary approach that is crucial for the development of future scenarios.

Involving students in the process is particularly valuable due to the diversity of perspectives and solutions they can generate. The academic environment provides a unique opportunity to integrate various disciplines — such as Design, Anthropology, Sustainability, and Technology — which enriches proposals and enhances creativity in addressing complex problems. Through direct collaboration with the community, these students gain practical experience, develop active listening and empathy skills, and become transformative agents, extending design beyond the theoretical realm.

In addition to the students, the AMACE RJ institution was selected as a key actor due to its significant impact on the community. Founded in 2003 by circus artist Renner Avillis (Xulipa, the Clown), AMACE RJ functions as a center for art, culture, and sports, offering courses in various areas, including circus, theater, cinema, dance, and sports. With a wide range of activities, the organization promotes cultural and social events that engage over 1,000 people annually. The social project “Conex-ações” primarily focuses on using art and culture as tools for social transformation, aligning with the principles of prospective design (Figure 1).



Source: AMACERJ.ORG.
Figure 1. AMACE RJ Project.

In addition to its cultural activities, AMACE RJ stands out for its ability to engage individuals of all ages and social classes, broadening the scope of its projects and contributing to social inclusion. Its practical expertise and direct connection with the local community are crucial in ensuring that the proposed future scenarios are grounded in the realities and needs of the periphery. The collaboration between students in the extension discipline and AMACE RJ fosters a process of scenario construction that is richer, more diverse, and more relevant, reflecting both the aspirations of the community and the innovations introduced through social design.

Background

The urban peripheries of Rio de Janeiro are characterized by deep social, economic, and cultural inequalities, serving as spaces that reflect the contradictions of urban development. Neighborhoods such as Praça Seca and Madureira, located in the city’s North Zone, exemplify this reality. While Madureira has a rich history of cultural vibrancy and community resistance, known as a hub for samba and black culture, Praça Seca faces complex challenges related to urban violence, inadequate public services, and social marginalization.

According to Abramo (2012), the outskirts of large cities are spaces of exclusion, but also of resistance and innovation, where alternative and creative social practices emerge. In this context, social design plays a crucial role, acting as a mediator and facilitator of transformations that aim not only at aesthetic or functional solutions but also at meaningful social change (Manzini, 2015).

AMACE RJ's work in Praça Seca, through projects involving art, culture, and sports, provides a concrete example of how social design can be mobilized to promote social inclusion and community empowerment. The NGO offers courses and activities that not only provide entertainment or leisure but also create opportunities for professional training and personal development, particularly for young people in vulnerable situations. This approach aligns with the concept of "design oriented toward social change," as emphasized by Margolin (2002), who asserts that design should aim to empower marginalized communities by providing them with tools to foster autonomous development.

Madureira, where the educational institution promoting this extension project is located, has a tradition of cultural leadership. The connection between this territory and Praça Seca forms an axis of action that transcends academic boundaries, directly engaging with the local social dynamics and amplifying the impact of design interventions. According to Lima (2016), design in the outskirts of cities should serve as a catalyst for dialogue among different social groups, fostering the co-creation of solutions that address local needs and aspirations.

The context of these two areas — Madureira, with its cultural potential, and Praça Seca, with its social challenges — provides fertile ground for developing future scenarios that involve active community participation. Through prospective design and collaboration between students and the NGO, interventions can be developed that contribute to the social and cultural transformation of these peripheries, fostering a more inclusive and sustainable future.

