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Research Article

# Social Innovation and Sustainable Development: An analysis of its impact areas and its relationship with the Sustainable Development Goals

## Innovación Social y Desarrollo Sostenible: Un análisis de las áreas de impacto y su relación con los Objetivos de Desarrollo Sostenible

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**Abstract:** In the last decade, social innovation has emerged as a multidisciplinary solution to address various social issues. This study employs a methodology that combines literature review and interviews with experts in social innovation. As a result, 17 main impact areas were identified, categorized into three blocks: economic, global, and social. Most notably, these areas are significantly related to all Sustainable Development Goals (SDGs). This suggests that social innovation has notable potential as a facilitating tool for achieving the SDGs, highlighting its importance in the pursuit of effective solutions to global challenges in sustainable development.

**Keywords:** third sector; innovation; qualitative analysis; social impact; SDG; sustainable development.

**Resumen:** En la última década, la innovación social ha surgido como solución multidisciplinar para abordar diversos problemas sociales. Este estudio emplea una metodología que combina la revisión de la literatura y entrevistas con expertos en innovación social. Como resultado, se identificaron 17 áreas de impacto principales, clasificadas en tres bloques: económico, global y social. Lo más notable es que estas áreas están significativamente relacionadas con todos los Objetivos de Desarrollo Sostenible (ODS). Esto sugiere que la innovación social tiene un notable potencial como herramienta facilitadora para la consecución de los ODS, destacando su importancia en la búsqueda de soluciones eficaces a los retos globales del desarrollo sostenible.

**Palabras clave:** tercer sector; innovación; análisis cualitativo; impacto social; ODS; desarrollo sostenible.

### 1. Introduction

Social innovation has evolved throughout history as a means to address social problems and needs. However, its definition, characteristics, and scope did not become clear until the 1990s, as noted by García-Flores and Palma in 2019. Nevertheless, it was only in the year 2000 that social innovation began to gain relevance in key documents and policies aimed at addressing pressing social issues, as pointed out by Moulaert and McCallum (2019). The consolidation of this concept

occurred after the 2008 crisis when the European Commission identified it as a means to promote a more socially oriented market economy.

Today, there is broad consensus among politicians, public officials, scientists, and civil society in general regarding the positive impact of social innovation. However, there is still a lack of agreement on the specific areas and sectors where social innovation practices can generate the greatest impact.

This is where social innovation emerges as a novel means to carry out actions through alternative forms of social organization. In this sense, it is of particular interest to identify the fields in which social innovation can be most effective. Therefore, the main objectives of this article are to identify and analyze, based on their relevance, the areas in which social innovation has the greatest potential for development. Additionally, it aims to highlight the potential implications that social innovation could have in achieving the Sustainable Development Goals (SDGs) established by the United Nations in 2015.

This approach is of vital importance because the SDGs represent a set of critical goals and challenges to address fundamental issues such as poverty eradication, gender equality, access to education, and environmental sustainability. Social innovation can play a key role in achieving these objectives by providing creative and effective solutions to complex and urgent social problems.

The structure adopted to address this article is organized as follows: first, this introduction is presented, serving as the starting point for the study. Next, in the second section, a comprehensive review of existing literature on the subject is conducted. In the third section, the research methodology employed is described in detail. The fourth section is dedicated to presenting the results obtained, identifying 17 impact areas and analyzing their relationship with the Sustainable Development Goals (SDGs). Finally, in the concluding section, the main conclusions derived from the study are presented, and the bibliography used as a reference is provided.

## 2. Theoretical Framework

### 2.1. *The Impact of Socially Innovative Initiatives*

The existing body of literature on social innovation encompasses a wide array of perspectives and definitions (Pastor & Balbinot, 2021). Nevertheless, a common thread runs through these diverse viewpoints: social innovation is fundamentally characterized by its ability to address societal challenges and fulfill social needs, ultimately aiming to enhance overall well-being (García-Flores & Palma, 2019). Social innovation initiatives often embrace a collaborative, grassroots approach involving citizens, primarily seeking to tackle a broad spectrum of social issues by providing alternative solutions distinct from traditional market or public sector offerings (Martínez et al., 2019). According to Boni et al. (2018, 68), social innovation comprises a set of practices and activities designed to address social problems and human needs. However, these authors underscore that social innovation extends beyond mere immediate problem-solving, as it should involve the enhancement of social relationships and structures.

While there is a consensus on the positive potential of social innovation for enhancing overall well-being, a clear consensus is lacking regarding the specific domains where its impact is most significant (Hernández-Ascanio et al., 2016, 178). Moreover, due to its interdisciplinary and cross-cutting nature, delineating its impact within a single specific area is challenging, as pointed out by Moulaert et al. (2017). In this context, it becomes paramount to explore the domains that existing literature has identified as conducive to the emergence and effectiveness of social innovations. In Table 1 below, we present areas highlighted in the literature as contexts where social innovations can flourish.

**Table 1.** Literature Review. Areas of Impact of Social Innovation.

Areas	Areas Authors point out
Better healthcare	(Mulgan, 2006; Howaldt et al., 2016)
Contributes to reducing unemployment	(Grimm et al., 2013; Howaldt et al., 2016: 187)
Empowers the role of women in society	(Mulgan, 2007; Peeters & Ateljevic, 2017)
Enhances local development	(García-Flores & Palma, 2019)
Facilitates access to housing	(Villa & Melo, 2015)
Facilitates sustainable development	(Buckland & Murillo, 2014; Howaldt et al., 2016; Millard, 2018; Eichler & Schwarz, 2019; Kruse et al., 2019)
Favors better transportation and mobility	(Howaldt et al., 2016)
Generates sustainable tourism	(Villa & Melo, 2015)
Helps to reduce domestic violence	(Mulgan, 2006)
Improved environmental quality	(Howaldt et al., 2016; Chueri & Araujo, 2019)
Improved quality of life	(Echeverría, 2013; Villa & Melo, 2015)
Improves governance	(Irizar, 2008; García-Flores & Palma, 2019; Chiuer & Araujo, 2019, 28)
Improves rural conditions	(Soto et al., 2015; Novikova, 2021)
Increased civic participation	(Echeverría, 2013)
Increased quality of education	(Morales-Gualdrón & Giraldo Gómez, 2015; Howaldt et al., 2016; Sanz & Marianna, 2020; Behrend et al., 2022)
Increases the capacity of the third sector	(Hernández-Ascanio & Rich-Ruiz, 2020; García-Flores & Palma, 2020)
Promote better finance conditions	(Martínez et al., 2019; Chueri & Araujo, 2019, 28)
Social inclusion and poverty reduction	(Mulgan, 2006; González et al., 2014; Howaldt et al., 2016)

Source: Author's elaboration.

Table 1 shows that different authors have identified multiple areas of social innovation impact, covering a wide range of domains and issues. Despite the apparent versatility and capacity of social innovation to address a wide range of needs and problems, it is essential to have a more precise understanding of the areas in which social innovation initiatives are more likely to excel and achieve the desired success.

The importance of identifying the areas where social innovation can have a greater impact lies in the ability to strategically allocate resources, such as time and funding, to achieve effective results. This avoids scattering resources across a wide range of social challenges and instead increases the efficiency of interventions, as well as their visibility and attractiveness to those responsible for designing and implementing them.

Furthermore, this precise understanding facilitates the alignment of social innovation initiatives with broader development goals, such as the Sustainable Development Goals (SDGs). This helps to address critical challenges in a way that is consistent with global goals.

For this reason, section 4 provides a more detailed analysis based on interviews with experts in the field. The aim is to identify and highlight the key areas where social innovation practices have the greatest potential for impact.

## 2.2. The potential of social innovation to contribute to the Sustainable Development Goals (SDGs)

The existing literature highlights the remarkable capacities of social innovation in the context of sustainable development. This close connection stems from the global growth of social problems and challenges, which has put increasing pressure on various organisations to adopt and implement social innovation approaches (Eichler & Schwarz, 2019; Kruse et al., 2019). As Angelidou and Psaltoglou (2017) point out, civil society, the private sector and the public sector

have begun to recognise that the current system of production is showing signs of exhaustion and requires a profound overhaul. As a result, the pursuit of the desired sustainable development, as shown by Rodrigo and Arenas (2014), involves significant changes in governance, which has led to a greater emphasis on social aspects in a possible alternative paradigm.

This growing interest in sustainable development reached an important milestone in 2015, when the United Nations General Assembly approved an agenda for sustainable development with 17 main goals and 169 targets to be achieved by 2030. The Sustainable Development Goals (SDGs) were endorsed by 193 countries, including emerging economies such as India and Brazil (Millard, 2018).

Millard (2018) highlights that, according to the United Nations, sustainable development involves meeting the needs of the present without compromising the opportunities of future generations. This definition first appeared in the Brundtland Report in 1987. The UN resolution adopted on 25 September 2015 emphasises that to achieve sustainable development, progress must be balanced across economic, social and environmental dimensions. In this context, Millard (2018) argues that the failure to achieve sustainable development is due to the lack of consideration of any of these three dimensions, a perspective that applies to all the SDGs, which address a wide range of areas.

The SDGs represent a set of essential challenges and goals to ensure sustainable development in the medium and long term. They currently constitute the most ambitious global agenda agreed by the international community to mobilise collective action around goals shared by all countries (Gil, 2018). However, it is important to note that while the SDGs provide a common framework, each government must set its own national goals and decide how to incorporate these aspirations into its plans, strategies and actions (United Nations, 2015).

Social innovation is emerging as an essential phenomenon that public decision-makers can promote to contribute to the achievement of these goals (Moore, 2015; Millard, 2018). In this regard, Herrero (2019, 49) emphasizes the potential of social innovation to address the key European and global social challenges, with a particular focus on the SDGs. Eichler and Schwarz (2019), in their study of 128 social innovation initiatives, investigated whether they contributed to addressing any of the SDGs. They found that a total of 115 initiatives were linked to solutions for at least one of the SDGs, representing over 89% of the total. This led them to conclude that social innovation and the SDGs are fully aligned. In the same vein, Millard (2018) argues that the UN's 2030 SDGs have contributed to the recognition of the relationship between social innovation and sustainable development, which has led to increased attention on this approach.

### 3. Methodology

A number of primarily qualitative analytical techniques were used to complete this research article. Specifically, a methodology combining literature review and semi-structured interviews was developed.

With regard to the literature review, an exhaustive study was carried out of the most cited academic works, as well as the main reports published by local, national and international institutions. This allowed for an understanding of the different impacts, areas and implications that social innovation can have.

Once the literature review was completed, and with an understanding of the issues at hand, semi-structured interviews were conducted to analyse the discourse and explore the areas where socially innovative initiatives could have a greater impact.

Finally, once the different areas where socially innovative initiatives are more likely to develop were known, the possible alignment of these areas with the Sustainable Development Goals was analysed.



### 3.1. Interview methodology

The existing literature highlights the remarkable capacities of social innovation in the context of sustainable development. This close connection stems from the global growth of social problems and challenges, which has put increasing pressure on various organisations to adopt and implement social innovation approaches (Eichler & Schwarz, 2019; Kruse et al., 2019).

A total of 24 semi-structured interviews were conducted in order to identify the sectors where social innovation can have a greater impact. These interviews were divided into several parts: In the first part, general questions about social innovation were asked; in the second part, inquiries were made about the most relevant aspects of the creation process of social innovation; and finally, there was a section dedicated to exploring the effects and results that, according to the interviewees, social innovation could generate. The script used for the semi-structured interviews can be found in Annex 1.

The interviewees were divided into three categories: leaders of initiatives recognised as socially innovative, agents and promoters of social innovation, and academics who have published prominent research in the field. The full list of interviewees can be found in Annex 2.

The interviewees were selected on the basis of the relevance of their experiences and projects, their academic and professional background, and the awards and recognition they have received from prestigious organisations in the field of social innovation.

A total of 87 people were contacted, of whom 24 agreed to participate in the interviews. In addition, in some cases, ongoing research allowed the identification of experts and interesting profiles that met the established criteria. The interviews took place during the months of June, July, September, October and November 2018, both in person and remotely, with an average duration of 50 to 75 minutes.

### 3.2. Data Analysis

Atlas.ti software was used to analyse the content of the 24 interviews. According to Prados (2007), Atlas.ti is a computer tool capable of structurally analysing complex qualitative data based on grounded theory, which aims to generate theory while studying the phenomenon.

Content analysis made it possible to identify the key elements of a phenomenon based on the words and phrases used by the interviewees (Noguero, 2002). The linguistic and semantic contexts of words or phrases expressing relevant concepts were examined. A total of 24 primary files corresponding to interview transcripts were analysed.

First, the interviews were coded, which involved segmenting relevant fragments of information (quotes) and labelling them with codes representing attributes related to the content of the quotes. Each time a quote related to an area where social innovation practices could be developed, a specific code was assigned. This coding made it possible to establish links between different parts of the information.

Atlas.ti was also used to count the absolute frequency of the codes assigned. This provided information on how often a particular attribute was mentioned in the content of the interviews. Then, to assess the relative importance of each attribute, its relative frequency was calculated, which refers to the number of times a particular code is repeated in relation to the total number of repetitions of all codes.

This statistical content analysis helped to identify the most important areas where social innovation could have a significant impact.

## 4. Results

### 4.1. Areas of Social Innovation Development Identified from Interview Analysis

After analyzing the content of the interviews, we have identified a total of 17 codes related to areas where social innovation can have a significant impact. Each of these codes represents a

specific domain in which social innovation could play an important role. Furthermore, we have categorized these areas into three main spheres based on the relationships observed during the content analysis: the socioeconomic sphere, the sustainability and well-being sphere, and the social sphere.

**Table 2.** Weighted areas conducive to the development of social innovation.

<b>Socioeconomic Sphere</b>	<b>Absolute Frequency</b>	<b>Relative Frequency</b>
Governance	17	0,0858
Employment	16	0,0808
Citizen empowerment and community development	16	0,0808
Rural Development	15	0,07575
Local Development	10	0,0505
Alternative consumption patterns	6	0,0303
<i>Total</i>	<i>80</i>	<i>0,40395</i>
<b>Sustainability and Well-being Sphere</b>	<b>Absolute Frequency</b>	<b>Relative Frequency</b>
Environment	19	0,0959
Education	12	0,0606
Housing	11	0,05555
Agriculture	10	0,0505
Health	10	0,0505
Energy	5	0,025252
<i>Total</i>	<i>67</i>	<i>0,338302</i>
<b>Social Sphere</b>	<b>Absolute Frequency</b>	<b>Relative Frequency</b>
Social Inclusion	18	0,0909
Social Rights and Social Justice	14	0,0707
Women's Empowerment	8	0,0404
Persons with Disabilities	6	0,0303
Active Aging	5	0,025252
<i>Total</i>	<i>51</i>	<i>0,257552</i>

Source: Author's elaboration.

Table 2 shows the priority areas where social innovation initiatives can have a more significant impact. Columns two and three show the absolute and relative frequencies of these areas, respectively. These frequencies are used as indicators to assess in which areas social innovation is more likely to have a greater impact. A higher frequency indicates that respondents repeatedly mentioned that area as conducive to the development and impact of social innovation.

The identification and weighting of these areas provides valuable information for those responsible for promoting, driving or developing initiatives in specific areas. It allows them to understand whether experts see opportunities for significant impact through social innovation in specific areas. Knowing that there are socially innovative approaches that differ from traditional methods is a crucial resource that can guide those who want to initiate projects to achieve impact in a particular area.

Moreover, by grouping all these fields into three main areas, we can see that social innovation faces three main types of challenges: economic and political, global and social. Below we will analyse each of these identified areas based on their relative importance within these spheres.

### *Socioeconomic sphere*

This sphere encompasses the primary impact areas of social innovation in relation to the socioeconomic domain, comprising a total of six fundamental areas:

1. **Governance:** Governance reflects the space where decisions that influence economic and social development are made. Historically, this domain was dominated by actors from the public sector. However, today, socially innovative initiatives are emerging that promote new models and approaches, challenging traditional governance. These initiatives drive a transition from a vertical and dominant focus of the public sector toward a more democratic and participatory model, creating inclusive governance.
2. **Employment:** Generating employment and reducing unemployment are economically and politically relevant goals in contemporary societies. In this context, numerous socially innovative initiatives focus on addressing unemployment, improving working conditions, and promoting employment. The rise of co-working spaces is mentioned as an example of innovative practices that respond to labor precarity and isolation resulting from transformations in work patterns.
3. **Citizen Empowerment and Community Development:** This area is closely related to the previous two. It focuses on empowering citizens and promoting community development, fostering a sense of individual and collective capacity and relevance. Many socially innovative initiatives in this domain promote the creation of networks that enable people to act collectively to achieve goals that would be unattainable individually. Furthermore, these initiatives often indirectly contribute to governance and employment, as organization and empowerment facilitate decision-making on a larger scale and the implementation of planned and effective social actions.
4. **Rural Development:** Rural development has become a focus of interest for socially innovative initiatives, as many rural communities face challenges such as depopulation, unemployment, and a lack of economic dynamism. These initiatives seek to promote more sustainable rural development models, which are fundamental for economic development and social well-being. Examples include the production of regional ecological products and sustainable cultural tourism.
5. **Local Development:** Similar to rural development, many regions face challenges due to their high economic dependence. Socially innovative initiatives propose alternatives to boost local community development by identifying and leveraging local resources, both tangible and intangible. This involves decision-making from a bottom-up perspective, fostering local economic development closely linked to citizen empowerment and more democratic governance.
6. **Alternative Consumption Models:** Traditional consumption models have posed significant problems for sustainable development. Socially innovative practices identify and generate new forms of production and consumption. These alternative models include self-consumption, the consumption of ecological and local products, collaborative consumption, and fair-trade practices. In addition to creating a new consumption paradigm, these practices impact areas such as rural development, local development, employment, and citizen empowerment.

These areas are not only essential for the socioeconomic sphere but also interconnect and influence each other, highlighting the importance of social innovation initiatives in addressing contemporary challenges.

### *Sustainability and Wellbeing Sphere*

This sphere encompasses the primary impact areas of social innovation related to sustainability and wellbeing, comprising a total of six fundamental areas:

1. **Environment:** Highlighted as the primary focus area, the environment constitutes a critical field. Social innovation has become a key driver for addressing sustainability issues that affect both present and future generations. Innovative initiatives play a crucial role in combating climate change, reducing pollution, managing water scarcity, and preserving biodiversity.
2. **Education:** It is identified as an essential domain where social innovation is indispensable. Education is being transformed by initiatives that aim to turn educational institutions into spaces for creativity and knowledge development. Furthermore, these initiatives improve collaboration among actors in the education system and promote technical and social skills for employability.
3. **Housing:** Access to adequate housing is a fundamental right facing significant challenges in today's society. Here, social innovation stands as a crucial tool to address this issue. Creative initiatives are facilitating housing access through solutions such as prefabricated housing for the homeless, collaborative housing models (cohousing), and floating houses in flood-prone areas.
4. **Agriculture:** Agriculture, beyond food production, is becoming an important field for social innovation. Initiatives such as urban agriculture, agrarian systems that ensure food sovereignty, and social agriculture are proliferating. These practices have an impact that extends to areas such as employment and the reduction of social exclusion.
5. **Health:** Healthcare is a fundamental concern in society. Social innovation positions itself as an effective tool to address issues and demands in this sector. It facilitates coordination between the public and private sectors for more effective solutions and promotes collective action by civil society to address unmet health needs. During the COVID-19 pandemic, many socially innovative initiatives emerged to address the psychological needs of the population.
6. **Energy:** Access to energy services is essential for wellbeing but is not always guaranteed for those with limited resources. Social innovation presents itself as a solution, promoting more decentralized energy models with a focus on self-consumption and alternative energy sources. These initiatives seek to eliminate economic barriers to energy Access

These interconnected and high-impact areas demonstrate the importance of social innovation in transforming our world toward a more sustainable and prosperous future.

### *Social Sphere*

In this sphere, crucial areas of impact for social innovation initiatives related primarily to social challenges converge. Five areas that address fundamental needs and rights for social well-being stand out:

1. **Social Exclusion:** Social exclusion, a result of systemic inequalities, is a central concern. Social innovation is recognized for its ability to address and reduce social exclusion. Numerous socially innovative initiatives work on creating social and symbolic capital to ensure the basic rights and freedoms of individuals.
2. **Social Rights and Social Justice:** Closely related to social exclusion, the emphasis on achieving greater social justice and social rights goes hand in hand with reducing social exclusion. Many social innovation initiatives designed to improve this area also have a positive impact on reducing social exclusion.
3. **Women's Empowerment:** Addressing gender inequality is a key priority in modern society. Women's empowerment is essential to overcome structural barriers. Many socially innovative initiatives focus on promoting women's empowerment as part of the national and international social agenda.
4. **Persons with Disabilities:** Personal identity and independence for people with disabilities are essential. Social innovation initiatives align with this goal, working to eliminate

discrimination and exclusion. These initiatives seek to facilitate the lives of people with disabilities, promoting their personal and professional development for independent living.

5. **Active Aging:** The aging of the population is a challenge in modern society. Social innovation addresses these issues with practices that respond to the needs of aging societies. Initiatives promote activities to improve the physical and mental health of older people, encourage intergenerational spaces, provide transition measures into retirement, and offer creative workshops to contribute to the well-being and active participation of older people in society.

These interconnected areas highlight the crucial role of social innovation in promoting equity, inclusion, and social justice in our communities. Social innovation acts as a driver to address complex social challenges and advance toward a more equal and just society.

#### 4.2. Alignment of Social Innovation Impact Areas and Sustainable Development Goals (SDGs)

We have previously established the close relationship between sustainable development and social innovation. Now, it is essential to analyze how the impact areas of social innovation align with the Sustainable Development Goals (SDGs), allowing us to understand how these initiatives can contribute to addressing global challenges and advancing toward a more sustainable future.