Methodology proposal

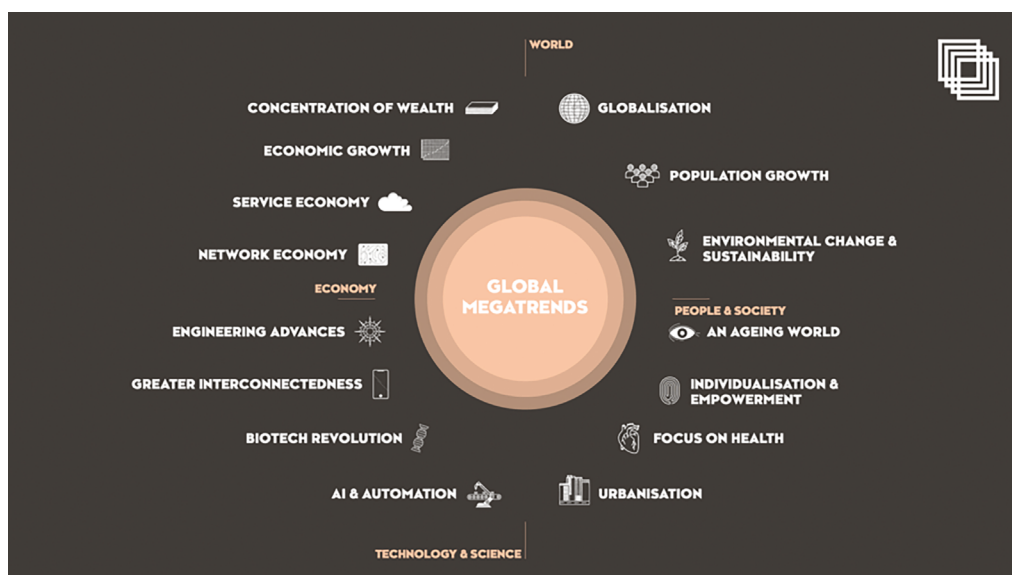
The methodology developed for this study was based on a theoretical-practical approach that included a literature review on prospective design and futurology, as well as interviews with Renner Avillis, the founder of AMACE RJ, and visits to the unit located in Praça Seca, on the outskirts of Rio de Janeiro. These steps were crucial for understanding the demands and specificities of the local community, enabling direct interaction with participants and fostering a connection between academic theory and the social realities of the territory.

The site visits and interviews allowed for the identification of the most urgent needs of the community served by the NGO, such as creating opportunities for young people, promoting social inclusion, and valuing local culture. The exchange of experiences and on-site observation provided a solid foundation for developing a methodology capable of addressing the future challenges of this region in a practical and context-specific manner.

The methodological proposal was structured into three main stages, further divided into eight steps. Each stage is outlined below, with concrete examples illustrating how the steps would be implemented in practice.

1. Exploration

- **Horizon scanning:** identification of key external factors, such as social, economic and cultural trends, as well as events and uncertainties that may influence the future of the community.
 - **Practical example:** carry out a PESTEL analysis to map trends such as the impact of digitalization on access to education, changes in public policies for culture and the effects of global warming on urban peripheries.
- **Determining the driving forces:** identifying the megatrends that broadly and significantly affect social, economic, political, and technological aspects. The following image (Figure 2) exemplifies the megatrends proposed by the Copenhagen Institute for Futures Studies (CIFS), which analyzes 15 megatrends for the world, which they consider the only relative certainty in today's unpredictable world. They are divided into four categories: "World;" "People & Society;" "Technology & Science;" and "Economy".



Source: CIFS (2022).

Figure 2. Megatrends proposed by the Copenhagen Institute for Futures Studies.

2. Discovery

- **Signal capture:** analysis of current indicators and evidence allows us to capture signals that can anticipate future changes. The participation of the community and other local stakeholders is essential.
 - **Practical example:** organize workshops with young people and adults in the community to explore their perceptions about the future and map signs of transformation, such as the emergence of independent artistic initiatives or sustainable enterprises.

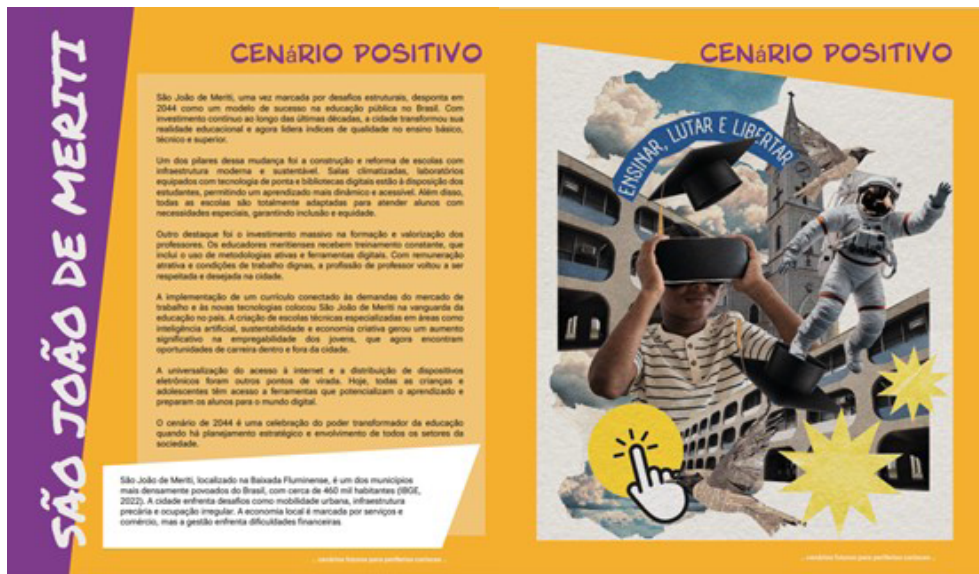
- **Identification of factors of importance and uncertainty:** after capturing signals, the factors are classified according to their potential impact and the level of uncertainty.
 - **Practical example:** use impact/uncertainty maps to prioritize issues such as economic instability and climate change, highlighted during the interviews as central concerns for the future of the community.

3. Construction

- **Determination of guiding axes:** two main axes represent the greatest uncertainties and polarize the possible directions for the future of the community.
 - **Practical example:** define axes such as "public policies for culture (strong × weak)" and "adoption of sustainable practices (high × low)" to structure the scenarios.
- **Details of the four scenarios:** based on the defined axes, four scenarios are created that represent combinations of these polarities.
 - **Practical example:** an optimistic scenario could include strengthened public policies and high adoption of sustainable practices, while a pessimistic scenario would present a reduction in public support and little concern for sustainability.
- **Command scenario selection:** among the four scenarios, the most occasional one and the one that should be avoided are identified.
 - **Practical example:** working together with the community to identify the most desired scenario (such as strengthening cultural initiatives with sustainability) and planning strategies to avoid it, in case it occurs.
- **Visualization of scenarios:** scenarios are presented through narratives and graphic representations.
 - **Practical example:** produce illustrative images or short videos that represent a narrative story of each scenario, facilitating the communication of future possibilities during community events and academic presentations, such as the example in Figure 3, developed in a Futurology exercise for the outskirts of Rio de Janeiro.

The choice of this methodology was justified by its ability to integrate a robust theoretical framework with practical insights gained in the field, enabling the construction of future scenarios that reflect both community aspirations and external trends and uncertainties. Collaboration with the NGO AMACE RJ was essential to ensuring that the developed scenarios were not merely speculative but firmly grounded in concrete realities and local needs.

This methodology offers an integrated and participatory approach, engaging both Design students and community members in a co-creation process of possible futures, grounded in megatrends as well as local social and cultural factors.



Source: personal collection (2024).

Figure 3. Example of positive scenario visualization.

FINAL CONSIDERATIONS

This study underscores the importance of integrating prospective approaches into the social context of urban peripheries, recognizing that the construction of future scenarios is a complex and iterative process that requires the participation of multiple actors and the application of various tools. This article aimed to propose a methodology applicable to the peripheries of Rio de Janeiro, specifically the regions of Praça Seca and Madureira, with the objective not only of developing a more inclusive vision of the future but also of directly involving local communities in planning processes.