The following Table 3 shows this direct connection between the SDGs and the impact areas of social innovation:

**Table 3.** Connection between the SDGs and the impact areas of social innovation.

Sustainable Development Goals (SDG)	Areas of Social Innovation Impact
<b>SDG Goal 1:</b> End poverty in all its forms everywhere	Social exclusion, Employment
<b>SDG Goal 2:</b> End hunger, achieve food security and improved nutrition, and promote sustainable agriculture	Agriculture, Rural Development
<b>SDG Goal 3:</b> Ensure healthy lives and promote well-being for all at all ages	Health, Active Aging
<b>SDG Goal 4:</b> Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all	Education, Social Exclusion
<b>SDG Goal 5:</b> Achieve gender equality and empower all women and girls	Women's Empowerment
<b>SDG Goal 6:</b> Ensure availability and sustainable management of water and sanitation for all	Environment, Health
<b>SDG Goal 7:</b> Ensure access to affordable, reliable, sustainable, and modern energy for all	Energy, Environment, Rural Development
<b>SDG Goal 8:</b> Promote sustained, inclusive, and sustainable economic growth, full and productive employment, and decent work for all	Employment, Social Exclusion
<b>SDG Goal 9:</b> Build resilient infrastructure, promote inclusive and sustainable industrialization, and foster innovation	Local Development
<b>SDG Goal 10:</b> Reduce inequality within and among countries	Social Rights and Social Justice, Social Exclusion

<b>SDG Goal 11:</b> Make cities and human settlements inclusive, safe, resilient, and sustainable	Local Alternative Models	Development, Consumption
<b>SDG Goal 12:</b> Ensure sustainable consumption and production patterns	Alternative Models	Consumption
<b>SDG Goal 13:</b> Take urgent action to combat climate change and its impacts	Environment	
<b>SDG Goal 14:</b> Conserve and sustainably use the oceans, seas, and marine resources for sustainable development	Environment	
<b>SDG Goal 15:</b> Protect, restore, and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, halt and reverse land degradation, and halt biodiversity loss	Rural Environment	Development,
<b>SDG Goal 16:</b> Promote peaceful and inclusive societies for sustainable development, provide access to justice for all, and build effective, accountable, and inclusive institutions at all levels	Social Rights and Justice, Social Exclusion	Social
<b>SDG Goal 17:</b> Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development	Governance	

Source: Author's elaboration.

This table shows that all identified areas of social innovation impact are directly related to one or more SDGs. Furthermore, some areas have links to multiple SDGs, highlighting the ability of socially innovative initiatives to address multiple goals simultaneously.

Given this close correspondence between social innovation and the SDGs, socially innovative initiatives emerge as essential tools for decision-makers at the national and international levels to achieve the SDGs and advance sustainable development. Social innovation becomes a valuable tool to effectively address social and environmental issues, promote positive change in society, and significantly contribute to the realisation of global sustainable development goals.

## 5. Conclusions

Social innovation is a phenomenon that generates social value and well-being. Its positive effects go beyond its final impact, with great importance attached to the processes and new methods of participation and work developed to achieve better social results. This contributes to the fact that a number of common elements and characteristics are present in the logic of action of any socially innovative initiative, allowing a novel approach to the most important social objectives in a wide range of areas.

In this study, we have thoroughly explored the complex relationship between social innovation and the Sustainable Development Goals (SDGs), discovering a synergy that offers a promising path towards a more equitable and sustainable world. Our key findings shed light on the powerful impact of social innovation in achieving social and environmental goals with global reach.

At its core, social innovation goes beyond the mere generation of value and wealth; it is a catalyst for processes and methodologies that promote superior social outcomes. This innovative and participatory approach is a common denominator of all the initiatives we have studied, enabling them to address the most pressing social challenges in different fields in a unique and effective way.

This inherent logic of action of social innovation initiatives, combined with their close link to sustainable development, allows them to contribute both directly and indirectly to the

achievement of socially desirable goals, such as the SDGs. Some of these initiatives may start with primary objectives related to the environment, employment or gender equality, while others, even if these objectives are not a priority, incorporate these aspects into their *modus operandi* (such as respect for the environment, labour inclusion and gender perspective).

In this work we have identified and assessed a total of 17 impact areas, which we have grouped into three categories: political and economic challenges, global challenges and social challenges. This identification and evaluation has led us to conclude that social innovation initiatives have a significant impact in a wide range of areas, with particular emphasis on the environment (0.0959), combating social exclusion (0.0909) and strengthening governance (0.0858). These areas, which have historically been challenging and where traditional policies have proved ineffective, find in social innovation initiatives a new perspective that can provide more effective responses to recurring problems.

The identification of these areas has also allowed us to conclude that social innovation initiatives, even when focused on a specific area, can contribute to the achievement of several SDGs. This close link between the SDGs and the areas of social innovation impact clearly shows that both public and private entities can find in this work a solid guide for developing socially relevant, innovation-based initiatives.

Finally, it is important to highlight two fundamental contributions of this study. On the one hand, we provide solid evidence for entrepreneurs and social organisations wishing to implement actions in specific areas, offering insights on how to approach them innovatively. On the other hand, we identify areas where experts believe there is a greater likelihood of success for social innovation, which is useful for public decision-makers in developing plans and policies that promote and support social innovation initiatives in areas with direct implications for the SDGs.

## Annexes

### Annex 1. Script – Interviews for Social Innovation and Sustainable Development: An Analysis of its Impact Areas and its Relationship with the SDGs.

#### *PART I: General Questions about Social Innovation*

1. In your perspective, what does social innovation mean to you?
2. What do you believe are the main characteristics and/or properties that an initiative or activity must possess to be considered a social innovation?
3. Do you think the concept of social innovation is being overused? Are you concerned it might lose its value?
4. What do you think motivates agents to engage in socially innovative practices? In your case or that of your association/company/represented sector, what was the main motivation?
5. What role do you believe innovation support centers play in social innovation? And academics? Would you identify any other relevant agents for promoting and developing social innovations? What kind of support has your association/company received?
6. What do you think is the profile of socially innovative agents? What kinds of organizations, companies (technological centers, business cooperatives, etc.), and public entities do you believe can engage in socially innovative activities?
7. What stages do you think a socially innovative initiative typically goes through from its inception to consolidation? What is the most critical phase?

#### *PART II: Identification of Variables*

8. In what types of regions do you believe social innovations tend to develop?
9. Do you think that in regions where there are more problems, more social innovations emerge?
10. What factors facilitated the launch of your socially innovative initiative?
11. What factors acted as barriers or hindered this process?

12. If you had to choose three major pillars that are essential for the development and promotion of social innovations, what would they be?
13. How do you think these factors can be measured?
14. Who do you think can promote the incentivization of the factors you mentioned?
15. What role do you think creativity plays in social innovation? What about art and culture?

*PART III: The Potential of Social Innovation*

16. What do you believe are the main benefits of engaging in socially innovative activities for society?
17. In which fields do you think the development of social innovations can be especially useful or relevant? What types of problems do you think it can help address?
18. Do you think it can be argued that in regions with fewer problems, there are social innovation initiatives? Or do you believe that the low incidence of certain problems in a region actually discourages social innovation?
19. What role do you think social innovation plays in improving and modernizing the public sector?
20. What positive implications do you think your initiative has on society?
21. What is the medium-term goal of your initiative/center/research group?

**Annex 2. Interviewee Positions.**

<b>Managers of centers or companies</b>
Local innovation agent of the Guadalinfo network.
Director of the Center for Social Innovation of the province of Malaga.
Director of the social and digital innovation laboratory "Citilab Cornellà".
Co-founder and president of the social innovation laboratory "Espacio_Res".
Director of Innovation and Social Economy at the Seville City Council
Director of Social Innovation Programs at Innobasque (Basque Innovation Agency).
Director of Entrepreneur Recruitment at Ashoka
He is a member of the UpSocial consulting team with operational headquarters in Barcelona.
Director of the Citizen Services Area of the Provincial Council of Malaga.
<b>Academics</b>
Researcher and co-author of the paper "Panorama actual de la Innovación Social en Colombia".
Associate Professor of the Department of Political Science and researcher at the Institute of Government and Public Policy of the Autonomous University of Barcelona.
Researcher in the Department of Didactics and School Organization at Deusto University.
Researcher and co-author of the paper "Panorama actual de la Innovación Social en Colombia".
Researcher at the Department of Applied Economics of the University of Vigo.
Researcher in the Department of Financial Economics and Accounting at Loyola Andalucía University.
<b>Directors and officers</b>
Responsible for the Rural Development Area of the Guadalhorce Valley Group.
President of the Andalusian Federation of Worker Cooperative Enterprises (FAECTA)
Person in charge of the Social Innovation initiative "Crafteando".
Director of Mouse4all.
Project assistant at Asprodisis.
Director in Spain of the Dogs and Letters initiative.
Coordinator of the research area of Hidra Cooperativa.
General Director of the "Pau Costa" Foundation.



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Research Article

# How to promote social innovation within Sustainable Development Goals (SDGs): The case of the Audiovisual Industry in Navarre

## Cómo promover la innovación social dentro de los Objetivos de Desarrollo Sostenible (ODS): El caso de la Industria Audiovisual en Navarra

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**Abstract:** This article examines the situation of social innovation in the audiovisual industry, which is a gap in the field of media management regarding the promotion of innovation with social impact. The main objective of this paper is to conduct a study in order to promote social innovation in the audiovisual industry at regional level. By collaborating through an action research case with the audiovisual cluster in Navarre (CLAVNA) this research focuses on specific Sustainable Development Goals (SDGs) related to gender equality, decent work and economic growth, and industry, innovation, and infrastructure. Three are the main findings of this study: 1) Technological innovations are crucial to promote social innovation; 2) the need for public-private co-creation for the development of the focused industry; 3) the relevance of focusing efforts on social innovation in firms based on animation and video games to attract development and investments.

**Keywords:** social innovation; SDGs; audiovisual; Navarre; action research.

**Resumen:** Este artículo examina la situación de la innovación social en la industria audiovisual, que constituye una laguna en el campo de la gestión de los medios de comunicación en lo que respecta al impulso de la innovación con impacto social. El objetivo principal de este artículo es realizar un estudio para promover la innovación social en la industria audiovisual en el ámbito regional. Mediante la colaboración a través de un caso de investigación-acción con el Cluster Audiovisual de Navarra (CLAVNA), esta investigación se centra en Objetivos de Desarrollo Sostenible (ODS) específicos relacionados con la igualdad de género, el trabajo decente y el crecimiento económico, y la industria, la innovación y las infraestructuras. Tres son las principales conclusiones de este estudio: 1) Las innovaciones tecnológicas son cruciales para promover la innovación social; 2) se advierte la necesidad de la co-creación público-privada para el desarrollo de la industria con foco; 3) se ve necesario centrar esfuerzos en la innovación social de empresas basadas en animación y videojuegos para atraer desarrollo e inversiones.

**Palabras clave:** innovación social; ODS; audiovisual; Navarra; investigación-acción.

## 1. Introduction

The concept of social innovation emerges in the literature of innovation to underline its impact on social performance and to differentiate it from technological, service, market, cultural, artistic and business innovation, among others (Pol & Ville, 2009). Martins et al. (2022) propose a definition of social innovation as being a process of change, social collaboration, and interaction, aiming at organizing ideas and inventions to tackle social problems and to improve quality of life and collective wellbeing through mechanisms of community governance.

What is the situation of social innovation in the audiovisual industry? This research looks for both concepts terms, audiovisual and social innovation, in the database of Web of Science there are only seven references that cite both "social innovation" and "audiovisual" or "audio-visual". Besides, none of those papers analyze how to promote social innovation in this industry. Therefore, it is not a topic that has been studied in depth in the field of media management. Does this mean that audio-visual firms do not promote activities based on both innovation and social impact? This research gathers that there is an interest in the industry to increase their social impact but there is a need to develop a strategy. In this sense, the article considers the role of organizations such as the Audiovisual Hub of Europe framework, which encourages the development of this industry in some regional areas.

In this line, the general scope of this paper is to develop an action research (AR) study to illustrate how to promote social innovation in the audiovisual industry in a specific geographical and political scope. More specifically, the focus of the study in Navarra, a province in northern Spain. Interest in social innovation has recently grown in a variety of industrial and productive sectors, as well as in academia. The research has been worked in a collaborative way with the audiovisual cluster in Navarra (CLAVNA) and focused the study on four specific Sustainable Development Goals (SDGs): gender equality (SDG5), decent work and economic growth (SDG8) and industry, innovation and infrastructure (SDG9). This study has a relevance for media management scholarship because it links two strategic concepts for the industry: innovation and social impact. Besides, the literature review herein identifies wide theoretical-empirical gaps.

This study has a dual objective: academic and business. First, to analyse which of the SDGs analyzed may be more representative in the audiovisual sector in Navarra. Second, helping to develop this industry in a specific geographical context through social innovation practices. This research contributes to studying social innovation in order to subsequently examine the practices of producers in Navarra through qualitative empirical research.

The article is structured as follows. First, it describes the context of the study: social innovation and audiovisual industry. Then, it shows the action research methodology and their main features in this study. In Section 4, the main findings are presented and, finally, it shows the main conclusions.

## 2. Context

### 2.1. Social innovation

Social innovation emerged in the innovation literature at the beginning of the 21st century as a process that leads to social change through new forms of social relations (Ayob et al., 2016). This holistic, multidimensional, and interdisciplinary concept involves the creation of new products, services, and models that meet social needs while pursuing corporate competitiveness.

The academy has made efforts to clarify SI and decipher its impact. In this sense, Murray, et al. (2010, 3) point to the "new ideas (products, services and models) that simultaneously meet social needs and create new social relationships or collaborations". The idea of addressing problems or challenges through innovation is also present in the definitions provided by a variety of institutions. Thus, the Centre for Social Innovation (2021) explains SI "as the creation, development, adoption, and integration of new and renewed concepts, systems, organizations

and practices that put people and planet first". Along the same lines, the OECD also mentions that "social innovation seeks new answers to social problems" (Forum of Social Innovation, 2000).

As described by Audretsch et al. (2021), the novelty of SI and the wide range of academic fields that analyze it is attributable to the lack of a common definition. In their article, they relay the five elements that describe this concept, as follows: 1) A social need that must be addressed, 2) an innovative element as a new approach, 3) the implementation of a product or service, 4) improvement to a given situation, and 5) developing new relationships and collaborations. These five elements can also be found within the definition from Murray et al. (2010).

Having overcome initial debate about whether or not it is a fad soon to disappear (Pol & Ville, 2009), SI is constituted as a growing field of study that, in turn, opens up new challenges for both the practices of management and policy making (van der Have & Rubalcaba, 2016). Likewise, judging by increased research, academics seem to perceive significant value in this type of innovation as a driver of social change (Cajaiba-Santana, 2014). Researchers from the Centre for Social Innovation at the Stanford Graduate School of Business emphasize its importance in promoting and producing lasting social change (Phills et al., 2008).

Although there has been a rise in research attention, there are still gaps in the literature, especially related to how companies can integrate these processes and their stages into their strategy and operations (Tabares, 2020). In words of Canestrino et al. (2015, 1): "Despite the increasing amount of literature about SI, scholars have paid little attention to the adoption of its practices at corporate level that means to the development of Corporate Social Innovation (CSI)".

Furthermore, scholars underlined its dual nature because CSI addresses both social and corporate objectives, providing an alternative for companies to help solve social problems through innovative procedures and strategies while reaching economic results (Dionisio & de Vargas, 2020). At the corporate level CSI process refers to "an initiative that aims to create both shareholder and social value with the potential to alter the structure of innovation systems, improve employee motivation, and change corporate identities and strategies to increase competitive advantage, while at the same time bringing solutions to societal needs" (Dionisio & de Vargas, 2020, 1). This kind of innovation is co-created with stakeholders, such as NGOs, public administration entities or foundations. The aforementioned requires establishing new social collaborations driving throughout complex networks and processes (Murray et al., 2010).

## *2.2. Audiovisual industry in Navarre*

Navarre is a small region in the north of Spain with 661,197 inhabitants in 10,391 km<sup>2</sup> and a GDP in 2020 of 29,314 euros, compared to the GDP per capita of 25,500 euros in Spain. These characteristics make Navarre a place with a high quality of life, proximity and administrative agility, to which must be added the diversity of the landscape and the tax incentive as attractions for the development of the audiovisual industry.

The Navarra Audiovisual Guide offers a complete list of companies according to their field of specialisation, as well as the professionals working in the sector. Some results of the sector mapping carried out by the cluster indicate that:

- Of all the companies in the sector, 68%, a significant majority, are self-employed professionals.
- Looking at the group of self-employed professionals (68% of the sector in Navarre) the main activities are divided between directing (approximately 10%), actor/actress (12%), scriptwriter (9%) and documentary maker (3%).
- Of the companies, 45% have audiovisual production as their main activity. The rest of the activities are very dispersed.
- 40% of the sector's annual turnover is below €100,000.
- 50% of self-employed professionals bill below €15,000 per year.

CLAVNA's study describes an atomised sector. Moreover, it has little access to international and national markets and a reduced capacity for self-financing. This is compounded by a lack of professionalisation in specific sectors (small companies undertake a wide range of activities) and little collaboration. Regarding the latter, it is a challenge to overcome a traditional reluctance to share information.

Since CLAVNA carried out this mapping, they have been trying to take steps to improve the visibility of Navarra's brand and projects in the sector. As its manager explains: "In the framework of SSIFF 2022 (San Sebastian International Film Festival) the brand "Navarra Film Industry" (NFI) has been presented, a single digital window where all the information related to the sector is concentrated, directed and supervised by a public/private commission of the audiovisual industry where the General Directorate of Culture, Navarra Film Commission, together with CLAVNA and Napar (Navarra Audiovisual Production) converge. A new public/private alignment effort to accelerate the growth of the sector from a single perspective".

In addition to what has already been advanced, work is underway on the next steps: "The NFI steering group is designing and coordinating what is needed to increase sectoral competitiveness within the parameters of sustainable and orderly growth of the sector. The topics are: the 2023 market assistance plan, the promotion of new training actions that are identified as necessary, the proposal for improvements in the regulatory frameworks that affect us (culture, R&D, tax incentives, film tourism...) and any other related proposal".

The Government of Navarre, in the period from 2021-2027, has decided to opt for sustainability as the main key to economic transformation, orienting its technological and industrial capacities towards the search for solutions that are responsible with the environment and people. The development of the audiovisual industry is one of the pillars of this strategy. This is an emerging sector and the Government of Navarre aims to strengthen Navarrese companies with the capacity for large-scale projects. They also propose improving the positioning of the region to attract filming and audiovisual activity. Together with this, they consider the creation of a niche in digital animation and video games to be relevant. To this end, they aim for a 25% increase in filming in Navarre and an increase in the creation of animation companies.

The Government of Navarre relies on Sodena as a financial support instrument for attracting and developing business projects with added value for the region, as is the case with the Smart Specialisation Strategy for Sustainability (S4) and collaborates with the implementation of the policy of promoting and boosting clusters, including the audiovisual sector. As CLAVNA's manager explains: "The steering committee of the audiovisual S4 meets regularly to monitor the sector's progress. It is made up of the director general of culture of the Government of Navarre, the head of the audiovisual projects section of the directorate general of culture, the Navarra Film Commission, members of the boards of directors of NAPAR and CLAVNA, as well as the cluster manager.

The manager of CLAVNA stresses that "2022 was the year of the Plot Point, a process to stimulate and promote collaborative projects to accelerate the growth of the local fabric, supervised by the S4 audiovisual steering committee. For growth to be truly connected to the territory, we understand that it must be rooted in the real productive fabric. And for this to be possible, a process has been undertaken to learn to collaborate, co-produce and think from Navarre towards the global market".

### 3. Methodology

#### 3.1. Action research

Action research (AR) is a collaborative research methodology whose first studies were published in social sciences (Collier, 1945; Lewin, 1946). Until late 70s, AR based papers were common to find in the fields of education, ethics, medicine or psychology. In this scope, a



definition that explain the “spirit” of AR was the following: “Action research aims to contribute to the practical concerns of people in an immediate problematic situation and to the goals of social science by joint collaboration within a mutually acceptable ethical framework” (Rapoport, 1970, 499). Thus, AR conceptually analyses the problems (theoretical contribution) and help practitioners to solve their “problems” (social contribution).

In late 70s and early 80s, some papers in management journals started to signal the features of AR as a relevant methodology to develop collaborative research projects (Susman & Evered, 1978; Evered & Louis, 1981). The use of AR in business and management make that also their features change in terms of the context of application (Shani & Coghlan, 2021). Main change with respect to social sciences is the role of the practitioner, which changes from “patient” to an “active participant”. It means that managers that act as coordinators in an AR study involve in all the stages of the process.

How about the use of AR in the field of Communication? Some authors argue for more action research in specific knowledge areas of this sector such as digital journalism (Grubenmann, 2016). In the field of media management, it is relevant to emphasize the publications of Greg Hearn and Marcus Foth as the researchers that have most emphasized the role of action research as a methodology that fits very well in this area (Hearn et al., 2008; Hearn et al., 2009). Besides, Hearn and Foth (2005) showed that action research can be a useful in three possible ways: “active participation” (practitioners help to define the aims and direction of the research and discussing findings and conclusions), “action-based methods” (new activities and experiences generate knowledge) and “generating action” (research is designed to put into practice new plans to solve specific problems).

Following this line, action research was a suitable methodology for this study due to the following reasons: first, researchers found a practitioner (CLAVNA) with a collaborative attitude and a problem to be solved. Second, this project fits as “active participation”: the objective is not to “take actions” if not to generate an action plan where the practitioner is involved in all the stages of the process. Third, the AR process permits to describe and develop the study with rigour and quality criteria.

#### Stage 0: Context of the research

This study is included into a doctoral thesis that analyze the role of social innovation in the audiovisual industry. The practitioner is the audiovisual cluster in Navarra (CLAVNA). This organization was created in 2017 as a non-profit association that sought to provide a professional and ambitious response to this industrial sector within the framework of the “Smart Specialization Strategy” of Navarra. As its manager explains: “CLAVNA grows year after year and at the end of 2022 maintains a social mass of 45 companies and institutions, highlighting the latest additions of technology companies (ICTs, AI, engineering) that approach the sector attracted by the important figures of sectoral growth and by the transversal nature of the audiovisual industry”. In 2021, CLAVNA modified its statutes to become an “innovative agent” member of “Navarre R+D+I System (SINAI), which allows them to attend R+D+i calls and participate in collaborative projects with other companies and research centers.