The methodology presented provides a framework for constructing future scenarios in a systematic and rigorous manner, adaptable to different contexts. It integrates concepts from prospective design and futurology with the social and cultural realities of peripheral communities, bridging theory and practice through a collaborative approach. The use of tools such as interviews, trend analysis, and the identification of emerging signals was essential in capturing the real needs of residents in these regions and their aspirations for the future. In doing so, the study aimed to establish a connection between academic knowledge and the lived experiences of the communities, while respecting the specificities of each location.

The active participation of local stakeholders was a crucial factor in implementing this methodology. By engaging residents, community leaders, and organizations such as AMACE RJ in the scenario-building process, it was possible to amplify the voices of populations that are often excluded from discussions about the city's future. AMACE RJ, in particular, with its focus on educating and training young people through circus arts, exemplifies how local organizations can contribute to the development of alternative futures. The social impact of this type of involvement is significant, as enabling the community to construct its own vision of the future increases the likelihood of implementing policies and projects that are better aligned with its needs.

Furthermore, the contribution of the Design students who participated in the extension project was fundamental. University extension projects play a crucial role in the education of students, as they provide the opportunity to apply the knowledge acquired in the classroom in real situations, while creating an enriching exchange between the university and society. Practical experience in the field, combined with direct contact with the community and its challenges, broadens the students' vision of the social role of design, showing that design can be a powerful tool for social transformation.

The methodology developed here, by integrating students into the process, enables them to become agents of change in their future professional practices. This is particularly relevant considering that the role of designers in contemporary society extends beyond the creation of aesthetic or functional products and services. The designer of the future must act as a facilitator, mediator, and co-creator, working alongside other social actors to develop creative and sustainable solutions to complex problems. In this context, extension training is an essential component of higher education, fostering the development of skills such as empathy, adaptability, and critical thinking, competencies that are indispensable for addressing future challenges.

Within the scope of the extension project, the use of interactive and participatory tools, such as workshops and collaborative dynamics, was essential for constructing future scenarios. These tools facilitated the active inclusion of the community in the process, strengthening the sense of belonging and ensuring that the envisioned futures accurately represented the real aspirations of the residents of Praça Seca and Madureira. By exploring possible futures together with the community, it was possible to identify opportunities for local development while anticipating potential challenges in the coming decades. Furthermore, the process enabled participants to recognize how their present choices influence the future, fostering a more conscious and responsible mindset.

Another key aspect of the methodology was the identification of emerging signals and trends that could shape the future of urban peripheries. Often viewed solely through the lens of marginalization, these areas are also dynamic spaces of social and cultural innovation. Understanding these dynamics was essential for constructing future scenarios that were both realistic and aligned with the transformative potential of the peripheries. Additionally, analyzing global trends, such as climate change, digitalization, and automation, helped position these scenarios within a broader context while maintaining a focus on local specificities.

Sustainability was also a central aspect addressed throughout this study. Future scenarios must be sustainable not only environmentally but also socially, and community involvement in their construction is essential to ensuring balanced and inclusive development. Partnering with an organization like AMACE RJ, which has a strong commitment to social sustainability through its educational and training initiatives, made it possible to align future visions with the promotion of autonomy and the provision of diverse opportunities for young people in urban peripheries.

The results of this study indicate that the applied methodology can be replicated in other peripheral regions, with adaptations to local contexts to enhance its social impact. Constructing alternative futures requires time, reflection, and collaboration among various stakeholders, but it also presents an opportunity to rethink the roles of cities, communities, and universities in fostering a more just and inclusive society. Furthermore, this article represents only the initial phase of the extension project, focusing on theoretical foundations and methodological development for future scenario construction. The next phase will involve the practical implementation of these guidelines, leading to the creation of scenarios for the creative economy in Rio de Janeiro's peripheries. This process will culminate in a visual output, with the production of images representing these future scenarios, which will be published in a digital magazine to broaden the discussion on the role of prospective design in social transformation.

Finally, this study reinforces the importance of integrating futurology and prospective design into public policy. Governments and institutions can benefit from applying participatory scenario-building methodologies, particularly in vulnerable urban areas. Involving communities in future planning not only ensures that their needs are more effectively addressed but also fosters a sense of collective responsibility, which can drive meaningful social change.

REFERENCES

- ABRAMO, Pedro. A cidade das periferias. *Revista Brasileira de Estudos Urbanos e Regionais*, v. 14, n. 1, p. 41-55, 2012.
- BISHOP, Peter; HINES, Andrew. *Teaching about the Future*. Springer, 2012.
- BONSIEPE, Gui. *Design e Democracia*. São Paulo: Blucher, 2012.
- BUARQUE, Cristovam. *A Segunda Abolição: A Construção de uma Nova Civilização*. São Paulo: Garamond, 2003.
- CHRISPINO, Alvaro. Os cenários futuros como consenso social: do contrato social ao universo educacional. *Revista Brasileira de Estudos Pedagógicos*, v. 82, n. 200-01-02, 2001,
- CROSS, Nigel. *Design thinking: understanding how designers think and work*. Oxford: Berg Publishers, 2011.
- DEHEINZELIN, Lala. *Desejável Mundo Novo*. São Paulo: Editora dos Autores, 2012.
- FLORIDA, Richard. *The rise of the creative class*. Nova York: Basic Books, 2012.
- GLOBAL FUTURES STUDIES & RESEARCH. *The Millennium Project*. s.d. Available at: <https://millennium-project.org/>. Access on: Aug 03, 2024.
- GODET, Michel. *From anticipation to action: a handbook of strategic prospective*. UNESCO, 1993.
- HAMEL, Gary; PRAHALAD, C. K. Competing for the future. *Harvard Business Review*, v. 72, n. 4, p. 122-128, 1994.
- HOWKINS, John. *The Creative Economy: how people make money from ideas*. Londres: Penguin, 2001.
- KRISTÓF, Tamás; NOVÁKY, Erzsébet. The History of Futures Studies: a century of evolution and development. *Futures*, v. 140, p. 1-12, 2023.
- LIMA, Marta. Design nas periferias: construção coletiva e inovação social. *Revista Estudos em Design*, v. 24, n. 2, p. 121-136, 2016.

MANZINI, Ezio. **Design, When Everybody Designs: An Introduction to Design for Social Innovation**. Cambridge: MIT Press, 2015.

MARGOLIN, Victor. **The Politics of the Artificial: Essays on Design and Design Studies**. University of Chicago Press, 2002.

POLACINSKI, Édio; SCHENATTO, Fernando José Avancini; DE ABREU, Aline França. Evolução dos estudos do futuro: resgate histórico. *In: ENCONTRO NACIONAL DE ENGENHARIA DE PRODUÇÃO*, XXIX, 2009, Salvador.

RAND CORPORATION. **About RAND**. Available at: <https://www.rand.org/about.html>. Access on: Aug 10, 2024.

SCHWARTZ, Peter. **The art of the long view: planning for the future in an uncertain world**. Nova York: Doubleday, 1996.

SILVA, Rosana. Inovação nas Periferias: O Potencial Criativo das Favelas do Rio. **Revista Brasileira de Economia Criativa**, v. 5, n. 2, p. 45-62, 2019.

WDO - WORLD DESIGN ORGANIZATION. **Definition of Industrial Design**. WDO, 2018. Available at: <https://wdo.org/about/definition/>. Access on: Jun 10, 2024.

WFSF - WORLD FUTURES STUDIES FEDERATION. **What is Futures Studies?**. s.d. Available at: <https://wfsf.org/about-futures-studies/>. Access on: Sep 1, 2024.

About the author

Paola de Lima Vichy: PhD in Design from the School of Industrial Design at Universidade do Estado do Rio de Janeiro (Esdi/UERJ).

Conflict of interests: nothing to declare – **Financial support**: Productivity Research at Universidade Estácio de Sá.