#### Stage 1: Dual objectives among participating agents

The definition of the dual objectives of this empirical work was agreed between both parties. The academic objective is summarized in the following research question: Which SDGs of can be most representative of the social innovation in an empirical context as concrete as the audiovisual sector in Navarra? In terms of the practitioner, the objective for CLAVNA was to define what type of practices could develop to promote social innovation among its members in the scope of prioritized SDGs.



Stage 2: Data collection and analysis

This stage is especially relevant because it can be considered as the “research study”. Table 1 shows the main aspects of data gathering in this stage.

**Table 1.** Key methodological aspects of the study.

KEY ASPECTS	DESCRIPTION
<b>Roles of the researcher and practitioner</b>	<ul style="list-style-type: none"> <li>• Researcher: to design the empirical work and carry out the fieldwork.</li> <li>• Practitioner: to assist in the design, and collection of information. Key role in the selection of managers to interview</li> </ul>
<b>Obtaining information</b>	<ul style="list-style-type: none"> <li>• Ten semi-structured interviews with managers of CLAVNA member companies</li> </ul>
<b>Information analysis</b>	<ul style="list-style-type: none"> <li>• Interview transcription and content analysis</li> </ul>

Source: Author's elaboration.

To do this, and -in the first place- the researchers met with CLAVNA (the practitioner) in order to agree with them on the questions that might interest them for the development of a social innovation project for this sector. Then, both parties decided those firms and organizations to be interviewed. Table 2 shows the profile of the interviewees.

**Table 2.** Interviewees profile.

	FIRM / ORGANIZATION	ROLE
1	CLAVNA	President
2	CLAVNA	Manager
3	NAPAR	President
4	ARENA	CEO
5	HURURU FILMAK	Producer
6	Navarra Televisión	General Manager
7	Gobierno de Navarra	Head of Section for Audiovisual and Digital Projects
8	Gobierno de Navarra	General Head of Development
9	Calle Cruzada	Producer
10	Dr. Platypus & Ms. Wombat	General Manager

Source: Author's elaboration.

The semi-structured questionnaire included open questions about the objectives but these questions were segmented according to the sample profile: public administration, producer or association.

BLOCK 1. How do you promote SDG 8 “decent work and economic growth from your company/association/institution”? What is your main problem to hire? Have you thought about partnering with other producers? What policy on the part of the government would help you? What policies as a government are you promoting? What is it that is costing you the most as a company to grow? How do you finance the projects?

BLOCK 2. How do you manage to develop SDG9 “Industry, Innovation and Infrastructure”? What costs you more to implement them in Navarra? What attraction are you seeing for investment in companies in Navarra? What advantages and disadvantages does Navarra have to work here? What kind of innovation are you doing as a company? What innovation strategy are you having in Navarra (for the Government, CLAVNA,...)?

BLOCK 3. How do you promote talent development through equality policies (SD5 “Gender equality”) Are there women at all levels? What positive actions are being taken to promote women's talent?

#### Stage 4: Dissemination of results

Shows the main outputs of this empirical work from academic dissemination to professional reports. In this line, the collaboration was very helpful for both parties so that further studies are considered.

## **4. Findings**

As explained, the interviews dealt about the 3 SDGs already mentioned in order to determine which are the ones that are being best implemented in Navarra. The most relevant information obtained from 10 interviews is organized in three “Blocks” corresponding to the SDGs 8, 9 and 5.

#### Block 1. SDG 8: Economic growth and decent work

The interviews carried out depict an industry that has developed in the last 5 years but is still in its first stage, fragmented and with a profile of a small producer. This is how both the president and the manager of CLAVNA described it. The General Director of Development of the Government of Navarre explains that “the creation of quality employment is a transversal vector of our strategy and -although nothing specific has been developed for this sector- we (have) consider(ed) it as a strategic axis and therefore we work hard as we see it as a sector with potential”.

The findings that have been obtained from the interviews also outline a group of small producers: companies with 2-3 employees and self-employed. Some reach 10-12 employees as is the case of Arena or Calle Cruzada. The production companies from Navarra are small and they associate with each other for larger-scale projects, as is the case of a co-production that they (have) made for the Basque regional channel, ETB while this research took place. This is a documentary feature film in which the following production companies from Navarra are participating: CLAU, 601, Arena and Labrit Multimedia. Arena is (in turn) also carrying out a project with another Basque production company.

The productions they cover are modest, as the CLAVNA manager explains, and there is a lot of author work. This causes difficulties for the platforms to hire contract production since, as he comments: “the platforms look for solvent production companies to develop local productions and those in Navarra are too small for them, hence the importance of promoting processes such as Plot Point, which is already giving its first fruits”. The representative of NAPAR, (for his part),

considers that "it would be necessary -on the part of the Government- a policy that helps local content". He advocates the development of local audiovisual content repositories so that they can then be sold. In turn, the president of CLAVNA sees a barrier in the fact that "a small audiovisual production company does not have the capacity to go to international markets to sell its products since the budget would not arrive and that leaves a complicated panorama for its development".

Regarding issues related to working conditions: wages, quality employment, etc., the production company Arena is committed to flexible hours "to make it easier for both men and women to dedicate themselves to raising children." In addition, they have a representative of the workers. COVID has made it easier for them to telework. They have a non-hierarchical company culture in the organization necessary to manage the creative people. Salaries are established at the proposal of the workers, facilitating the participatory mode of management. In fact, "the ERE<sup>1</sup>" that took place a few years ago was suggested by the workers who are very aware of the reality of the company." This producer would ask the government to improve everything that has to do with leaves of absence, maternity leave, EREs. Hururu Filmak, due to its status as a cooperative, consists of worker members who collaborate with freelancers adjusted to a service. They have also partnered with other production companies. They have recently worked on a documentary feature film co-produced with 2 other international companies. In this sense, one of the companies that hires local production companies as suppliers is Navarra TV. They find it difficult to attract and retain professionals who know the territory, key to their environment. Another obstacle is the salary which, according to the director, makes it difficult to attract talent to Navarra. With the salaries that are offered, it is not easy to attract people to work in Navarra, since it is a place where the standard of living is not cheap.

The producers interviewed have a different opinion about growth. Arena considers that "although finding good people is now very easy because there are many very good people", they do not want to grow. "Fifteen years ago, we had an experience that was not good and we decided to decrease in order to once again have creative control of what we do. Our goal is to stay that way, as a boutique and - when we want to tackle big projects - partner with others". From Calle Cruzada they consider that growth is not an option either. They are stabilized, they work on request. However, others like Dr. Platypus & Ms. Wombat aim at growth. They are consolidating a production cycle at present. The next step they want to take is the production of short films and what costs them the most is financing. In addition, they have difficulty attracting talent for their projects to such an extent that they have decided to train their teams themselves.

### Block 2. SDG 9: industry, innovation and infrastructure

In order for the audiovisual industry to become a strong industry in Navarra, it needs further development. CLAVNA believes that the possibilities are many. Proof of this is that the Government of Navarra is proactively emphasizing R+D+i thanks to ADITECH, with whom there is a collaboration agreement. "They are working on different projects, such as one with the UPNA<sup>2</sup> on energy efficiency in filming, they are pending the creation of a space that will be an audiovisual hub in Navarre (a place has already been located and meetings have been held with the City Council of Pamplona and the Government of Navarre) as well as the development of a network of nodes between Pamplona, Lesaka-Baztan and Tudela" affirms the Manager of the audiovisual cluster.

Although Navarre has (as) driving effects for the establishment of producers like the landscape diversity and the fiscal incentive, they consider that they are not enough to achieve the goal. It has been previously explained that in Arena they consider it easy to attract talent, but they

<sup>1</sup> Expediente de Regulación de Empleo (ERE). An Employment Regulation File is a process of suspension or termination of labour relations in certain circumstances, while guaranteeing the rights of workers".

<sup>2</sup> UPNA: <https://www.unavarra.es/portada>

do not think so in Dr. Platypus & Ms. Wombat, Navarra TV or Calle Cruzada. The latter said that "they had to bring in talent from outside for some filming tasks because they couldn't find it here" and in Dr. Platycus & Ms Wombat they have had to set up -as explained before- training courses for these specializations. In addition, "it depends on what you want to do. Navarre is not a place to settle", explains the Manager of CLAVNA. "If you want to do a daily series, there is no structure for it" affirms the president of CLAVNA.

It is suggested that, through SINAI<sup>3</sup>, a project could be launched to create a National Audiovisual Research Center that could be a driving force for development (with the two universities in Navarra, NAPAR and CLAVNA). In this sense, the NAPAR representative considers that this development in technological innovation would be key for Navarra to be a benchmark in the audiovisual field. Arena, Navarra TV or Dr. Platypus & Ms. Wombat speak along the same lines.

Navarra TV considers, for its part, that "in order to innovate it is necessary to designate a team within the company". This (is considered) seems unfeasible in their case due to lack of budget for it. Its main bet, as previously mentioned, is technological development. They consider that the audiovisual language is changing and the way of telling stories is now different. In addition, "we already do direct with a mobile and we look for the technological tools on the market for work." This forces them to have constant recycling by turnover of the people on the team.

Even so, not all innovations are technological, and producers such as Hururu Fimak are innovating on sustainability issues in filming and working on offsetting the carbon footprint. The latter consists of neutralizing the amount of CO2 emissions that occur in a shoot by investing financially in an environmental project.

The head of the audiovisual and digital projects section of the Government of Navarre (belonging to the Ministry of Culture) considers that the best way to turn it into an industry is to add several policies. Culture alone would not achieve the objectives of attracting companies if it does not have the help of other departments such as Economic Development, the Treasury. From Culture, the main tool is to give subsidies for the development of all stages of the value chain and also for film festivals.

Facing the implementation of companies in Navarra, from Dr. Platypus & Ms. Wombat point out that "Navarre has values such as quality of life, proximity and administrative agility that come from being a small autonomy that make it attractive. This is also highlighted in the Culture department, in CLAVNA, Arena or Hururu Filmak. The NAPAR representative is more critical and considers that the tax incentive has not helped growth since only companies have come to roll and have left. In this sense, Dr. Platypus & Ms. Wombat consider that in order to make it easier for companies to establish themselves in Navarre, it would be necessary to design a financing model that responds to the reality of local production. Along with the financing model, they consider that telecommunications are a pending issue since they can be greatly improved: "there is not enough bandwidth to work. The square meter is very expensive. The cost of living is high. Buying a home is complex. Although -on the contrary- they affirm that it is a comfortable place because it is not necessary to go by car, there are green areas, trees and the health system better than in other places. Even so, it could be concluded that "there are three reasons -according to the manager of CLAVNA- why a company in the sector makes the decision to establish itself in Navarra: the diversity of landscapes for filming, the fiscal entity and the closeness and agility of the public administration".

### Block 3. SDG 5: Gender Equality

The Head of the Audiovisual and Digital Projects Section and the General Director of Development of the Government of Navarre explained in the interviews how "in our area we try

<sup>3</sup> <https://www.aditech.com/es/conoce-el-sinai/>

to promote that both the aid that is granted and the companies that end up being our suppliers have a greater commitment weight in equality issues”.

In all the interviews maintained with the production companies, the importance of shared talent has been discussed and in no case have they stated that there are apparent problems of inequality, as it will be show below. In the case of Calle Cruzada, his CEO comments that he has always seen the audiovisual world as an egalitarian world where women have had relevant positions. This statement is supported by Dr. Platypus & Ms. Wombat. The latter say that for the selection they treat people equally. Access to training is the same for men and women in their company by analyzing the portfolios and reels that come to them. “And we also do empathy exercises when selecting profiles that have complicated life situations, regardless of whether they are men or women”. The Director of Navarra Televisión tells us that the Government of Navarre promoted a series of business policies to take care of this issue. “We had already incorporated 80% of the requirements requested by the government. Just before the lock down as a result of COVID-19, we signed an agreement in this regard with the unions and it is being carried out in an equal and visible manner”. In the case of Hururu Filmak, they are taking great care of the issue of (re)conciliation and activating mechanisms so that this can happen. In fact, they explain, “only women participated in the last project we have carried out”.

## 5. Conclusions

Three relevant findings are obtained from this study. First, social innovation may help the production of audiovisual content in Navarra to be more competitive, as long as it works with the right tools. In this sense, technological innovations can be an opportunity for the development of the industry and its consequent social impact. Uniting innovation and impact (SI), betting on the local and focusing on the SDGs that arise from the work carried out would contribute to developing a sector in a way that is sustainable over time. Also, it would be necessary to look at some areas parts of this sector, such as the production of animation content as well as video games or stories in alternative formats as areas of growth. The technology allows the relocation that does not allow the cinema and the series. For this it would be necessary to improve the bandwidths and allow more robust sources of financing. As it is a technological industry, it has much more possibilities of development outside of Madrid or Barcelona than others.

Second, only when there is co-creation between public administration, associations and the private sector as well as when projects are maintained regardless of who are in the government, it is possible to develop an industry. In this sense, the proximity of the institutions and the prioritization of the sector make Navarra an attractive place to set up. An example of this is the launch of the public/private governance body "NavarraFilmIndustry", and the parliamentary unanimity for the maintenance of the audiovisual industry as one of the six strategic economic sectors.

Third, the research emphasizes that this sector prioritizes short term results and subsidies. Each project involves an important effort and to be an atomized sector implies that it is not easy to find people within the team dedicated to innovation. Animation and video games can be a line of work and companies and studios could be attracted to set up in Navarra. For this, it is necessary to facilitate its implementation by focusing on social issues, training the professional profiles that this sector needs, developing sources of financing as well as infrastructures, creating R&D in the audiovisual industry and attracting the implementation of an important production company or platform to Navarra.

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Research Article

# Four types of Social Innovation and their impact on democracy in the 21st century

## Cuatro tipos de Innovación Social y su impacto en la democracia del siglo XXI

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**Abstract:** In modern history, there are various types of social innovation that have changed the world in different ways. In part, they go hand in hand with democratisation processes, but especially in the 21st century they harbour potential that threatens democracy. In this article, four types of social innovation are derived from the history of discourse and analysed in terms of their connection with democracy. The article argues that, especially in complex times, the acceptance of the new depends on how democratically it comes about and that, while strengthening democratic innovations is central to Europe's future, they are challenged by authoritarian notions of innovation. As a decisive parameter for a successful improvement or preservation of democratic systems, the article highlights the importance of the broadest possible inclusion, representation and participation in all four types.

**Keywords:** social innovation; democracy; 21st century; inclusion; participation.

**Resumen:** En la historia moderna, existen varios tipos de innovación social que han cambiado el mundo de diferentes maneras. En parte, estos han ido de la mano de los procesos de democratización, pero especialmente en el siglo XXI, han representado una amenaza para la democracia. En este artículo, se identifican cuatro tipos de innovación social derivadas de la historia y se analizan en términos de su conexión con la democracia. El artículo argumenta que, especialmente en tiempos complejos, la aceptación de lo nuevo depende de cómo se produzca democráticamente y que, si bien el fortalecimiento de las innovaciones democráticas es fundamental para el futuro de Europa, éstas se ven desafiadas por las nociones autoritarias de la innovación. Como parámetro decisivo para el éxito de la mejora o preservación de los sistemas democráticos, el artículo destaca la importancia de la inclusión, la representación y la participación más amplias posibles en los cuatro tipos.

**Palabras clave:** innovación social; democracia; siglo XXI; inclusión; participación.

### 1. Introduction

In the history of modernity, we essentially find four types of innovation (Godin, 2012; Pausch, 2018). Beginning with the idea that the future can be shaped by human beings, a critique of traditional power relations and of the divine grace developed at the end of the Middle Ages. The assumption that it is not God or earthly saviours commissioned by him who determine the



fate of the world leads equally to innovation and democracy. This is reflected in the discourse history of both terms. However, it does not mean that innovation is always democratic or contributes to more democracy. The two phenomena can be mutually dependent, but innovation can just as easily contribute to strengthening authoritarianism (Evangelista, 2020; Curato & Fossatti, 2020). For example, the totalitarian regimes of the 20th century were particularly innovative in developing technologies that massively changed social life and destroyed democracies (Evangelista, 2020). But democratic states also produced innovations that damaged democracy (Felt & Fochler, 2009). In the 21st century, this situation has worsened as acceleration, digitalisation and aspects of globalisation threaten the democratic backbone of technological innovations (Rosa, 2017). The purpose of this article is to outline paths to the future of innovation that strengthen democracy. To this end, the four types of social innovation in the modern era are described, in order to then classify them in terms of their effects on democracy and argue for democracy-enhancing innovation for the 21st century.

## 2. Social Innovation and the emergence of democracy in the modern era

### 2.1. Context and historical debate about innovation

The first type of social innovation, which refers to the goal of emancipation, has the longest historical and conceptual tradition. The idea that the future is not controlled by God but can be shaped by human beings developed in the decades of the Enlightenment at the same time as the idea of modern democracy and found a peak in the French Revolution of 1789. The idea that the future can be shaped by humans is therefore a relatively recent phenomenon in historical terms and an important prerequisite for the emergence of innovations (Heintel, 2009, 87).

At that time, innovations were not primarily seen as inventions, but as essential social changes that involved the inclusion of new groups of the population or the bringing about of changes by completely different actors in society. They were thus also seen as something that threatened the established order and therefore had a reputation as something dangerous. In the Renaissance, innovation was considered heresy (Godin, 2012, 8). Later, it was associated with the ideas of the French Revolution and those of socialism (Godin, 2012, 6). In the related conceptual understanding, a social innovation is given when it aims at the release from paternal authority, the liberation of a slave or altogether the liberation of individuals from coercion, oppression and inequality, i.e. an - in the sense of universalistic human rights - emancipation encompassing all parts of society. This concern, which was shared by founding fathers of modern sociology such as August Comte (cf. Comte 1852), met with widespread criticism among conservative social classes and elites. As shown by Godin (2012) the work of William Lucas Sargant, an English economist of the late 19th century, demonstrates this. In a critical publication entitled "The social innovators and their schemes", he accused the social innovators of his time of working schematically and conspiratorially with subversive and revolutionary methods (Sargant, 1858, iii-v). Anarchists like Pierre Joseph Proudhon or social utopians like Robert Owen were included in the group of these social innovators at the turn of the 19th and 20th centuries (Godin, 2012; Sargant, 1860, 446).

Social innovation was thus regarded at the time as a revolutionary and subversive programme for the realisation of freedom and equality. This revolutionary connotation was later replaced by a social reformist one, which also made the concept of innovation less dangerous to ruling elites (Godin, 2015). Subsequently, it was used less frequently overall and then usually less revolutionary than humanistic.

Chronologically, clearly after the emergence of an emancipatory approach to social innovation, namely only at the beginning of the 20th century and under the impression of the Industrial Revolution of the second half of the 19th century, the concept of innovation was taken up by Joseph Schumpeter in 1911 (Schumpeter, 1911, 1926) and related to economic development. From his influential economic theory, a second type of social innovation can be derived, which

can be interpreted as adaptation to economic and technical innovations or their use (Pausch, 2018). The change in social practices thus takes place according to what has been developed before and has been able to establish itself on the market. For Schumpeter, as with closed innovation, the essence of innovation remains the new, which proves to be better than the old and therefore usually displaces it. As a result of the displacement of the old, there are consequently losers in innovation processes. These processes have a profound effect on society (Schumpeter, 1911, 1926), because citizens and consumers have to adapt to the innovations of the economy and technology. In this understanding of the term, social innovation is merely the consequence or side effect of technological-economic innovations. Its goal is the adaptation to new technologies and products or their use. It is precisely at this point that two paths to modernity emerge: an emancipatory one, which promotes democracy and is promoted by democracy, and a technological-economic one, which at least potentially endangers democracy. The fact that Schumpeter did not connect his theory of innovation with his theory of democracy remains a curiosity that reveals research desiderata on his thinking (Schumpeter, 1950).

Before the distinction between democracy-promoting and democracy-threatening innovations is refined, a typology is presented, which will subsequently be interpreted in terms of the two forms. For in addition to the two types described, the emancipatory type and the type of social innovation as adaptation, there is also the type of social innovation as problem-solving, which is more technocratic in nature, and the type of social innovation as local norm deviation.

After the concept of innovation was primarily used in economic terms for a long time, in the second half of the 20th century it also attracted renewed interest in the social sciences (Hochgerner, 2012). Various sociologists and social actors included it in their standard repertoire of relevant topics. Social innovation was now no longer interpreted merely as adaptation or utilisation, but redefined - without, however, a simple reversion to the older emancipatory usage. According to Gillwald (2000, 5) social innovations are, in short, socially momentous regulations of activities and procedures that deviate from the previously customary pattern. They are possibly everywhere in social systems, result in behavioural changes and are related to, but not the same as, technical innovations. This definition leaves many questions unanswered, especially those about the difference between an innovation and general social change. Howaldt and Jacobsen emphasise that social innovations are in any case about finding solutions to social problems (Howaldt & Jacobsen, 2010). Howaldt and Schwarz state that social innovations tend to be used as descriptive metaphors in the context of phenomena of social change or social modernisation (Howaldt & Schwarz, 2010, 54). In their view, a social innovation is a recombination or reconfiguration of social practices in certain fields of action or social contexts, intended by certain actors or agents, with the aim of solving or satisfying problems or needs better than is possible on the basis of established practices. A social innovation needs to be socially accepted and diffuses broadly into society (Howaldt & Schwarz, 2010, 54). In addition to the criterion of newness or renewal, four decisive aspects stand out from this very complex definition, namely 1. intended search for solutions to social problems, 2. independence from economic profit, 3. broad social diffusion and 4. change of social practices.

Howaldt and Schwarz point out that innovations do not produce good per se, but are dependent on perspective and thus ambivalent (Howaldt & Schwarz, 2010, 54). They strip the term of its strong normative meaning, as it is inherent in the emancipatory type. The fact that social innovations, unlike technological or economic ones, are not aimed at increasing profits is largely undisputed. If one understands the emergence of social problems as constructivist with Blumer, innovation can be sharpened to problem solving. For Blumer, social problems are mainly results of a process of collective definition. They do not exist independently of this as a constellation of objective social conditions (Blumer, 1975, 102). In his five-step model, he points out that a problem must first be perceived, recognised and defined as such by a group and then brought to public recognition. At this point, democracy comes into play as a framework condition for social innovation, because only in democratic societies is it possible to negotiate problems in

public (Pausch, 2022). From the third stage, the mobilisation of strategies for action, the focus on solving the social problem begins, which continues with the creation of plans for action and their implementation (Blumer, 1975). If one follows this sociological approach, one can also conceptualise social innovation as a novel solution to a social problem along the aforementioned five stages - here it essentially begins from stage 3, the mobilisation of strategies for action, and is concretised in the subsequent creation of solutions.

Finally, another view of social innovation is offered by Canadian sociologist Yao Assogba with recourse to various classics of sociology such as Max Weber or Raymond Boudon. According to Assogba, a social innovation is the response to a concrete social and localised problem, as a solution to a situation experienced as unacceptable or unsatisfactory. It is usually based on a humanistic motive. What no longer seems acceptable is to be changed (Assogba, 2010). This starting point resonates with the need for revolt against oppression, lack of freedom and injustice as described by the French philosopher Albert Camus. The slave who stands up to his master is at the beginning of this kind of social innovation, which he demands, however, not only for himself but for everyone (Camus, 1997; Pausch, 2019). With its emphasis on the local aspect, it differs from the previously mentioned assumptions, even if the goal is basically problem-solving here as there. However, while the initiative in the previously discussed type comes more from the government or administration, here the need for change is carried from the bottom up, as it is not seen or deliberately ignored by those in power.

The approach thus has its starting point on a small scale, in contrast to governance processes or open innovation, which are each initiated by the elites. It is not where institutionalised power and its actors start that this kind of innovation begins, but on the contrary, where this institutionalised power is challenged "from below" or simply ignored. Social innovation thus develops here in a "little codified" way, in a "certain clandestinité", i.e. potentially underground, since it involves deviant solutions that imply a violation of established rules. Another characteristic of social innovation is that it aims at a social finality and underlying values and - in addition to diffusion and acceptance - institutionalisation as the final stage, which in turn requires state intervention (Assogba, 2010, 2). "Innovation thus inscribes itself in a dialectic that involves, on the one hand, the rupture with the institution, and on the other, the reconstruction of the institution as a new norm, which in turn can be questioned." (Assogba, 2010, 2). So while social innovation as problem solving refers to a coordinated and planned act of governance by legitimised and organised actors, Assogba points to the subversive element of innovation. It is a bottom-up process. The pursuit of social finality in a localised space reveals the normativity of innovation. The focus is not on management or governance, but on shaping and changing the social. The actors of this kind of innovation often act in the background (i.e. subversively), at least initially, because their solutions can be threatening to the establishment (i.e. the norm-setting actors). The method is nevertheless ultimately dependent on the involvement of various actors in order to achieve acceptance and democratic legitimacy but can be compared to a step-by-step plan that begins in secret and gradually becomes public. Blumer's model mentioned above is thus also relevant for this type. The components of a social innovation are:

1. The starting point is a concrete local problem, which is responded to with a novel solution.
2. The aim is not only to solve the concrete local problem, but to achieve a social finality based on values such as equality or justice, thus democratic improvements.
3. Social innovation is supported by a multitude of actors. It starts from a few local actors and spreads through a democratic process and negotiations and networks.
4. Social innovation proves its efficiency through diffusion and adaptation outside its original, local application framework. It is considered a successful experiment that is transferable to similar situations.
5. Institutionalisation is the final stage of a successful social innovation. This is usually associated with state intervention, i.e. legal implementation. (Assogba, 2010, 2).

## 2.2. The 4 types of Social Innovation

The history of the term innovation thus shows several changes in meaning since the end of the Middle Ages. From the four understandings of innovation described above, types can be derived that differ from each other, not in all aspects, but in relevant aspects: either in the goals, the methods, the actors of innovation or in their temporal and spatial horizons. Individual innovations cannot always be clearly assigned to one type or another. In some cases, mixed forms can occur also in relation to the impact on democracy<sup>1</sup>. Finally, it is exactly this question of the impact on democracy that is of particular interest for this article.

**Table 1.** Four types of Social Innovation.

	<b>TYP 1:</b>	<b>TYP 2:</b>	<b>TYP 3:</b>	<b>TYP 4:</b>
	<b>SI as emancipation</b>	<b>SI as adaptation to technological innovation</b>	<b>SI as problem solving</b>	<b>SI local norm deviation</b>
<b>Goals</b>	Emancipation	Profit	Problem solving by management	local problem solving with emancipatory goals
<b>Methods</b>	<b>BOTTOM UP</b> through reform, rebellion or revolution	<b>TOP DOWN</b> through marketing or open innovation	<b>TOP DOWN</b> through technocratic management or governance	<b>BOTTOM UP</b> through subversion or rebellion
<b>Initiators/actors</b>	Revolutionnaires, rebels, reformers	Entrepreneurs, inventors	Managers, civil servants	Activists
<b>Spatial dimension (at initiation)</b>	Global, universal	Market-oriented (target groups)	State or sub-state levels (governmental)	Local
<b>Time dimension (impact)</b>	Midterm to longterm	Short- and midterm, but long-term impact	Short- and midterm	Midterm
<b>Democratic impact</b>	Positive with a possibly negative turn	Possibly positive, negative or neutral	Possibly ositive, but negative or neutral	Mainly positive

Source: Author's elaboration. Translated and adapted (Pausch, 2018).

In this table, the four types derived from the discourse history of social innovation are summarised. Their impact on democracy cannot be seen one-dimensionally. While the goal of emancipatory innovation is always to improve participation and increase political freedom and equality, it can also take an authoritarian turn in an unintended direction, as we saw in the course of the French Revolution. Nevertheless, it tends to promote democracy. Adaptation to technology, on the other hand, has a higher potential to be used for anti-democratic causes, although it has not infrequently also advanced democracy, at least indirectly. The third type of innovation as problem-solving, as a technocratic-pragmatic approach, is not primarily interested

<sup>1</sup> An example of such a hybrid form is the EU project ICARUS, which is about innovative approaches to urban security. Cities work together with the police, social workers, scientists and other stakeholders. Special methods such as design thinking were used to identify problems and develop innovative solutions. Here the different types of social innovation as a problem solution mix with that of local norm deviation. When it comes to goals, the focus is just as much on emancipation as security policy. And even technological solutions can be developed within the project. For more information on the project see: <https://www.icarus-innovation.eu/>

in democracy, and can therefore both benefit and harm it, depending on the case. The fourth type, on the other hand, has an underlying democratic note similar to that of emancipatory innovation. By focusing on a local problem, its effect is to promote democracy on a small scale. It hardly poses a real democratic danger and has thus a mainly positive impact on democracy. In terms of direction and impact as well as actors, it is not always clear what the relationship is between bottom-up and top-down processes. Heiko Berner brings empowerment into the debate as a missing link that can close the gap between the political system and citizens (Berner, 2023).

### 3. Paths to modernity: innovations that promote and threaten democracy

If we look at the innovation processes of the modern era, we can roughly divide them: We can refer to democratic innovations as those that strengthen democracy as a result. Neutral innovations have no discernible effect on democracy. Innovations that threaten democracy are those that push democracy back. Democratic innovations are those that benefit democracy in a broad sense. This goes further than recent definitions of democratic innovation, such as those formulated by Smith (2009), Geissel (2023) or Elstub and Escobar (2019). The broader approach is able to capture historical processes towards democratisation. For this purpose, we can refer to the Varieties of Democracy Index V-Dem of the University of Gothenburg. V-Dem distinguishes five basic principles of modern democracy: electoral, liberal, participatory, deliberative and egalitarian (Vanhanen, 2000). All innovations that help these basic principles and improve them can be qualified as democratic innovations in terms of their output. In terms of input, we can understand democratic those processes that focus on participation and inclusion, reject systematic violence against people, seek dialogue and not only want to achieve the above criteria, but also take them into account in their methods and actions.

It is important to distinguish between an output or result dimension and an input or process dimension. The latter is about the question of whether the process was in accordance with democratic principles. The outcome dimension focuses on the question of whether the outcome of the process strengthens democracy or not. Since this article is primarily concerned with a conceptual classification, only a few examples are cited without deeper analysis of the details. However, this would be necessary in further research, from a historical as well as a current perspective, and would also be indispensable for examining the usefulness of the concept.

Conversely, innovations that are detrimental to democracy are to be regarded as innovations that endanger democracy. This is the case when political rights are restricted, minorities are discriminated against, access to voice and co-determination is made more difficult, etc. An innovation cannot always be clearly classified as promoting or endangering democracy. Often, it is a complex interplay of different variables that decides which effect predominates. In certain cases, there can also be winners and losers, i.e. groups that gain democratic participation through an innovation while others lose. An example of this could be the switch to digital voting. The conceptualisation proposed here serves as an orientation and does not assume that every individual case can be clearly classified.

If one considers the above-mentioned types of innovation, the first one, namely the emancipatory type, is clearly democracy-promoting in terms of the goal and the intended output. The struggle for political equality and emancipation corresponds to several principles listed in the V-Dem Index. It calls for equal political rights, especially the right to vote (electoral), participation and co-determination (participatory) and an egalitarian society overall. Only the deliberative demand is not explicitly included in the emancipatory type, although deliberation can go hand in hand with the other demands. The historical example of the labour movement or the suffragettes in the struggle for the right to vote shows this. In the 21st century, the demand for an extension of the suffrage to people with foreign citizenship or a reduction of the voting age would be understood as democracy-promoting innovations in this sense. Also measures that advocate for human and civil rights through the right to vote can be seen as emancipatory, democracy-promoting innovations.

When considering the input dimension of such innovations, one has to take into account whether the same rights are fought for through democratic means, i.e. whether dialogue is relied on or whether violence is considered a legitimate means. This is a highly complex question in terms of political theory. It touches the relationship between revolt as non-violent resistance and revolution as violent overthrow, which is based on the philosophy of Albert Camus (1997) (Pausch, 2019). Without going into this problem in more detail here, it can be said that the systematic use of violence can in any case be classified as anti-democratic, while under certain authoritarian conditions the resistance of the oppressed often cannot do without violence. Rodion Ebbighausen refers, with reference to Camus, to some elements that need to be taken into account for the use of violence as self-defence if one feels committed to the fundamental democratic and peaceful idea: Firstly, it would have to be self-defence and directed against violence by extremists or authoritarian rulers in order to avert even greater harm. Secondly, all other means must have been exhausted beforehand. Thirdly, it must remain the exception and not the rule, and fourthly, care must be taken to prevent any collateral damage and to spare third parties (Ebbighausen, 2013). Finally, those who use violence under these criteria to achieve a democratic goal must always be aware of the problematic nature of violence and never generally understand it as a legitimate method (Camus, 1997). All this applies not only to the type of emancipatory innovation, but also to the others. The input dimension, i.e. the method of enforcing an innovation, must be oriented towards democratic standards and in exceptional cases respect the aspects mentioned above.

In the second type of innovation, that of adapting to or using technologies and inventions, the democratic benefit is often not clear-cut, but depends on many intervening variables. If we take the invention of new means of communication as a criterion, for example, these have historically been quite conducive to democracy in the longer term, since they have improved and expanded access to information and the possibilities of having a say, regardless of whether we are talking about the printing press, the mass media or the internet. At the same time, however, they have created new exclusions. At any rate, they are conducive to democracy if they improve the aforementioned criteria of electoral, liberal, participatory, deliberative and/or egalitarian. Online elections, digital petitions, the internet and social media potentially contribute to an easier expression of opinion (Lewandowsky & Pomerantsev, 2022). At the same time, new media bear the danger of exclusion and can often be used by rulers to secure authoritarian conditions (Asimovic et al., 2021; Bakir & McStay, 2018). The example of digitalisation and artificial intelligence can be used to illustrate the problems. The innovations that are advancing at breakneck speed in these areas require adaptation to them. Today, it is hardly possible to lead a life without digitalisation. Those who do not use a smartphone or do not have an email address can no longer participate in social life on an equal footing (Fan & Zhang, 2021). But the dependency goes much further, so that without a Google account or MS applications, much of what is part of social life in the 21st century is not possible. This creates dependencies on private companies that are becoming more powerful and largely lack democratic back-stops (Fuchs, 2021). This is one of the biggest democracy problems of our time. The knowledge about the emergence of such technologies as well as the resources are also completely unequally distributed and pose new challenges to the idea of democratic equality. In their emergence and ownership, technological innovations would therefore have to be given a more inclusive flavour in order not to be primarily democracy-endangering.

The type social innovation as problem-solving harbours both potentials, while the one of local norm deviation as described by Assogba (2010) can rather be regarded as democracy-promoting and usually already carries this claim in itself. The more technocratic approach to problem-solving, on the other hand, can very clearly also be democracy-endangering, as it has a strong bureaucratic flavour, which in turn does not prioritise a democratic backbone and the adherence to or achievement of the principles of electoral, liberal, participatory, deliberative and egalitarian. The measures discussed as democratic innovations in the narrower sense, i.e. citizens'



councils, mini publics or citizens' assemblies, youth councils, etc., can often begin as local deviations from norms, but can also be initiated from above as solutions to problems and are democratically oriented in their output. In their emergence and implementation, however, not all the requirements for democratic legitimacy and inclusiveness are always fulfilled.

The most discussed and relevant democratic innovations at the beginning of the 21st century are an extension of the right to vote, the democratisation of supranational entities, for Europe above all the European Union, citizens' councils at various levels, and a democratisation of workplaces, economic relations and education systems (Herzog, 2023; Landemore & Fourniau, 2022). Individual countries are facing further specific challenges (Merkel, 2019). However, perhaps the more relevant question for democracy in the 21st century is to what extent technological innovations (new media, artificial intelligence, and digitalisation) have a negative impact on democracy and its principles, as they are described in the V-Dem index (Vanhanen, 2000).

#### **4. Discussion and conclusions: Democracy-promoting innovation for the 21st century**

Innovation has always had a certain relationship to politics and power issues. Democracies have done much in their modern development to make changes to the status quo and thus innovation possible. At the same time, however, innovations can also endanger democracy, and this is especially true at a time when democracy as a whole is in crisis and a new counter-wave of authoritarianism is emerging worldwide (Merkel, 2018). The early 21st century has produced a large number of socially relevant innovations. At the same time, the number of democratic states has been declining since 2005. Even old and well-established democracies are losing quality. This raises the question of which innovations to strive for in the future and how to implement them. A look at strategies of innovation is crucial from this point of view.

If one draws on the four types of innovation mentioned above, emancipatory innovations in the 21st century are manifold, recognisable and usually driven by social movements. The strongest dynamics can be seen in the area of the climate movement, which can be considered innovative-emancipatory and democracy-promoting in several respects. Both in terms of climate policy goals and in its methods, innovative approaches are evident that have an impact on democracy. The goal of leaving a viable planet for future generations raises an extremely exciting question for democracy: To what extent do future generations, who are either not yet born or do not yet have the right to vote, have inalienable rights and to what extent must these be protected by current policies (Asenbaum et al., 2023; Maeda, 2021)? What is emancipatory about the demands of the climate movement is the idea of freeing future living people and other living beings from their dependence on current politics. This results in a certain tension between the interests of currently living citizens and the formulated or assumed and very probable interests of still very young or future living citizen. The difficulty for democracy is to weigh up to what extent present interests can be curtailed for the existential interests of future citizens without undermining other principles of democracy (Beckman, 2013). This is not trivial and cannot be answered unequivocally, but the potential for improving democracy lies in the efforts of many climate activists. In addition to the climate goals and corresponding demands, the climate movement is also characterised by the fact that they push for innovations in democracy and at least propose them as a supplement to parliamentarism (Willis et al., 2022). First and foremost are the climate councils, which in France, for example, meet on the basis of randomly drawn citizens to develop policy proposals (Landemore, 2023). Within their own movement, Fridays for Future, for example, are also trying new, democratic ways of decision-making (Della Porta & Portos, 2023). Another example of innovation that promotes democracy as emancipation is the Black Lives Matter movement, the Pride movement and others that work against discrimination and equality (Della Porta et al., 2022). The extent to which they are able to assert their concerns or defend what they have already achieved will depend very much on the general development of democracy and its resilience.

The second and third types, i.e. innovation as adaptation or use of technological innovations, and innovation as problem-solving by bureaucracy, are at the crossroads between democracy-promoting and democracy-threatening innovation. As argued earlier, inventions and research results from a wide range of fields are key drivers of social change and social innovation, i.e. the transformation of social interactions. They can drive democracy and often have done so in the modern era, but rarely without producing innovation losers. Today, we face very specific challenges. Technologies, digitalisation, artificial intelligence can help spread misinformation, imitate voices and faces, perfect plagiarism to the point of undetectability, make combat robots operational, and so on and so forth (Risse, 2021). Two problems of democracy become apparent. The first is the output that threatens democracy, i.e. technologies that restrict the lives, equal rights and freedoms of citizens and work in favour of authoritarian regimes. The second danger is in the development and research of these technologies themselves and in their framework conditions. Hardly any of the great technological inventions of the last centuries were democratically desired or sufficiently legitimised. What was researched at what time with what goals was largely left to the freedom of the market or science, very often also to the military. The atomic bomb, genetic engineering, the internet and so on did not come into being because a democratic majority had explicitly spoken out in favour of research in these areas. Even though in times of democracy, technology and science policy are linked back to parliaments, the public has had no realistic possibility to influence it. There may be exceptions to this rule, but they are not very significant.

The resources for inventions, developments, etc. are not democratically distributed either, but in the hands of a few, with the exception of state research institutions. All this leads to a problem of democracy with accelerated technological progress (Rosa, 2013). The particular challenge with this type of innovation is that it is not only applied in a way that inhibits democracy in authoritarian regimes, but that it is also common in existing, established and functioning democracies and can thus contribute to undermining them. Now, it can certainly be assumed that authoritarian regimes still do not allow any democratic linkage of their innovation policy and that they push ahead with innovations under the aspect of maintaining their own power. In contrast, democratic forces are relatively powerless and limited to international reactions such as boycotts, public pressure or diplomatic measures. In their own sphere of influence, however, it is all the more important to focus on innovation that promotes democracy and to contain the aspects that endanger democracy. Democratic minimum standards in innovation policy would be important. This could mean, for example, that participation plays a greater role in innovation processes, in the form of communicative rationality as defined by Habermas, i.e. according to the principle that those who have a say in an innovation and can get involved are more likely to accept it (Habermas, 1981). We can assume that people who have been involved in a process, who have been able to contribute, to criticise, to put forward their own proposals, will accept the result of this process better, even if it is not considered ideal or runs counter to their own interests (Habermas, 1981). This can also be understood as a dialectical principle, in that contradictions clash, are negotiated in discourse processes and finally lead to a result that need not be synthetic in itself, but is at least legitimised for a time by the upstream democratic discourse and meets with broad acceptance. In innovation research, the conviction has prevailed for some years that the participation of the target audience, potential consumers, users or - in the case of social innovations - citizens, not only increases the acceptance of the result, but also the quality of the "product" (Faber, 2008). Under the catchword "open innovation", this idea is partly systematically implemented in corporate innovation management. Democracies should also increasingly demand this from entrepreneurial, technological innovation.

The same applies to the bureaucratic form of innovation as problem-solving from above, from ministries and official offices. Here, too, it can be assumed that authoritarian regimes try everything to deal with social problems under the aspect of maintaining power. Democracies must take care that their innovations do not create inequalities, but on the contrary fight them. In



any case, it must be possible to expect all actors in the political system, including the bureaucracy, to work to promote democracy and to pay particular attention to this issue, especially in times of burgeoning authoritarianism.

Four types of social innovation can be distinguished in recent centuries. They have contributed to democratisation in different ways, but sometimes also have the potential to threaten democracy. In the 21st century, where authoritarian tendencies increasingly threaten democracy, special attention should be paid to power relations and the conditions under which innovations emerge, as well as analysing their consequences. In the future, the preservation of democracy and its spread will also depend decisively on how we shape our innovation policy.

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Research Article

# Exploring the future with PRO-SPECT: an evidence-based modular foresight approach

## Explorando el futuro con PRO-SPECT: un enfoque modular de prospectiva basado en la evidencia

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**Abstract:** In the face of rapid technological advancements and unforeseen societal events, predicting the future of work proves challenging. Foresight, the exploration of potential futures, emerges as a valuable strategy to navigate labor market uncertainties. However, existing foresight methods often lack alignment with the goals prioritized by sectoral and organizational stakeholders. Addressing this gap, we introduce PRO-SPECT (PROfessional Sectoral perSPECTive), a modular foresight approach crafted through literature review, expert interviews, and workshops. Tailored to meet the needs of policymakers, organizations, and communities, PRO-SPECT consists of four key steps: Scope, Scan, Impact, and Perspective. This evidence-based approach aims to equip stakeholders with actionable insights for the future of work and beyond. This article provides a comprehensive overview of PRO-SPECT, encouraging further adoption and knowledge development in foresight practices.

**Keywords:** foresight; future; scenario development; work; labor market.

**Resumen:** Ante los rápidos avances tecnológicos y los imprevistos sociales, predecir el futuro del trabajo resulta todo un reto. La prospectiva, la exploración de futuros potenciales, se perfila como una valiosa estrategia para sortear las incertidumbres del mercado laboral. Sin embargo, los métodos de prospectiva existentes no suelen estar en consonancia con los objetivos prioritarios de los agentes sectoriales y organizativos. Para colmar esta laguna, presentamos PRO-SPECT (PROfessional Sectoral perSPECTive), un enfoque de prospectiva modular elaborado mediante revisión bibliográfica, entrevistas a expertos y talleres. Adaptado a las necesidades de los responsables políticos, las organizaciones y las comunidades, PRO-SPECT consta de cuatro pasos fundamentales: Alcance, Exploración, Impacto y Perspectiva. Este enfoque basado en pruebas tiene por objeto dotar a las partes interesadas de ideas prácticas para el futuro del trabajo y más allá. Este artículo ofrece una visión general de PRO-SPECT y anima a su adopción y al desarrollo del conocimiento en las prácticas de prospectiva.

**Palabras clave:** prospectiva; futuro; desarrollo de escenarios; trabajo; mercado laboral.

### 1. Introduction

The labor market and the way we work are subject to constant change, influenced by rapid technological advancements and unexpected societal events like COVID-19. These factors

contribute to a significant level of uncertainty about the future of work (TNO/RIVM, 2023; WRR, 2020; McKay et al., 2019; SER, 2016). Yet, anticipating and preparing for what lies ahead is essential. What might be coming our way and how do we prepare for it? How can we proactively respond to these developments and be resilient in an ever-changing labor market and world? Which skills do employees need to remain relevant? Which jobs will disappear, and which jobs will arise? Answering these questions is difficult. The labor market's inherent uncertainty and dynamic nature, coupled with the multitude of influencing variables, render conventional predictive methods susceptible to errors (Bakule, Czesane & Havlickova, 2016; Khanna et al., 2022). Traditional forecasting approaches, for example, rely on incomplete and/or historical data and on conventional (macroeconomic) assumptions, rendering the extrapolation of such data for future predictions inherently unreliable.

A promising alternative for delving into the future of work and the labor market is found in foresight — an approach that permits the exploration and validation of assumptions in the face of unpredictability. In contrast to conventional forecasting methodologies, foresight offers a methodical means of envisioning multiple potential futures, rather than a singular trajectory, thereby enriching the decision-making process. Foresight specifically supports decisions in areas involving relatively long lead times, such as long-term labor market planning (Di Bartolomeo et al., 2001). Consequently, foresight emerges as an optimal approach for unraveling the complexities inherent to work and labor market, thereby enhancing our readiness for diverse potential scenarios in the evolving landscape of work (Khanna et al., 2022).

In the context of work and labor market, foresight has predominantly been applied to support policy and decision-makers in strategic planning purposes. This application has typically been confined exploring a spectrum of probable, preferable, and plausible futures, with an emphasis on broad and long-term horizons (e.g., how technological breakthroughs or the green and energy transitions may transform the labor market (WEF, 2023); how digital technologies will impact skills, jobs, and the wider economy by 2030 and beyond (Brown, Sadik & Souto-Otero, 2021). While undeniably valuable for informing global-, European-, and/or national-level considerations, such an approach may not seamlessly address the needs of sectorial and (smaller) organizational stakeholders, who often prioritize short-term or more actionable goals when preparing for the future. For instance, employing foresight methods can provide governments with insights into the future skills required to cultivate a resilient, flexible, and adaptable workforce on a national scale, but these approaches fall short in guiding organizations regarding the specific skills essential within their sector or organization. More tangibly, it does not elucidate how to develop these skills among their employees. To fulfill the latter requirements, a more adaptable foresight approach is necessary – one capable of offering potential futures at the sectorial or (smaller) organizational levels, and pragmatic and adaptable enough to translate these potential futures into concrete, achievable action steps tailored to the specific needs of the sector or organization in question.

This paper serves as the foundation and scientific rationale for AUTHOR's sectoral foresight approach, a modular approach specifically aimed at systematically exploring the future of work and labor market on a regional, sectoral, and/or organizational level. This evidence-based approach goes beyond existing foresight approaches employed in strategy and policy development by utilizing a clear rationale for data gathering and method selection based on existing literature, domain knowledge and action research. The developed approach, called PROSPECT (PROfessional Sectoral perSPECTive), combines quantitative and qualitative data, and involves collaboration with partners and experts from the start. This bottom-up active engagement of various stakeholders not only constitutes a critical component of the foresight process (Geurts et al., 2022; WRR, 2010), but also ensures that action steps can be tailored to specific needs. As such, this approach can support sectors and organizations, including small and medium-sized enterprises, with short-, medium-, and long-term strategic planning, ensuring –for example– that they are equipped with the right talent to meet the needs of the future.

In the following, we first discuss the benefits of foresight for exploring the future of work and the labor market in more detail. Then, we outline the development and evolution of the PRO-SPECT approach, designed to provide organizations, public or private entities, and policymakers with a structured and comprehensive approach to address their foresight inquiries. The primary time frame considered for this specific foresight approach is 5-15 years. Note, however, that the methodology can be adapted to address other themes, and can accommodate shorter and longer time frames, due to its modular structure and flexibility in methods.

## 2. Exploring the Future of Work and Labor Market with Foresight

As discussed above, anticipating the future of work and the labor market is a complex undertaking. The application of systematic future exploration provides a valuable means of identifying emerging labor market trends and assessing the implications of potential strategies (Bakule et al., 2016). Policy makers and decision-makers often utilize future exploration to assess future prospects, address information deficits, and mitigate potential imbalances and mismatches. The most suitable approach varies depending on the level of uncertainties involved. Two methods commonly employed in future exploration are forecasting and foresight.

Forecasting entails providing a single and definitive representation of the future, often relying on quantitative techniques. This approach emphasizes the most likely future and leaves little room for uncertainties, making it well-suited for relatively stable environments with minimal unknowns. For instance, forecasting can be used for sales planning, in which organizations forecast how many products they need to create or how much money they might earn in a certain period, to decide whether to hire more employees or build more factories. Forecasting can also be used for workforce prospects, in which forecasting offers countries or regions a probability-based picture of future developments in terms of (un-)employment rates and the expected number of jobs, to achieve goals such as full employment and higher wages. Forecasting, however, can only provide so-called 'business-as-usual' outlooks that assume continuity of today's trends (Wilkinson, 2016). It relies on the availability of adequate labor market data, and, even when based on established principles and macroeconomic models, is relatively error prone (Bakule et al., 2016; Khanna et al., 2022).

Foresight, as defined by the Scientific Council for Government Policy, is a systematic study that examines potential future scenarios using scientific knowledge (WRR, 2010). It requires less formalized data than forecasting and depends on key experts and stakeholders, making it a highly interactive tool of social dialogue with relevant representatives (Bakule et al., 2016). Foresight concentrates on "exploring the unknown future, or in other words, exploring multiple possible futures" (WRR, 2010). Unlike forecasting, foresight relies predominantly on qualitative methods and deliberately incorporates uncertainties, recognizing the likelihood of change. Its primary purpose is to comprehend emerging external developments, assess their potential impact, and explore alternative futures. Put differently, its primary objective is to prepare for, rather than predict, future developments (Wilkinson, 2016). This proactive stance enables the provision of early warnings, for example regarding evolving skills mismatches in the world of work, allowing ample time for the vocational education and training sector to prepare for the skill demand in 10 years. Alternatively, foresight can unpack the different ways in which computerization advances may affect the demand for low-skills and low-wage jobs (cf. Barbosa et al., 2022). In contrast to forecasting, foresight also enables the incorporation of disruptive events or 'wildcards' such as pandemics or other crises and can therefore move beyond the business-as-usual outlooks (Di Bartolomeo et al., 2001).

In the PRO-SPECT approach, we deliberately adopt foresight as the method for future exploration. This decision stems from the belief that, in many cases, it is prudent to acknowledge the substantial uncertainty surrounding the future of work, rendering a singular vision inadequate. After all, in the face of the profound uncertainty characterizing the contemporary and future landscape of work, it is imprudent, at best, to rely on the historical stability of cause-



and-effect relationships assumed by traditional forecasting models. In fact, traditional forms of forecasting, which are heavily based on historical and familiar raw data, have often failed in the face of strategic discontinuities in the environment (Adegbile et al., 2017). The COVID-19 pandemic serves as a stark illustration, disrupting the precision of economic models and forecasts crafted by economists for metrics such as GDP growth, unemployment rates, and sectoral expansion (Khanna et al., 2022). By placing uncertainty and the potential for change at the core, as the foresight method does, sectors and organizations –including small and medium-sized enterprises– can strengthen their preparedness for what lies ahead when it comes to work and labor market.

One caveat with foresight studies is that they tend to follow no specific methodology: each study tailors the methodology according to its goals (Barbosa et al., 2022). Therefore, we synthesized the literature on foresight methods to arrive at a structured and comprehensive approach that can guide sectors and organizations in their foresight inquiries related to the future of work and labor market. We designed this approach in a modular way because the literature indicates that Foresight becomes more reliable when different and complementary methods are combined, as it reduces the probability of a biased result. Note that these methods most often comprise the creation of various future scenarios, although other methods like horizon scanning (identifying opportunities and threats that may arise in the future) or detecting weak signals (indicators of potential future changes) can also be employed. To also align with the goals of sectors and (smaller) organizations, we specifically designed our approach to allow for relatively short-term outlooks and to enable concrete actions.

### 3. Methods

The development of the PRO-SPECT approach involved a comprehensive process that encompassed a literature scan, interviews with experts, and interactive workshops.

The literature scan was conducted in a structured manner. The objective was to identify existing foresight methods from the scientific literature. Utilizing multiple electronic databases such as Scopus, Google Scholar, and PsychInfo, we searched for articles using relevant terms like "foresight," "review," and "method." To ensure thoroughness, we also examined recent volumes (published within the last five years) of scholarly journals such as *Foresight*, *Futures & Foresight Science*, and *Journal of Future Studies*. Additionally, we explored (grey) literature and referred to interview references to gather examples and practical insights into methods employed in the field.

The collected articles underwent a systematic review process. We assessed them based on methodological quality and practical applicability. A team of three researchers deliberated on the selected articles, and when consensus was reached, the chosen articles were read and analyzed in their entirety. From these, five articles were eventually chosen as the foundational basis for the PRO-SPECT approach (Fergnani, 2019; Geurts et al., 2022; Popper, 2008; Smith & Saritas, 2011; Voros, 2003). The remaining articles were employed to analyze and select the methods that form part of PRO-SPECT. These methods are detailed in Chapter 5. The process of synthesis involved considering the advantages, disadvantages, and criteria for choosing each foresight method, along with their suitability for sectoral foresight.

In addition to the literature review, we conducted interviews with nine experts, both within and outside of Koen et al. (2023). During these interviews, we discussed various foresight studies, scientific explanations, and practical lessons learned. The experts shared their experiences and examples of foresight methods, which displayed a wide range of approaches. Some experts focused on systematic monitoring of technological developments and presented them to potential users through a portal to assess their impact and value. Others employed standardized scenarios for product development, while some emphasized action research and contributing to transitional initiatives.

Lastly, two workshops were organized, engaging a total of eleven senior AUTHOR experts involved in foresight activities. We presented the initial version of PRO-SPECT and gathered feedback and advice from the participants. Their valuable input led to the incorporation of several optional methods into the approach with a specific focus on translating scenarios into concrete actions for sectors and organizations.

#### 4. Development of the PRO-SPECT approach

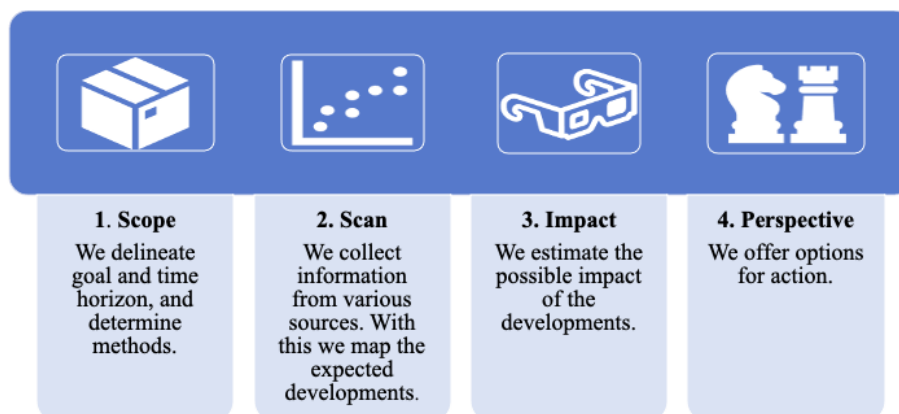
The development of the PRO-SPECT approach involved a thorough analysis of foresight processes from selected literature sources. The foresight process, as described in the literature, generally comprises several sequential steps, starting with information gathering and concluding with outcomes aimed at supporting strategy and policy development (Fergnani, 2019; Geurts et al., 2022; Popper, 2008; Smith & Saritas, 2011; Voros, 2003). While there may be slight variations in the precise scope and definition of these steps, the fundamental essence remains consistent across most sources.

Voros (2003) provides a comprehensive foresight framework that encompasses the following stages: 1) Input (what is currently going on?), 2) Analysis (what seems to be happening?), 3) Interpretation (what is really happening?), and 4) Prospecting (what might be happening?). These steps are then followed by 5) Outputs (what should we do?) and 6) Strategy (what will we do and how will we do it?). The process commences with the collection of data from various sources, including individuals and relevant reports or scientific literature (Input). Subsequently, the gathered data undergoes qualitative and/or quantitative analysis to derive meaningful insights (Analysis). In the Interpretation phase, the data is processed and tailored to align with the organization's objectives, often contributing to strategic planning. The knowledge derived from this analysis forms the basis for future explorations, termed Prospecting.

The literature also presents other foresight frameworks, each encompassing distinct steps, though with considerable overlap in objectives. Popper (2008) introduces five stages: Pre-foresight, Recruitment, Generation, Action, and Renewal, while Smith and Saritas (2011) outline Understanding, Synthesis & Modelling, Analysis & Selection, Transformation, and Action. Moreover, Geurts and colleagues (2022) present a hybrid AI expert approach with the steps: Scoping, Scanning, Trend Analysis, Impact Assessment, and Strategizing.

To develop the PRO-SPECT approach, we integrated and aligned these overlapping steps, disregarding minor definitional discrepancies. Consequently, the synthesis resulted in four distinct steps: 1) Scope, 2) Scan, 3) Impact, and 4) Perspective. Together, these steps should allow sectors and organizations to explore multiple potential futures and formulate strategies with concrete actions steps. Figure 1 provides an illustrative representation of the PRO-SPECT foresight framework.

**Figure 1.** The PRO-SPECT foresight framework.



Source: Authors' elaboration.



1. *Scope*: The initial step in the PRO-SPECT approach involves defining the foresight question and establishing a shared vision of the problem. This stage aligns with the systematic understanding (Smith & Saritas, 2011), scoping (Geurts et al., 2022), and pre-foresight (Popper, 2008) steps from the literature. Scoping is pivotal in setting the trajectory for subsequent stages and entails determining research questions, target audiences, methodologies, criteria for data source selection, and relevant experts. This clear scope guides the choice of foresight methods in subsequent steps and ensures alignment of goals and expectations, particularly in client-driven future studies.
2. *Scan*: In the second phase, a diverse array of methods is employed to gather data essential for future estimation. This extensive process encompasses both quantitative and qualitative data collection, culminating in an overview of critical external developments that hold influence over the focal issue, albeit with varying degrees of influence. Examples of such developments encompass technological advancements, ecological changes, and social transformations. This step corresponds to elements of analysis and interpretation (Voros, 2003), recruitment (Popper, 2008), synthesis & modelling, analysis & selection (Smith & Saritas, 2011), and scanning and trend analysis (Geurts et al., 2022). Scanning involves selecting potential sources, analyzing them to extract relevant developments, and generating a longlist of pertinent signals, external developments, and factors. Subsequently, expert interviews contribute to shortlisting key external developments deemed relevant to the issue at hand.
3. *Impact*: The third stage delves into assessing the potential impact of the selected external developments on the predefined outcome measure. If significant uncertainties surround the direction and pace of these developments, multiple scenarios are explored and analyzed. This stage shares similarities with prospecting (Voros, 2003), generation (Popper, 2008), transformation (Smith & Saritas, 2011), and impact assessment (Geurts et al., 2022). The impact analysis scrutinizes how the external developments identified in Step 2 might affect various dimensions of the problem statement. Acknowledging the non-linear and complex nature of impacts, this analysis considers interactions between developments, events, ecological and social conditions, and the actions of societal actors over time. The insights derived from this analysis facilitate a comprehensive understanding of reality and a range of alternative futures.
4. *Perspective*: The final stage of the PRO-SPECT approach aims to present action perspectives that support policymakers in making informed choices and developing strategies to prepare for the future. The ultimate goal of the PRO-SPECT approach, and foresight in general, is to enable users to proactively prepare for the future. This step aligns with strategy (Voros, 2003), action and renewal (Popper, 2008), action (Smith & Saritas, 2011), and strategizing (Geurts et al., 2022). During this phase, the focus shifts from exploring possible futures to determining how the insights gained can guide policy development and decision-making. The impact analysis findings are translated into practical applications that aid decision-makers in formulating and guiding strategic actions for implementation. These applications may involve assessing current policies' impacts and choices, providing early warnings about potential challenges or new opportunities, facilitating future-oriented planning, exploring disruptive developments, and proposing targeted focus areas. The involvement of stakeholders and experts in this phase fosters a shared understanding of change dynamics and allows exploration of future decisions and compromises, yielding a deeper insight into opportunities and threats across various scenarios. In the case of a client-driven future study, engagement of the client in this step is vital, as they must actively contribute and be open to questioning strategy and policy.

In certain foresight processes described in the scientific literature, strategy development and implementation follow the development of the action perspectives (Voros, 2003; Waverly

Consultants, 2017; Geurts et al., 2022). In the PRO-SPECT approach determining, shaping and discussing action options is the last step of the foresighting process, considering implementation of the strategy as a separate process to be conducted by a client, to adjust policies based on the findings.

Ideally, foresight should integrate into a cyclical process of strategy and policy development, wherein outcomes of actions are continuously monitored. By incorporating foresight results and advancing data and insights into subsequent scanning phases, the overall process embraces continuous assessment, adjustment, and refinement of strategies over time.

## 5. Implementation methods within the PRO-SPECT approach

To determine the methods within the PRO-SPECT approach, we amalgamated Popper's (2008) overview with Smith and Saritas' (2011) comprehensive assessment. The latter provided a clear delineation of each method's advantages and disadvantages, aiding us in selecting methods suitable for sectoral futures exploration. Additionally, we refer to The Futures Toolkit by Waverly Consultants (2017), which offers a detailed description of various tools applicable in the foresight process. The final selection of methods was the outcome of internal working sessions, supplemented where necessary based on relevant literature. Emphasizing replicability and manageability, we deliberately opted for clear methodologies, as these aspects are often missing or inadequately described in practice.

The methods used in the foresight process can be both quantitative and qualitative. Quantitative methods involve, for example, questionnaire surveys and extrapolation of existing data, while qualitative methods involve interviews with experts and scenario development e.g., using working sessions. In his overview of commonly used methods in scientific studies of foresight, Popper (2008) showed that literature review, expert consultation, and scenario development are fundamental research methods frequently used in every discipline (Popper, 2008). It is also notable that 10 of the 14 methods are qualitatively oriented. The top three methods (literature review, expert panels and scenarios) consisted of purely qualitative methods. This suggests that qualitative methods are more "popular" than quantitative and semi-quantitative methods. The popularity of qualitative methods within the foresight process is not surprising: after all, the foresight process is exploratory in nature and is informed by subjective judgments and interpretations of the expected changes (or lack thereof) that shape the future. Forecasting is more quantitative in nature, but it often requires many assumptions to be made regarding future developments, which, while creating a specific and unambiguous picture of the future, also risks creating a false security and false accuracy for the client if the future is (to a large extent) uncertain (WRR, 2020).

Within the PRO-SPECT approach, we identified 20 methods in total, most of them are more qualitative in nature. We have selected four or more possible methods per step, each answering a specific leading question. Table 1 provides a concise description of the "what" and "how" of each method and a suggestion of appropriate participants. For an in-depth practical elaboration of these methods, Koen et al. (2023) offers more detailed insights. Each step of the approach permits a range of methods, with the selection based on the problem statement, organizational context, and the foresight expert's tradition. The approach is inherently multi-method and iterative, meaning several methods may be utilized per step, and the selection of methods in a given step depends on the outcome of the preceding step.

The availability of resources such as time, budget, and expertise also influences the selection and tailoring of methods. Generally, a more thorough foresight process yields more valuable results. However, striking the right balance between time investment and maintaining momentum is crucial. A reasonable time for the process could range from two to four months, allowing for both thorough analysis and an efficient process (WRR, 2010).

1. *Scope*: This step involves establishing the foresight question, target group, time frame, and methodology. Methods for scoping include exploratory discussions with

policymakers, stakeholder analysis, baseline situation analysis based on existing data, and concept and definition delineation (EU, n.d.; Alder, 2021; Popper, 2008) (Table 1). For instance, stakeholder analysis workshops may be conducted to identify and involve relevant experts for consultation during the foresight study. Upon completion of the scoping step, a clearly defined goal, problem statement, and a shared understanding of the context are established. A conceptual model and time frame for the foresight study serve as guiding principles for the subsequent steps.

2. *Scan*: The second step entails identifying external developments (e.g., technological advancements, demographic shifts) potentially impacting the problem. The scanning phase involves data gathering through methods such as DESTEP analysis, literature review, quantitative research, expert interviews, Delphi technique, Horizon scanning workshops, or web scraping (Rastogi & Triverdi, 2016; TNO/RIVM, 2023; Popper, 2008; EU, 2020; Opeyemi, 2021) (Table 1). For example, DESTEP analysis involves consulting experts in interviews and workshops to compile a list of the most relevant external developments across six domains: demographic, economic, socio-cultural, technological, ecological, and political-legal. The outcome of the scanning process includes a shortlist of key external developments, an overall estimate of their impact on the problem, and an assessment of their uncertainty (e.g., regarding direction or pace). The selected external developments will be used in the following steps.
3. *Impact*: This step explores how external developments may affect the outcome measure and considers other relevant factors. The impact analysis utilizes methods such as expert consultation, driver mapping, extrapolating external developments from quantitative data, and developing future scenarios (Waverly Consultants, 2017; Popper, 2008; WRR, 2010; Smith & Saritas, 2011) (Table 1). For instance, driver mapping involves group discussions or workshops to determine the most impactful developments and their level of uncertainty. Impactful developments, the drivers, are mapped onto two axis “certain” and “important”. For further scenario development, the two most important drivers can then be used to create a matrix of four alternative futures. Upon completion of the impact analysis, insights into the (potential) future impact of external developments on the outcome measure are obtained, and a set of possible future scenarios emerges.
4. *Perspective*: In the fourth and final step, action perspectives are provided through various follow-up methods to assist policymakers in making informed decisions and formulating strategies for future preparation. Possible methods include the 7 questions expert consultation, SWOT analysis, option planning using a Boston matrix, roadmapping, and wind tunnel test (Waverly Consultants, 2017; Linde, 2021; Smith & Saritas, 2011; Ruijter & Janssen, 1996; Van Asselt et al., 2014; Voros, 2003) (Table 1). For example, to develop action perspectives stakeholders and experts engage in sessions to collectively comprehend change dynamics. When conducting SWOT analysis, opportunities and threats across the different selected futures are identified, as well as potential areas requiring further attention.

Upon completing the impact analysis, action options in the form of strategic or policy options, elaborate roadmaps, or knowledge and innovation agendas are made available to the policymaker or client with the future question. Active involvement of the policymaker or client in this step is vital, as they play a central role in shaping the approach and fostering a joint learning process with stakeholders and experts (De Geus, 1988).

**Table 1.** Schematic overview of the methods used in each step of PRO-SPECT.

Step	Method	Brief description: what?	Brief description: how?
<b>1. Scope</b>	Exploratory discussion about a foresight question	Go over a fixed set of discussion points to scope the assignment with policymaker or client	Set of discussion points are at least: 1) Stakes (why the foresight study, what is at stake?); 2) Clarity (clearly scoped e.g. objectives, activities, time horizon); 3) Ownership (who takes ownership for the results?); 4) PEOple (who works on the foresight study, which experts need to be brought in?)
	Stakeholder analysis	Identify and analyze stakeholders of an organization or project together with experts and the client	Identifying stakeholders for example in a group workshop: 1) brainstorming 2) mapping the stakeholders onto “influence” and “important” axis
	Analysis of baseline situation	Make a draft of the current situation with the input of experts, stakeholders, and the client	Analyzing existing data, literature, and initial exploratory interviews to identify the baseline situation
	Delineation of concepts and definitions	Define the most important concepts and making the links between them visible in a framework	Creating a supporting conceptual framework in which the most important concepts are presented in relation to each other
<b>2. Scan</b>	DESTEP	Overview of possible external developments categorized into six domains: demographic, economic, socio-cultural, technological, ecological, and political-legal	Creating a shortlist of the most relevant external developments based on interviews with experts
	Literature review	Literature review of various documents: scientific literature, gray literature and documents from the sector or organization itself	Gaining insight into the future that a sector or organization may face by analyzing literature
	Quantitative research	Analyses of existing data, such as from Eurostat, Statline (CBS)	Identifying developments over the past few years and reveal the relationship between various external developments
	Consult experts – Interview	Confidential conversation with one or two individuals from an organization	Obtaining views, opinions, and perspectives on future developments
	Consult experts – Delphi technique	Semi-quantitative technique to gather and synthesize expert opinions on a specific topic	Gathering and synthesizing expert opinions through questionnaires in multiple rounds, aiming to reach consensus among experts

	Consult experts – Horizon scanning workshop	Cluster and rank information about possible external developments	Gathering information about developments in the field from a group of experts in a short period of time
	Web scraping	Identify developments and discover weak signals from the web	Collecting large amounts of data automatically from web sources
<b>3. Impact</b>	Consult experts	Using various methods, submit developments to experts and collect the expected impact	Gathering expert opinion on the impact of external developments on outcome measures in various forms
	Driver mapping	Determine the most impactful external developments and the extent to which they are (un)certain with the input of experts, stakeholders, and the client	Group discussion/workshop to determine and analyze the most impactful developments: 1) brainstorm; 2) mapping the drivers onto “certain” and “important” axis
	Extrapolate developments from quantitative data	Using quantitative data to gain insight into the anticipated development and impact of external factors	Identifying trends and make projections for the future from historical data, if desired with upper and lower limit taking the uncertainty of the future into account
	Developing future scenarios	Formulate alternative futures based on the selected external developments with the input of experts, stakeholders, and the client	Combining the two (most uncertain and impactful) developments creates a matrix of four alternative futures as a basis for further scenario development
<b>4. Perspective</b>	Consult experts- 7 Questions	An interview technique for collecting desired futures and policy options ( <i>adjusted to foresight purposes</i> )	Identifying different perspectives on a desired picture of the future, threats, opportunities and (strategic) next steps
	SWOT analysis	Provide insight into how prepared the client (sector, target group or organization) is and into the factors that should be considered when developing policy or strategy	Identifying the Strengths, Weaknesses, Opportunities and Threats per future scenario with the input of experts, stakeholders, and the client
	Option planning	Assess different policy options in the context of different scenarios with the input of experts, stakeholders, and the client	Scoring how positive policy option will be in scenarios using a Boston matrix, expressed from - (bad idea) to ++ (very good idea in a crosstab
	Roadmapping	Create a holistic picture of all developments with links and relationships between different elements on a timeline with the input of experts, stakeholders, and the client	Plotting all the input from scanning and impact together with experts in workshops to see how it influences a policy area

	Wind tunnel test	Test whether current policies are robust with different scenarios with the input of experts, stakeholders, and the client	Running multiple policies through different future scenarios also with wildcards: (low-probability events with very high impact, e.g., pandemic)
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Source: Authors' elaboration.

*Note.* More detailed descriptions can be found in Koen et al. (2023).

6. Discussion and conclusions

This article highlights foresight as a valuable method to explore multiple possible futures, acknowledging the substantial uncertainty that surrounds the future of work and the labor market. We have developed and discussed the modular PRO-SPECT (PROfessional Sectoral perSPECTive) approach, a systematic and evidence-based method to explore future possibilities related to work and the labor market at various levels, specifically aimed to align with the goals of sectors and (smaller) organizations. Although PRO-SPECT is aimed to equip stakeholders with actionable insights for the future of work, it may also be useful for other domains. The PRO-SPECT approach comprises four main steps: Scope, Scan, Impact, and Perspective. Each step involves specific methods to respectively define the problem, gather data, assess potential impacts, and present action steps and perspectives to policymakers and organizations.

While the development of the PRO-SPECT approach is founded on a comprehensive analysis of existing foresight methods aimed at ensuring replicability and manageability, it is essential to acknowledge that the four-step framework is not exhaustive. One notable limitation is the challenge of capturing the full complexity of dynamic systems in foresighting, partly due to gaps in available data and ever-changing circumstances, leading to potential inaccuracies in foresight outcomes. Moreover, foresight heavily relies on assumptions and subjective judgments made by researchers and decision-makers, which can significantly impact the validity and reliability of the findings. To mitigate this, it is crucial to carefully select highly qualified experts who can think creatively and unconventionally, as their imaginations play a critical role in constructing future scenarios (Voros, 2003). Additionally, decision-makers must be able to effectively interpret and utilize the foresight research outcomes to translate them into actionable insights and decisions in practical settings. Foresight outcomes should not be used as a given future truth, but rather as insights that support the exploration of possible futures and future scenarios.

Furthermore, it is important to note that our literature review, although conducted with diligence, was limited in scope, and may have potentially overlooked certain information sources.

The PRO-SPECT approach can be used by several actors, such as research institutes and (smaller) companies. For instance, our approach could be employed to explore how future scenarios entailing collaborative styles such as human-machine cooperation and smart virtual learning may impact skill demand (also see Ahmad, 2000). This, in turn, can be used by policymakers, local authorities, employers, academics, and researchers to set up future-oriented education and training policies to bridge the gap between skills demand and supply (Touahmia et al., 2020). Yet, given our specific choice of methods underlying each step in the PRO-SPECT approach, its primary application lies at the sectoral and organizational level.

Moving forward, our next steps involve refining and expanding the approach through practical testing. Already, the PRO-SPECT approach has been employed in the study conducted by Preenen et al. (2023) within the EU Horizon 2020 GI-NI project (Growing Inequality: a Novel Integration of transformations research) to develop future scenarios. In this project, the PRO-SPECT approach provides a method of preparing for the uncertain future of skill demand in Europe and worldwide, by examining the combined effect of technological change, globalization, and migration. In one such scenario, for example, globalization and digital transformation both accelerate by 2030, resulting in an increasing flow of goods, services, and investment across

borders as well as a vast technological growth that reshapes all sectors. Following the PRO-SPECT approach, the impact of each (combined) drivers on future of skill demand within the four scenarios will be explored next.

It is important to note that the PRO-SPECT approach has value once (and only if) the policy within an organization or sector can actually be adjusted based on the findings. We have therefore designed this foresight approach in such a way that decision-makers can actively participate from the start. However, their participation in the process is just as important as it is in the results: clients and other stakeholders should also view the foresight process as a joint learning process, in which active participation is required to gain insight into external developments and their impact (De Geus, 1988).

Our overarching goal was to create a first accessible approach that organizations can utilize with minimal or no guidance from foresight experts. To advance this, we aim to develop a decision tree in the near future that facilitates the selection of appropriate methods based on specific questions. Additionally, we will explore the possibility of establishing a 'minimum viable approach' for certain issues, allowing for scalability depending on the time and budget constraints of clients.

It is important to emphasize that while the future cannot be predicted with certainty, our approach endeavors to contribute to proactive preparedness for potential future scenarios. For instance, in the context of our example, we seek to contribute to a healthy future labor market in the future. Ultimately, our aspiration is to foster the advancement of action research in future preparation by establishing PRO-SPECT as a valuable and adaptable methodology. We hope that this article will inspire others to embrace, explore, and build upon PRO-SPECT, thereby enriching the collective knowledge and driving meaningful progress in the field of foresight.

Overall, the PRO-SPECT approach is a valuable contribution to the field of foresight and can help organizations and policymakers navigate the complex and dynamic landscape of the labor market with greater resilience and preparedness. By embracing foresight and engaging in future exploration, society can better anticipate and respond to the challenges and opportunities that lie ahead in an ever-changing world.

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Research Article

# Knowledge Creation as Influence the Achievement of Organisational Social Innovation

## La creación de conocimiento como influencia en la consecución de la innovación social organizativa

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**Abstract:** This research investigates the effects of knowledge creation on organisational social innovation in R&D organisations. Organisational social innovation deviated from the concept by presenting a new paradigm in business, the potential for innovation of which was viewed as knowledge creation as a factor to solve business economic problems and unfulfilled demands in society. In the post-industrial era, managing intellectual assets has become a crucial component of organisational effectiveness. Organisations require knowledge creation that will enable them to respond quickly to changes, fulfil the demand for constantly changing business knowledge, and improve their ability for long-term organisational innovation. As a result, this research investigates the impact of knowledge creation on the achievement of organisational social innovation. However, there is a lack of interest of previous researcher in this area. In this paper, a partial least squares structural equation model (PLS-SEM) was used, and a survey questionnaire was chosen to collect data for this descriptive study. This finding includes 171 Malaysian R&D organisations. This study showed a substantial relationship between knowledge creation and organisational social innovation. The findings of this study extended and improved knowledge-based view (KBV), emphasising the need of understanding a firm's competitive advantage in terms of knowledge creation on achievement of organisational social innovation. However, this study has some limitations, especially in terms of breadth and sample size. Furthermore, the application of current criteria may limit the examination of additional determinants.

**Keywords:** knowledge creation; innovation; organisational social innovation.

**Resumen:** Esta investigación estudia los efectos de la creación de conocimiento sobre la innovación social organizativa en las empresas de I+D. La innovación social organizativa se aparta del concepto al presentar un nuevo paradigma en la empresa, cuyo potencial de innovación se considera la creación de conocimiento como factor para resolver los problemas económicos de las empresas y las demandas insatisfechas de la sociedad. En la era postindustrial, la gestión de los activos intelectuales se ha convertido en un componente crucial de la eficacia organizativa. Las organizaciones necesitan crear conocimientos que les permitan responder rápidamente a los cambios, satisfacer la demanda de conocimientos empresariales en constante evolución y mejorar su capacidad de innovación organizativa a largo plazo. En consecuencia, esta investigación indaga sobre el impacto de la creación de conocimiento en la consecución de la innovación social organizativa. Sin embargo, existe una falta de interés de los investigadores anteriores en este ámbito. En este trabajo se utiliza un modelo de ecuaciones estructurales por mínimos cuadrados parciales (PLS-SEM) y se opta por un cuestionario de encuesta para recopilar los datos en un estudio descriptivo.

Se incluyen 171 organizaciones malasia de I+D. Así, este estudio muestra una relación sustancial entre la creación de conocimiento y la innovación social organizativa. Las conclusiones de este estudio amplían y mejoran la visión basada en el conocimiento (VBC), haciendo hincapié en la necesidad de comprender la ventaja competitiva de una empresa en términos de creación de conocimiento sobre el logro de la innovación social organizativa. Este estudio tiene algunas limitaciones, especialmente en cuanto a la amplitud y el tamaño de la muestra. Además, la aplicación de los criterios actuales puede limitar el examen de otros factores determinantes.

**Palabras clave:** creación de conocimiento; innovación; innovación social organizativa.

## 1. Introduction

Organisational Social Innovation (OSI) is seen as a crucial modern achievement of the twenty-first century (Dionisio & de Vargas, 2020). Organisational social innovation, which aspires to generate both social and economic advantages, provides a framework for integrating sustainability into company operations (Amran et al., 2021). To address social challenges sustainably and profitably, businesses consider OSI as an investment and look for strategic alliances. By using OSI as a business model, we might contribute to the 2030 Sustainable Development Goals. However, there are other arguments for and against the idea of OSI in the business world, and this area of study is still in its infancy (Mustapha et al., 2021), some. Additionally, there are persistent arguments in the workplace about corporate social responsibility (CSR). Over the past ten years, the connection between CSR and innovation has grown gradually. The formation of various institutions, nonprofit organizations, and foundations has been prompted by the increased visibility of social innovation in academia and the public recently (Altuna et al., 2015). Social innovations are innovative goods or services that can foster new interpersonal relationships or teamwork while meeting societal needs. However, there are signs that for-profit businesses are motivated to create organisational social innovations that support their CSR objectives. Even while businesses with a focus on the market are not traditionally thought of as social enterprises, they are increasingly looking to create economic value through creative CSR strategies (Carberry et al., 2019). To divert attention from CSR's more limited focus on stakeholder management, the term organisational social innovation reframes such practices in terms of their ability to address social concerns in novel ways.

Even if CSR professionals are interested in social innovations, the literature currently available does not provide any recommendations on how for-profit businesses might approach social innovation efforts (Alhasani et al., 2023). The CSR strategy is the primary foundation for the development of social innovations in the company (Altuna et al., 2015). Since society has high expectations for the corporate social responsibility of enterprises, the development, and research of the SI leading to OSI are strongly related to CSR. It is obvious that these companies engage in social innovation to implement strategic CSR, but it is still not clear how they successfully manage these programs.

In recent decades, corporate firms have prioritised difficult economic and social concerns (Esen & Maden-Eyiusta, 2019). There is increasing interest in organisational social innovation as a novel strategy to integrate economic operations into delivering solutions for both financial and social benefit (Jayakumar, 2017). Since the move to a knowledge economy has elevated social innovation to the forefront of economic development, innovation in today's economic forms has a significant impact on economic growth (Dionisio & de Vargas, 2020). Because of its significant impact on societal well-being, organisational social innovation has quickly gained popularity among firms (KPMG, 2014). However, corporations find it difficult to invest in the manufacture of items that meet customer demand for social innovation-related goods and services. This topic entails the development of a more equitable and sustainable society, one that is focused on meeting local needs and producing innovative, market-driven solutions (Farinha et al., 2020).

Organisational social innovation (OSI), defined as the inventive acts and services of private firms to create game-changing advances, is a new strategy or model used by commercial organisations (Esen & Maden-Eyiusta, 2019).

This divergence is important in an economy that depends on knowledge to advance. But there is a discrepancy between innovation and knowledge creation (Aldaibat, 2017). Malaysia's challenging shift to a knowledge-based economy is crucial. Organizations engaged in the intense knowledge-based sector face new problems due to dynamic changes in the business environment and transformative processes relating to environmental, social, and economic issues.

According to Nonaka (1994), the organisation must develop employee knowledge management systems so that this resource can play a significant part in the company's long-term success. Employees have two forms of knowledge, according to Nonaka (1994): tacit knowledge (difficult to formalise and describe) and explicit knowledge. The interconnectedness of organisations and society can provide enormously valuable information for the operation of organisations and society.

## 2. Literature review

### 2.1. Theoretical theories

Knowledge-based theory (KBV) is adapted to the study in knowledge creation. According to KBV, innovation and knowledge creation are strongly related (Estate, 2018). This study extends the Knowledge-Based View (KBV) on higher innovation capacities about internal organisational resources, effectiveness, and interactions inside the company through an interest in superior firm knowledge resources (Chen et al., 2017; Costello, 2019). The knowledge-based view (KBV) theory proposes an approach for gaining a competitive advantage by organising, aggregating, and integrating specialised knowledge. KBV carries that knowledge in companies is seen as a strategic resource and a key asset of a long-term competitive advantage (Mahbob et al., 2013).

#### 2.1.1. Organisational social innovation (OSI)

OSI is an innovative and crucial concept for businesses in the 21st century. Although lacking a formal definition, it generally involves the implementation of social innovation ideas and theories at the corporate level (Dionisio & de Vargas, 2020). Recent discussions have emphasized OSI as encompassing innovative projects that combine corporate resources with those from other industries to collaboratively develop advanced solutions to social, economic, and environmental issues impacting both business and society (Amran et al., 2021). OSI is considered a strategic investment and a valuable business asset, as it has been demonstrated in previous studies to enhance corporate sustainability and confer a competitive edge through the introduction of unique services, methodologies, and approaches. Furthermore, OSI enables organizations to create new revenue streams and establish a socially relevant innovation system (Tabares, 2020; Samidi et al., 2023).

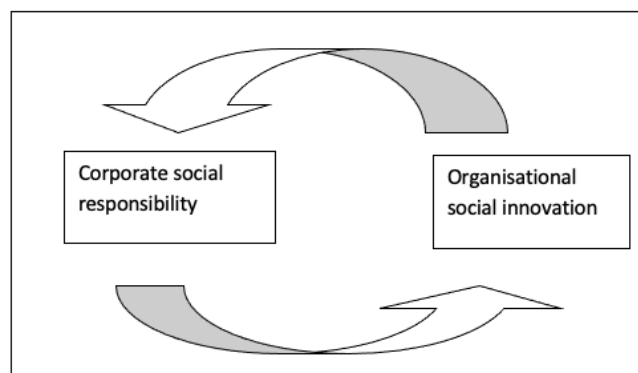
According to Cunha and Benneworth (2020), the literature in this area lacks a solid foundation and is relatively nascent. Previous research indicates that the concept of organisational social innovation is still in its early stages, and the uncertainty surrounding social innovation has made comprehending the concept of organisational social innovation challenging (Van der Have and Rubalcaba, 2016). While social innovation is more prevalent than organisational social innovation, there has been limited research on the latter in the existing literature (Tabares, 2020). Previous studies have shown that the diversity of available literature makes it challenging to reach a consensus within the academic community. Despite some organizations embracing organisational social innovation, it continues to face criticism, particularly regarding the impact of social initiatives on employees and other stakeholders (Van der Have & Rubalcaba, 2016; Dionisio & de Vargas, 2020).

Organisational social innovation is thus relevant to become a fundamental business strategy in order to connect economic, social, and environmental concerns that may result in improved interactions between enterprises, stakeholders, society, and communities while reducing the creation of shared value. Consequently, CSI is viewed as the business model's answer for promoting community well-being because it connects to social value, produces economic benefits, and does so from an environmental aspect (Kocziszky et al., 2017; Mariann & Krisztina, 2018).

### 2.1.2. How OSI differs from CSR?

According to Amran et al. (2021) there is a considerable disconnect between stakeholder expectations and a company's social performance in terms of corporate social responsibility. To address this issue and move towards strategic and systemic investments, businesses have shifted their focus towards organisational social innovation (OSI) (Amran et al., 2021). With OSI, businesses invest money in research that is relevant to society and the environment, treating it as any other commercial venture (Mirvis et al., 2016). Incorporating OSI in CSR has led to solutions on how a company's citizenship behavior can have a sustainable impact, rather than just reactive or charitable actions that do not significantly improve society (Bambang, 2018).

**Figure 1.** Differences between CSR and OSI.



Source: Author's elaboration.

Both CSR and innovation are necessary for a company to succeed in the long run. CSR may increase the added value of innovation (Zhou et al., 2020). A greater knowledge of the strategic decision-making involved in implementing CSR and its potential benefits for future development is necessary to fill the research gap caused by the lack of empirical research on the effects of CSR on innovative performance (Zhou et al., 2020). Table 1 shows a summary of the differences between CSR and OSI.

**Table 1.** How CSR differs to OSI.

	CSR	OSI
<b>Concepts/definition</b>	The ongoing dedication of companies to act morally, promote economic growth, and enhance the standard of living for their employees and their families.	A strategic viewpoint that suggests a management philosophy based on the need for social responsibility as a part of corporate ethics in order to innovate.
<b>Activities involve</b>	Managers and shareholders engage in that are compatible with moral, cultural, philosophical, or religious attitudes and views.	OSI includes the firm's internal and external stakeholders engaging in creative activities that produce lasting solutions to a range of social and environmental problems.

<b>Degree of involvement</b>	Offer a programme that benefits society by fostering economic growth, enhancing the lives of your employees and the people in society.	Involve engagement and collaboration with stakeholders to implement a new idea.
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Source: Author's elaboration.

### 2.1.3. Knowledge Creation (KC)

Knowledge is critical to the success of a business. Nonaka (1994) defines knowledge generation as a dynamic blend of skills, capabilities, and cultural values possessed by skillful persons. The act of developing knowledge has a substantial impact on the effectiveness and calibre of innovation (Yang & Zheng, 2022). Knowledge is viewed as a strategic asset by corporations. Nonetheless, a company's success is dependent on its workforce's ability to collect and use information, allowing them to establish a continuous competitive edge for their organisation (Li Sa et al., 2020). Nonaka (1994) argued that the development of tacit knowledge has a significant impact on organisational performance, notwithstanding the difficulties in managing tacit knowledge.

However, little study on R&D organisations has been undertaken, resulting in a scarcity of accessible information about knowledge generation practises (Chong et al., 2019). Furthermore, internal organisational mechanisms for gaining information at the individual level via managers or employees and translating it into organisational knowledge are still little understood (Elaine et al., 2015). Because of the intricate interplay between knowledge and the process of knowing, which is achieved through action, experience, and social interaction (Maravilhas & Martins, 2018), researchers prioritise knowledge creation as the critical first step in the knowledge creation process.

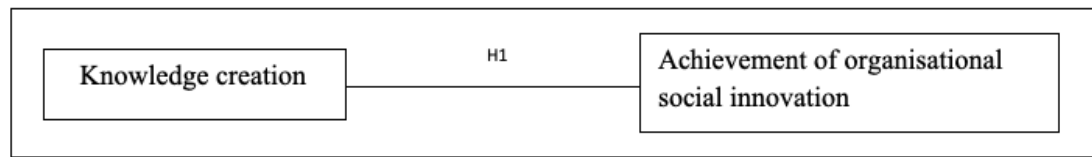
### 2.2. Theoretical and hypotheses development

In order to enhance innovation, it is essential for businesses to allocate adequate resources towards knowledge creation (Aldaibat, 2017). In dynamic work environments, employees are motivated to actively contribute their knowledge and are provided with the necessary tools and resources for generating new insights (Chatzoglou & Chatzoudes, 2018).

Sahibzada et al. (2020) discovered a significant correlation between Knowledge Creation (KC) and Organisational Social Innovation (OSI). Businesses with elevated levels of KC exhibit greater effectiveness and have the potential to surpass their competitors, as indicated by Qadri et al. (2021). Additionally, Liao and Wu (2010) highlight a significant relationship between knowledge creation and organizational innovation. According to their findings, Taiwan's domestic sector excels in fostering organizational innovation due to its emphasis on knowledge creation. The study concludes that robust knowledge development is more efficient and contributes to business success, aligning with the observations of Davenport and Prusak (1998), Darroch (2005), and organizations studied by Qadri et al. (2021).

However, it's worth noting that certain prior studies overlooked the significance of knowledge creation as a hidden driver of economic innovation. This argument is grounded in Schumpeter's (1934) assertion that innovation can occur independently of new idea generation and vice versa. This investigation led to the formulation of the following hypothesis:

*H1: Knowledge creation influences organisational social innovation.*

**Figure 2.** Differences between CSR and OSI.

Source: Author's elaboration.

### 3. Research method

This study's population consists of Malaysian R&D organisations. Because the substances are in charge of Malaysian firms' creative endeavours, the major criterion for sample selection was a focus on R&D organisations. The survey was disseminated to 171 R&D organisations in order to collect the relevant information. Organisational social innovation affects the successful implementation and impact of creative strategies, initiatives, or practices within an organisation aimed at addressing social concerns or promoting societal well-being. Through the organisational social innovation in R&D organisations, an organisation makes strategic corporate investments in generating new or upgrading existing products or services that will provide solutions to complex economic, social, and environmental concerns. This study adapted the measurement model based on Esen and Maden-Eyiusta (2019). Besides, the survey instrument examined the recommended model and research hypothes. The study used the Knowledge-Based Value Theory (KBV), which focuses entirely on the importance of knowledge as a valuable resource for achieving success, which knowledge creation refers to the generation of new knowledge. Chang et al. (2014) provided the inspiration for this study's premise as measurement for knowledge creation. However, the study did not investigate other contextual elements that may influence organisational social innovation achievement.

### 4. Results

#### 4.1. Demographic Characteristics

Table 1 summarises the paper based on four categories: (i) manufacturing; (ii) trading; (iii) service; and (iv) mixed-type industry. Result shows 57.3% of respondents were from the service industry, followed by 22.2% of respondents from the manufacturing industry, and then followed by 10.8% of respondents from the mixed industry and the remainder off 8.8% respectively represented by trading industry. The majority of respondents represent firms that have been in operation for more than 20 years, with 63.2% of respondents. The next largest group, representing 25.7% of respondents, are firms that have been in operation between 11-20 years. The remaining 11.1% of respondents represented firms that have been in operation for less than 10 years. The analysis also reveals that the respondents in the study came from organizations with a diverse range of employee numbers. The largest group of the respondents worked for organizations with over 10,000 employees. From the analysis, 36.3% worked for organizations with more than 10,000 employees, 21.6% worked for organizations with 5,000-10,000 employees, 15.8% worked for organizations with 2,000-5,000 employees, 15.8% worked for organizations with 1,000-2,000 employees, and remaining 10.5% of respondents worked for organizations with less than 1,000 employees. Lastly, this research also looked into the level of management criteria. According to the findings, the majority of the respondents are from middle-level management. 48.0% of the respondents were from middle-level management, 26.3% of respondents were from low-level management, and the least 25.7% of respondents were from upper-level management.

**Table 2.** Demographic Distribution of Respondents.

<b>Type of Industry</b>		
	<b>Frequency</b>	<b>Percentage</b>
Manufacturing	38	22.2
Trading	15	8.8
Service	98	57.3
Mixed	20	11.7
Total	171	100.0
<b>Age of firm</b>		
	<b>Frequency</b>	<b>Percentage</b>
<10 years	19	11.1
11-20 years	44	25.7
>20 years	108	63.2
Total	171	100.0
<b>Number of employees</b>		
	<b>Frequency</b>	<b>Percentage</b>
<1,000 employees	18	10.5
1,000-2,000 employees	27	15.8
2,000-5,000 employees	27	15.8
5,000-10,000 employees	37	21.6
>10,000 employees	62	36.3
Total	171	100.0
<b>Level of Management</b>		
	<b>Frequency</b>	<b>Percentage</b>
Upper-level management	44	25.7
Middle-level management	82	48.0
Low-level management	45	26.3
Total	171	100.0

Source: Author's elaboration.

#### 4.2. Common Method Variance

Ramayah et al. (2020) advocated for investigating standard method variance to address the issue of Common Method Bias and investigate total collinearity. Constructs have variance inflation factor (VIF) values equal to or greater than 3.3. The VIF scores in this study vary from 1.1783 to 1.579. As a result, CMV was not a major worry in this work.

#### 4.3. Measurement Model

The loadings, cronbach's alpha (CA), composite reliability (CR), and average variance extracted (AVE) in the measurement model were all analysed by the researchers. Loadings should be greater than 0.5, AVE greater than 0.5, and CR greater than 0.7, according to Hair et al. (2019). Table 3 shows that all AVEs are larger than 0.5 and all CRs are greater than 0.7. Furthermore, the loadings were all greater than 0.5, which was reasonable.



**Table 3.** Measurement Model.

	Organisational innovation	social	Knowledge Creation	CA	CR	AVE
OSI1	0.926			0.9630	0.9731	0.9003
OSI2	0.959					
OSI3	0.968					
OSI4	0.942					
KC1			0.770	0.9037	0.7083	
KC2			0.742			
KC3			0.889			
KC4			0.801			
KC5			0.822			

Source: Author's elaboration.

#### 4.4. Structural Model

Table 4 outlines the requirements for testing the hypotheses that have been developed. According to Hair et al. (2017), the R<sup>2</sup> coefficient of determination was determined to be 0.432, showing that knowledge generation accounted for 43.2 percent of the variance in organisational social innovation accomplishment, indicating a reasonably accurate predictive capacity. The link between knowledge creation and the attainment of organisational social innovation ( $\beta = 0.2974$ ,  $p < 0.01$ ,  $t = 4.3673$ ) demonstrated a significant association with the attainment of organisational social innovation, affirming the support for Hypothesis 1 (H1). Furthermore, when examining the bias-corrected 95% upper and 5% lower confidence intervals, none of the intervals encompassed a value of 0, providing substantial validation for the research findings.

**Table 3.** Structural Model.

H	Relationship	Path Coefficient, $\beta$	Standard Deviation	T Statistics	P Values	Confidence intervals		Result
H1	KC -> OSI	0.2974	0.0681	4.3673	0.000	0.1895	0.4156	sig

Source: Author's elaboration.

Yang and Zheng (2022) assert that knowledge creation exerts a significant influence on innovation, a proposition consistent with earlier research suggesting that knowledge creation plays a role in shaping organizational social innovation (Alshanty & Emeagwali, 2019). The progression of knowledge is integral to the innovation process, as emphasized by Marques et al. (2021). Consequently, businesses generate valuable new information, which is then transformed into commodities, services, and procedures, converting broad knowledge into specific knowledge (Marques et al., 2021). Despite the strong relationship between innovation and knowledge creation, this connection has not been thoroughly explored (Popadiuk & Choo, 2006). Consequently, the presented hypothesis has been validated and demonstrates a significant outcome.

## 5. Conclusion

Despite the fact that knowledge assets are presented as the primary source of organisational social innovations, a deeper understanding of the intricate relationships between these qualities

is required because vast gaps in this research field persist. In addition, the paucity of empirical research employing the aforementioned frameworks necessitates fresh theoretical and empirical work, which is why this study has concentrated on contributing empirical data and results on the subject. In this study, it was established that there is a link between knowledge creation and organisational social innovation. In line with the previous works, the findings of this study are consistent with earlier studies that show a significant relationship between knowledge creation and innovation (Marques et al., 2021).

Researchers and managers should think about the knowledge creation as a factor that encourages achievement of organisational social innovation which considers social, environment and economics benefits. This study illustrated that knowledge creation encourages innovation has evolved as an investment that helps businesses while also improving human well-being in the pursuit of the SDG 2030 (Singh et al., 2020). This phenomenon has a cause-and-effect relationship that should be recognised. This paper presents a conceptual framework that Malaysian R&D organisations give a significant result in knowledge creation and achievement of organisational social innovation empirically tested. Future studies should evaluate how well the concept works in various businesses sectors. Even though this study was conducted in Malaysia, further research can be conducted in other areas in other developing or developed countries.

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Research Article

# La emergencia de los laboratorios ciudadanos: Un modelo para la creación de comunidades de innovación

## The emergence of Citizen Labs: A model for the creation of innovation communities

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**Resumen:** El presente artículo trata de analizar el surgimiento de los laboratorios ciudadanos como un modelo de innovación implementado desde el sector público. Estos han ido adquiriendo distintas formas y alcances dependiendo del contexto en el que se implantan. Estos emergen como entornos (físicos o virtuales) donde los ciudadanos pueden experimentar soluciones innovadoras para sus comunidades. Analizamos aquellos aspectos que los diferencian de otros modelos de innovación pública, además de su motivación, funcionamiento y retos que enfrentan. Para ello se describen tres casos desarrollados en el entorno iberoamericano, que permiten analizar sus aportaciones al modelo, así como los desafíos y oportunidades asociados con su implementación.

**Palabras clave:** laboratorios ciudadanos; innovación ciudadana; inteligencia colectiva; comunidades de práctica.

**Abstract:** This article tries to analyze the emergence of citizen laboratories as an innovation model implemented by the public sector. These have acquired different forms and scope depending on the context in which they are implemented. These emerge as environments (physical or virtual) where citizens can experience innovative solutions for their communities. We analyze those aspects that differentiate them from other public innovation models, in addition to their motivation, operation and challenges they face. To this end, three cases developed in the Ibero-American environment are described, which allow us to analyze their contributions to the model, as well as the challenges and opportunities associated with its implementation.

**Keywords:** citizen laboratories; citizen innovation; collective intelligence; communities of practice.

### 1. Introducción

Hoy en día podemos observar cómo las instituciones públicas no han evolucionado con la suficiente profundidad que demandan las sociedades actuales y se encuentran, en algunos aspectos, cada vez más alejadas de las necesidades reales de una ciudadanía que ha tomado mayor protagonismo. Y es que las instituciones públicas (tal y como las conocemos) están

pensadas y preparadas para la gobernanza de un mundo que se esperaba seguro y firme; es decir, no fueron concebidas como espacios experimentales. Sin embargo, en los últimos años se han explorado nuevos paradigmas (Gobierno abierto o innovación abierta) e intensificado las acciones hacia una nueva institucionalidad más abierta e inclusiva, atenta a la generación de nuevos canales de escucha con la ciudadanía para desarrollar una labor política que afronte los nuevos problemas complejos que demanda un contexto social en constante evolución. En este panorama reciente, sobre todo en los países pertenecientes a Iberoamérica (España, Portugal y Latinoamérica) vemos emerger algunos espacios y formas de organización autodenominadas como laboratorios ciudadanos.

El presente artículo se divide en dos partes: en la primera se analizan aquellos instrumentos y mecanismos que consideramos más importantes del modelo de laboratorio ciudadano a través de tres experiencias implementadas en el ámbito público iberoamericano: Medialab-Prado en el Ayuntamiento de Madrid, España, la iniciativa de innovación ciudadana de la Secretaría General Iberoamericana (SEGIB) y Lab Cultural Ciudadano, LABNL, de la Secretaría de Cultura del estado de Nuevo León, México. La segunda parte trata de construir una definición del modelo que lo distinga de otros esfuerzos para innovar desde el sector público, así como reflexionar sobre los retos y posibilidades ligados a su ejecución.

## 2. La emergencia de los laboratorios ciudadanos

Todas las señales apuntan a que nos encontramos en medio de un cambio en nuestras sociedades que nos convida a crear nuevas formas más efectivas de conectar las instituciones con la ciudadanía. Las disrupciones continuas provocadas por las sucesivas olas de la tecnología digital; la creciente brecha entre gobernantes y gobernados; la emergencia de nuevas voces y activismos; o los problemas emergentes que no se pueden clasificar en las categorías sectoriales a las que estamos acostumbrados. Todos estos componentes de este gran cambio contienen elementos fundamentales que afectan a nuestra sostenibilidad como sociedad, pero también un halo de esperanza. En este contexto incierto, abierto, complejo y paradójico existen dos preguntas esenciales cuya respuesta definirá la razón de ser de las instituciones públicas en los sistemas democráticos:

- ¿Cómo se puede escuchar de modo efectivo a las innumerables voces de personas y colectivos diversos que reclaman su derecho a participar activamente en la vida pública?
- ¿Cómo se desarrollan políticas públicas para afrontar los nuevos, y viejos, retos que no admiten soluciones simples ni solamente técnicas?

Desde la última década han comenzado a aparecer diversos modelos de institucionalización, como los laboratorios de gobierno y los laboratorios ciudadanos. Estos modelos institucionales emergentes han encontrado su lugar en un entorno de cambio paradigmático en las formas de gobernanza pública, especialmente con la cada vez más consolidada evolución hacia el paradigma de gobierno abierto en los países del entorno iberoamericano.

Los laboratorios ciudadanos comparten algunas similitudes con los laboratorios de gobierno<sup>1</sup>, pero tienen características fundamentales que los diferencian. Los laboratorios de gobierno son impulsados por las instituciones públicas de arriba abajo (top-down) estableciendo el marco y la agenda con el objetivo de generar valor público, implicando a la ciudadanía en la construcción de propuestas que puedan guiar e incidir en la acción de gobierno mediante diferentes mecanismos como las agencias o programas de gobierno, la acción de las universidades públicas (con una lógica de transferencia de conocimiento), o bien con proyectos entre el sector público y privado (Rojas-Martin & Stan, 2020). Mientras tanto, los laboratorios

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<sup>1</sup> Para una información más detallada de la génesis de los laboratorios de gobierno y la descripción de algunos ejemplos en el contexto latinoamericano consultar: Galíndez & Nuñez (2020). *European Public & Social Innovation Review*, 5, 2.

ciudadanos son impulsados respondiendo a una lógica de abajo arriba (bottom up) de forma autoorganizada por miembros de la sociedad que trabajan colectivamente en agendas locales. El trabajo del laboratorio ciudadano consiste en generar las condiciones de posibilidad para que la ciudadanía pueda encontrarse, organizarse, tener acceso a las infraestructuras, herramientas e información necesaria que permita el intercambio de conocimientos y saberes diversos con el objetivo de abordar problemáticas comunes a través de la producción de prototipos. De la estabilidad que se consiga en la organización ciudadana depende que sigan fluyendo sus demandas, anhelos y propuestas, las cuales van produciendo un torrente cada vez más amplio de innovaciones que inciden e impactan en distintos ámbitos de la sociedad de una forma continua.

Antes de detenernos en los aspectos más importantes que caracterizan el modelo y buscar su definición, vamos a repasar algunos casos concretos que retratan esta forma de hacer innovación ciudadana.

### 3. Los laboratorios ciudadanos en la práctica: Tres casos de referencia

No es el objetivo de este texto hacer una recopilación exhaustiva de laboratorios ciudadanos existentes y de sus trayectorias, pero sí analizar algunos ejemplos que permitan comprender la diversidad de trayectorias, formatos y herramientas que han aportado a la innovación ciudadana. Vaya por delante, como se discutirá después, que el modelo de laboratorio ciudadano es incipiente y por tanto muestra un gran potencial, contando con un gran margen de evolución hasta cumplir su promesa de convertirse en instrumentos al servicio de la innovación ciudadana y el mejoramiento de la vida en común. Los casos que proponemos aquí han sido elegidos por su cercanía cultural y política (entorno iberoamericano), la estrecha relación que los vincula y por su capacidad de generar procesos de innovación en los que la ciudadanía autoorganizada ha tenido un papel fundamental como artífices de las propuestas y proyectos producidos.

#### Caso 1: Medialab-Prado

Es el ejemplo de laboratorio ciudadano que ha contado con mayor desarrollo tanto por su duración, como por la profunda evolución de su modelo que además ha sido esencial en la propia definición de lo que se considera hoy en día un laboratorio ciudadano. Hay algunos trabajos como Corsín y Estalella (2010); García y M.L.P. Madrid (2018); Lafuente (2022); Yudice (2022), que se han aproximado más en detalle a la institución madrileña. En el caso del presente trabajo se trata de identificar cuáles fueron las aportaciones del laboratorio español al repertorio de herramientas, metodologías y códigos en los que se basan actualmente los laboratorios ciudadanos.

MLP<sup>2</sup> (actualmente reconvertido en Medialab Matadero y con un formato diferente al de laboratorio ciudadano) fue un centro cultural dependiente del Ayuntamiento de Madrid que nace en 2002 (con el nombre Medialab Madrid) como un centro de “arte digital” y una vocación tradicional (exhibición de obras digitales y producción por parte de artistas y agentes culturales) aunque innovando en sus contenidos y formatos. Debido a diversas circunstancias, que explicaremos más adelante, sufre dos evoluciones paralelas. Por una parte transita de la exhibición y consumo de cultura “experta” a la producción “amateur” implicando progresivamente a la ciudadanía en la creación de comunidades de práctica y aprendizaje duraderas. Por otra parte, produce una serie de “infraestructuras” (Corsin, 2014) que lo convierten en un dispositivo de escucha hospitalario abierto a la ciudadanía.

Aunque funcionó como laboratorio ciudadano durante más de dos décadas, este trabajo hace referencia a su trabajo en la etapa comprendida entre 2007-2021. En una serie de conversaciones con quien fue durante esta etapa director de MLP, Marcos García, cuenta cómo

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<sup>2</sup> <https://www.medialab-matadero.es/>



en 2006 se produce la primera gran innovación del centro en cuanto a su modelo de funcionamiento. En el marco del programa educativo del por entonces Medialab Madrid, se produce un nuevo taller sobre arte, nuevas tecnologías y uso de herramientas de código abierto que llevaba por nombre “Interactivos?\_2006”. En esa ocasión el taller trabajaría con hardware y software de código abierto, concretamente con Arduino y Processing, respectivamente. El formato del taller era un hackaton, para esta ocasión de hasta dos semanas intensivas de duración. Inspirados por las lógicas del código abierto, y tras hacer una primera convocatoria de proyectos seleccionados para el taller, los organizadores tomaron la decisión de lanzar una segunda convocatoria abierta de colaboradores que pudieran participar en la producción de los proyectos junto a sus promotores en un formato de producción entre iguales (peer-to-peer), como una forma de ser consecuentes y recursivos con la propia temática del evento. El taller funcionó muy bien y la experiencia de abrirlo a nuevos puntos de vista y sensibilidades lo nutrió de formas muy significativas. Tras el éxito de “Interactivos?\_2006” y en el contexto de la primera década de los 2000’s, en la que se abrían paso tantas iniciativas en internet bajo las lógicas de la cultura abierta (Wikipedia, The Pirate Bay, WordPress, etc.), en MLP se abre la pregunta de cómo hacer un centro cultural que funcionara bajo las lógicas del código abierto, trasladando la cultura libre, colaborativa y de autorías distribuidas que se estaba dando en las redes al espacio físico. En 2007 se repitió la experiencia de “Interactivos?” bajo el tema Magia y Tecnología, explorando y experimentando alrededor de la relación entre ambas ideas, y el taller volvió a ser un éxito atrayendo aún más gente. Habían nacido los talleres de prototipado con doble convocatoria de proyectos y colaboradores. A partir de ese momento se siguieron haciendo “Interactivos?” (hasta 2019), pero ya no había vuelta atrás, lo que había sido la metodología de un taller en concreto pasó a ser el modelo de funcionamiento de toda la institución, cambió el nombre, la sede y la dirección de MLP culminando su transición de un espacio dedicado al consumo de cultura, a uno de producción cultural abierto.

La otra gran aportación de MLP al modelo de los laboratorios ciudadanos que destaca esta investigación es su forma de entender la mediación cultural. Como ya hemos comentado, lo que en sus inicios fue Medialab Madrid comienza siendo un centro cultural vanguardista que mezcla arte-ciencia-tecnología y en el que el público podía disfrutar de distintas obras artísticas de carácter experimental con las cuales se podía interactuar. Para facilitar esa interacción entre público y obra existía la figura del mediador/a, quienes hacían de puente entre la obra, el artista y el público visitante. Con el paso de los años el propio modelo de funcionamiento de Medialab inspirado en la cultura libre permeó también las prácticas de mediación. Fué en 2013 que aprovechando el potencial de los perfiles de las personas que formaban el equipo de mediación (en su mayoría jóvenes, con formación universitaria y en procesos de investigaciones de posgrado), se crea el programa de mediación-investigación el cual implicaba para los/as mediadores el proponer un proyecto de investigación que pudiera reunir a su alrededor (mediante una convocatoria de colaboradores) a una comunidad de ciudadanos/as concernidos con la problemática de la investigación.

Es así como la mediación fue percolando también la propia institución, convirtiéndose en un mecanismo amplio que opera de muchas formas, entre otras ayudando a incubar comunidades de práctica que nacen de forma orgánica o impulsadas por alguno de los otros dispositivos de los que se dota el laboratorio (como los talleres de prototipado). La función de mediación es principalmente la de crear las condiciones de cuidados necesarias para que la vida en el laboratorio se desarrolle de la mejor manera posible. En realidad, engloba roles diversos que van desde la acción pedagógica para hacer comprensibles los prototipos y proyectos al público en general, a coordinar y gestionar los trabajos que tienen que ver con los cuidados y lo reproductivo, o liderar procesos de investigación, producción y documentación. Pero, más allá de la figura específica de mediador, el propio laboratorio se convirtió en un dispositivo de mediación y de escucha, capaz de “asamblar” a distintos agentes provenientes tanto del mundo del activismo, makers, hackers, artistas, academia, administración pública, o la empresa privada.



El impacto de Medialab Prado se ha extendido más allá de España. Siempre fue un centro con proyección internacional y quienes participaban en los distintos talleres de prototipado replicaban la experiencia en sus países y lugares de origen, diseminando distintas experiencias internacionales durante la primera y segunda década de los 2000s. Ha sido reconocido con premios internacionales por promover la innovación ciudadana, como el Princess Margriet Award 2016, otorgado por The European Cultural Foundation. Su modelo ha inspirado iniciativas similares a nivel global como las dos de referencia que analizamos a continuación.

### Caso 2: La Iniciativa de Innovación Ciudadana de la Secretaría General Iberoamericana (SEGIB)

A partir del éxito del modelo puesto en práctica en MLP algunas instituciones y organizaciones internacionales comenzaron a implementarlo y adaptarlo a sus contextos de acción. Uno de los casos más paradigmáticos y que ha tenido mayor repercusión, tanto en la forma de aplicación, como en su extensión, ha sido La iniciativa de innovación ciudadana de la Secretaría General Iberoamericana (SEGIB)<sup>3</sup>. Para el objeto de este artículo se centrará en dos de los proyectos más importantes que ha emprendido la SEGIB desde 2014, a saber, los Laboratorios de innovación ciudadana (LABIC) y las Residencias de innovación ciudadana. A partir del trabajo previo que la SEGIB venía realizando desde 2010 con el proyecto Ciudadanía 2.0 el cual impulsaba procesos de apertura institucional, participación ciudadana y uso de medios digitales, fue el caldo de cultivo para que en el marco de la Cumbre Iberoamericana de 2014 en Veracruz, México con la colaboración de MLP y socios locales se realizara el primer Laboratorio de Innovación Ciudadana (LABIC). Los LABIC son una suerte de eventos itinerantes en formato de laboratorios ciudadanos que promueven la innovación ciudadana en Iberoamérica. Su objetivo principal es generar comunidades internacionales de innovación ciudadana y trabajar en la solución de problemas concretos que enfrentan las comunidades locales en diferentes países de la región.

En los últimos años (2019-2023) los LABIC vienen siendo complementados con otras dos iniciativas de laboratorios de innovación ciudadana, los PostLABIC y los LABIX. En el primer caso, consiste en un programa de escalado de proyectos ciudadanos que fueron previamente prototipados en un LABIC. El objetivo es desarrollar un modelo de negocio autosostenible y un piloto en terreno para escalar el impacto de los proyectos. Por otro lado, los LABIX basan toda su metodología en la de los LABIC, pero el ámbito de la convocatoria de proyectos y colaboradores se circunscribe al entorno local de la institución que los acoge junto a la SEGIB.

En términos de las aportaciones que los LABIC han proporcionado al modelo de laboratorios ciudadanos, vale la pena destacar que en cada una de sus ediciones se han tratado de adaptar a las características del contexto donde se trabaja. Desde la elección de los espacios, la temática central del laboratorio, como los agentes a los que se dirigen las convocatorias de proyectos y colaboradores, y sobre todo, la dinámica de trabajo con las comunidades locales. Es decir, la apuesta por una territorialización de la innovación ciudadana situada en los conflictos y problemáticas locales, pero también haciendo partícipes de los procesos de propuesta y prototipado de proyectos a los agentes afectados. Un ejemplo muy significativo de ello fue el LABICxlaPAZ organizado en 2018 con el objetivo de abrir al trabajo colaborativo de la ciudadanía la estrategia del posconflicto del gobierno de Colombia. Fue realizado en el Departamento de Nariño, un territorio que durante décadas fue una de las zonas más afectadas por el conflicto armado. En este caso se priorizaron las temáticas de desarrollo local alternativo, derechos humanos, convivencia, cultura de paz y reconciliación (Brarda, 2020).

Otro de los proyectos que forma parte de “La iniciativa de innovación ciudadana” de la SEGIB y que ha tenido una repercusión destacable en la difusión del modelo por todo iberoamérica han sido las “Residencias de Innovación Ciudadana”. Estas se han llevado a cabo desde 2015 por la SEGIB en colaboración con Medialab-Prado y con el apoyo de la Agencia

<sup>3</sup> <https://www.innovacionciudadana.org/>

Española de Cooperación Internacional para el Desarrollo (AECID). A partir de 2016 se sumó al apoyo Zaragoza Activa y posteriormente el LAAAB del Gobierno de Aragón<sup>4</sup>. Consisten en un programa intensivo para el prototipado de proyectos de laboratorios ciudadanos en instituciones iberoamericanas. Por lo general en cada una de sus ediciones la convocatoria de proyectos contaba con de 3 a 5 proyectos de laboratorios seleccionados para que sus promotores participen de una residencia de 2 semanas en Medialab-Prado, la cual incluye capacitaciones, visitas a diversas iniciativas ciudadanas, mentorías y asesoramiento integral para sus proyectos. El objetivo de estas residencias consiste en que los proyectos de laboratorios de innovación ciudadana prototipados puedan implementarse en los contextos de las organizaciones o instituciones participantes. Algunos laboratorios incubados en estas residencias fueron: OpenLabsMx (Universidad Tecnológico de Monterrey, México), Santalab (Gobierno de la Provincia de Santa Fe, Argentina)<sup>5</sup>, LABxS Laboratorio Santista (Instituto Procomún, Brasil)<sup>6</sup>, MVDLAB (Intendencia de Montevideo, Uruguay)<sup>7</sup> y más recientemente en 2019, LABNL (Secretaría de Cultura de Nuevo León, México)<sup>8</sup>.

### Caso 3: LABNL, Laboratorio Cultural Ciudadano

Inspirado por proyectos como: Medialab- Prado, la Iniciativa de Innovación Ciudadana de la SEGIB o el proyecto slowU<sup>9</sup> de la Escuela de Humanidades y Educación del Tecnológico de Monterrey, nace en 2021 como laboratorio cultural ciudadano de la mano del Consejo para la cultura y el arte (CONARTE) y posteriormente, en 2022 como proyecto y sede de la Secretaría de Cultura del Estado de Nuevo León. A la hora de acercarse a este laboratorio ciudadano se debe tener en cuenta que a diferencia de MLP, que fue transformándose de un centro cultural tradicional a un laboratorio ciudadano, LABNL se creó, desde sus cimientos e infraestructuras con este propósito. Esto ha permitido que, al partir con toda una serie de herramientas, metodologías y conocimientos heredados de toda una tradición precedente, el laboratorio de Nuevo León haya podido hacer efectiva la escucha y promover múltiples procesos de innovación e inteligencia colectiva en un corto periodo de tiempo.

A pesar de su breve recorrido, LABNL ha podido aportar al modelo consolidándolo y profundizando en algunos de los dispositivos más importantes de los que se dota para trabajar los procesos de innovación ciudadana. El primero que abordaremos es la mediación. Siguiendo el modelo de MLP, en LABNL la mediación se concibe como un proceso de investigación-acción donde el mediador/a trabaja sobre un problema específico (que propone en una convocatoria pública) y como parte de su proceso de trabajo cultiva una comunidad de práctica. Es decir, los/as mediadores en LABNL acompañan proyectos y comunidades externos y además promueven una comunidad alrededor de su propio proyecto de mediación-investigación-creación (MIC). La aportación al modelo consiste en el compromiso por propiciar dichas comunidades y el seguimiento que el laboratorio hace de las mismas, dándole una posición central en su quehacer diario. Desde el equipo de mediación se promueven reuniones de diseño de proyectos en las que la ciudadanía puede hacer propuestas de forma libre (sin una temática concreta) además de las que se ajustan a convocatorias temáticas que lanza el propio laboratorio. En estas sesiones los/as ciudadanos/as cuentan con el asesoramiento técnico suficiente para plantear una propuesta y convertirla en un proyecto prototipable. El proyecto, a través de la precedente convocatoria de colaboradores, reúne a un grupo de personas interesadas que con el apoyo y seguimiento del equipo de mediación puede convertirse en una comunidad estable. Para que ese primer grupo de ciudadanos/as reunidos alrededor de un proyecto pueda convertirse en una comunidad debe

<sup>4</sup> <https://www.laaab.es/>

<sup>5</sup> <https://santalab.asuntosdelsur.org/>

<sup>6</sup> <https://lab.procomum.org/>

<sup>7</sup> <https://montevideo.gub.uy/node/41513>

<sup>8</sup> <https://www.labnuevoleon.mx/>

<sup>9</sup> <https://sitios.itesm.mx/ehe/slowu/index.html>

pasar por una primera fase de prototipado, tener la voluntad de querer seguir trabajando juntos/as y demostrar autosuficiencia en la coordinación de sus sesiones de trabajo, uso de materiales y espacios en el laboratorio. Además, se media para que las comunidades se encuentren en un espacio hospitalario de cuidados que les permita trabajar en el desarrollo de sus prototipos, con infraestructuras y herramientas adecuadas, con conexión a otros proyectos e iniciativas afines, difusión en redes y medios para sus actividades, registro documental del proceso de trabajo o mediación de conflictos hacia dentro y hacia fuera de la comunidad. El otro aspecto en el que LABNL está realizando nuevas aportaciones al modelo es la forma en la que entiende la documentación de los procesos de prototipado ciudadano, experimentando y ampliando la noción de documentación y las herramientas y plataformas para llevarlo a cabo. En un laboratorio ciudadano que aboga por la cultura libre y el conocimiento abierto, la documentación juega un papel crucial al hacer que el conocimiento sea accesible y compartido. En los procesos de creación colaborativa que se llevan a cabo en laboratorios ciudadanos, la documentación y la accesibilidad a ella suele ser un reto pocas veces resuelto. Si bien siempre se hace énfasis en que documentar y poner la información en abierto es importante para este tipo de procesos, los equipos de trabajo no siempre logran hacerlo y se vuelve más una obligación tediosa, que una actividad natural, necesaria, creativa e inspiradora dentro del propio proceso.

LABNL cuenta con un equipo dedicado a la documentación de los procesos que se dan en el laboratorio. La documentación, comunicación y difusión de sus actividades están gestionadas por este mismo equipo registrando los procesos de trabajo y con ello produciendo distintos formatos de documentación y difusión que permitan compartir las aportaciones de los ciudadanos/as. Basándose en la metodología docArt<sup>10</sup>, la documentación en LABNL trata de dar cuenta tanto de los hechos prácticos y funcionales, como de los aspectos relacionales y afectivos del proceso de prototipado. Al hacerlo, no solo se facilita la replicabilidad de los prototipos, sino que también se promueve una visión crítica y plural del mundo. La documentación en LABNL se centra en dos objetivos clave: permitir la replicabilidad de los prototipos y hacer visibles los aprendizajes adquiridos durante el proceso colaborativo (Lafuente; Gómez & Freire, 2018). Para ello LABNL se ha dotado de una serie de herramientas y plataformas de código abierto, como su sitio web o su wiki en la capa digital, las cuales permiten dar cuenta de los procesos y resultados del trabajo de la ciudadanía de una forma accesible y abierta y que los mismos participantes puedan colaborar en la producción y edición de la documentación de sus prototipos; o los espacios de documentación análogos como mamparas, exposiciones o docSpaces los cuales permiten el registro abierto y colaborativo de los procesos de prototipado durante las mismas sesiones de prototipado, convirtiendo las paredes del laboratorio en un mapa del proceso de trabajo donde asistentes y visitantes pueden reconocer el desarrollo de los prototipos. Todas estas herramientas fomentan la transparencia, la rendición de cuentas, la colaboración y la cultura libre entre las comunidades del laboratorio ciudadano.

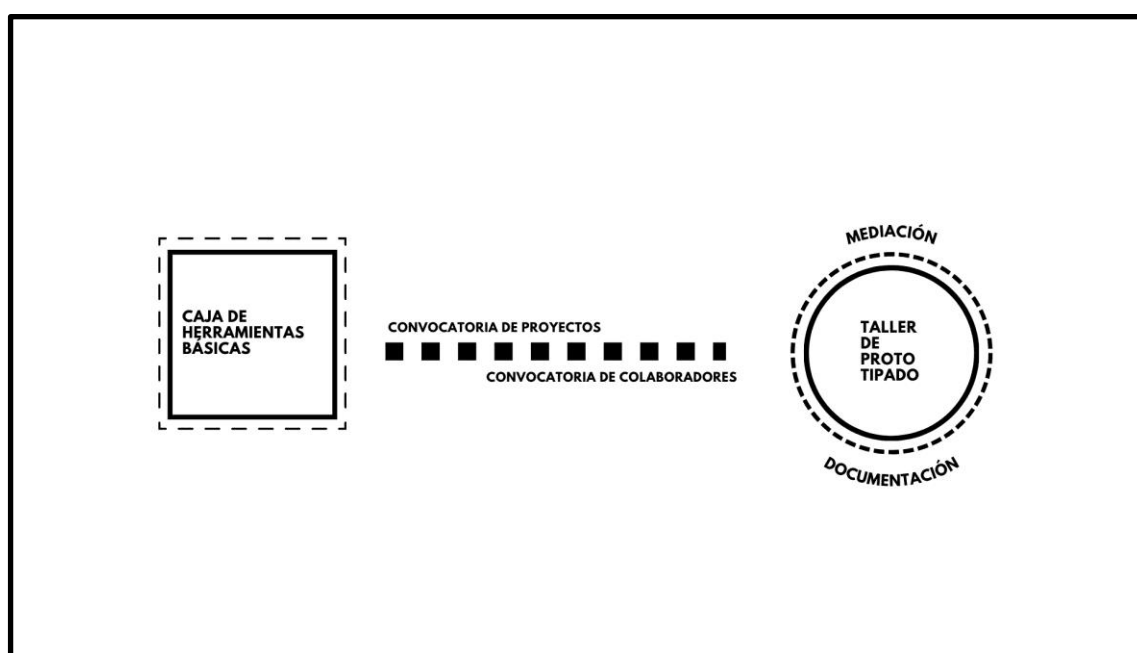
#### 4. Hacia la definición de un modelo para la puesta en marcha de Laboratorios Ciudadanos

Tras haber analizado los aportes más sustanciales al modelo de laboratorios ciudadanos de los casos expuestos, podemos asegurar que un laboratorio ciudadano cuenta con diversas herramientas flexibles que permiten conectarse y mezclarse para configurar una programación adaptada a las necesidades específicas de cada caso. En base a la experiencia de MediaLab-Prado, que distribuye, consolida y profundiza la SEGIB y LABNL, se identifican 4 instrumentos principales para la definición de una caja de herramientas básica (Figura 1) Las convocatorias abiertas (de proyectos y colaboradores/as) a través de las cuales la ciudadanía puede proponer proyectos en base a sus anhelos, afectaciones o intereses y sumar a un grupo de participantes al

<sup>10</sup> docART es un prototipo metodológico para la documentación de prototipos en laboratorios ciudadanos. Su primer desarrollo se llevó a cabo en el laboratorio ciudadano "Inteligencia colectiva para la democracia" (MediaLab Prado, noviembre de 2017). Consultar en <https://www.docart.app/>

proceso de producción. 2) Los talleres o sesiones de prototipado que son espacios que pueden variar su duración de 5 a 15 días en los que los grupos formados a través de las convocatorias se reúnen de forma presencial o en línea para dar forma a las propuestas seleccionadas. Para ello cuentan con el apoyo de figuras como los mediadores o mentores que aporta el laboratorio. 3) La Mediación como la forma de crear las condiciones de cuidados necesarias para que los grupos puedan prototipar en el laboratorio de forma horizontal, traduciendo y conectando entre las culturas disciplinares y afectivas distintas de los participantes y el exterior del laboratorio. 4) La documentación para compartir el conocimiento, visibilizar los aprendizajes y facilitar la replicabilidad de los prototipos. Por supuesto a esta caja de herramientas básica se le pueden y deben añadir muchas otras que ayuden a comprender mejor las características del contexto en el que se está trabajando, que faciliten el diseño de los prototipos o que permitan su posterior validación junto a las comunidades afectadas/concernidas (Lafuente & Gómez, 2021).

**Figure 1.** Caja de herramientas básica para Laboratorios Ciudadanos.



Fuente: Elaboración propia a partir de los casos Medialab-Prado, LABIC y LABNL.

Este repaso por algunas de las experiencias más significativas que han poblado el panorama iberoamericano permite proponer una definición y resaltar algunos aspectos fundamentales que hacen distinguibles a los laboratorios ciudadanos como un modelo de innovación ciudadana:

Entendemos un laboratorio ciudadano como un entorno abierto y hospitalario dedicado a la producción experimental que combina diferentes métodos, protocolos, dispositivos, infraestructuras y códigos puestos al servicio de la innovación ciudadana, o en otras palabras, es una forma de protocolizar los cuidados necesarios para atraer inteligencia colectiva alrededor de proyectos que permitan visibilizar, problematizar y, en el mejor de los casos, dar solución a los asuntos que afectan a una comunidad.

Es por tanto, una suerte de construcción que funciona de dos formas: 1) como un “objeto frontera” (Star & Griesemer, 1989) lo suficientemente plástico como para adaptarse a las necesidades y limitaciones locales de las distintas comunidades que los emplean, pero también, lo bastante robustos como para mantener una identidad común en todos los sitios y contextos y 2) como un “dispositivo de escucha” que permite recibir y canalizar las propuestas de la ciudadanía a través de las distintas herramientas analizadas (como las convocatorias, la mediación o las sesiones de prototipado) haciendo de los laboratorios ciudadanos un espacio para

el ejercicio de una democracia participativa fundada en la producción colectiva de soluciones a los problemas que nos conciernen como sociedad.

#### *4.1. Aspectos para distinguir un laboratorio ciudadano*

A continuación, se describen tres condiciones que desde este trabajo se consideran fundamentales para poder identificar un laboratorio ciudadano como un dispositivo al servicio de la innovación ciudadana.

##### *a. Son espacios abiertos*

La inspiración de los laboratorios ciudadanos en el mundo hacker es reconocible. De hecho, muchos laboratorios nacen en el ámbito de la cultura digital y de las prácticas de las comunidades de software y hardware libre. En este contexto existen hackerspaces, hacklabs, makerspaces, fablabs, medialabs, etc. entornos donde comunidades de práctica experimentan con las tecnologías digitales con reglas de juego que favorecen lo abierto y colectivo.

Como hemos visto al analizar el caso de Medialab-Prado, la inspiración de su modelo institucional bebe justamente de las prácticas hackers y la cultura libre. Dice Lafuente (2022) al respecto en su último libro:

“Entre los primeros y principales aliados de MediaLab-Prado estuvieron los hackers, personas que escribían código, pero que sobre todo admirábamos porque creían y practicaban la cultura libre. Eso explica que nuestra noción de prototipo rápidamente se asoció con la noción de abierto. Y abierto quería decir varias cosas: una, obviamente, la vinculaba a todas (las personas) y a todos (los temas). No había entonces tema o cuestión que fuera demasiado grande, distante o compleja para que quedara fuera de nuestros intereses. Abierto a todo y a todas, pero también abierto en el sentido de no acabado, porque nadie tenía el privilegio de decir cuándo los procesos inaugurados habían concluido: nadie tenía derecho a cerrar una conversación. Abierta era nuestra manera de decir tentativo, inacabado, imperfecto o experimental” (Lafuente, op. cit, 73).

Y es que esta defensa de lo abierto es reforzada y acompaña de forma recursiva por muchas prácticas fundamentales en el quehacer diario del laboratorio: desde el acceso abierto al propio edificio/espacio destinado para sus actividades, las convocatorias que lanza o las iniciativas, proyectos y comunidades que acoge, fomentando la colaboración y la participación activa de cualquier perfil y conocimiento sin necesidad de certificaciones. Respecto al trabajo de las comunidades de práctica podemos observar lo mismo en un doble gesto de apertura pues, los grupos de trabajo se comprometen a estar permanentemente abiertos a la inclusión de nuevos participantes y todo el trabajo que realizan se encuentra documentado bajo licencias libres (habitualmente Creative Commons) con el fin de compartir su conocimiento y permitir su uso, estudio, distribución, modificación y replicabilidad en la línea de las 4 libertades que proclaman desde hace décadas los defensores del software libre.

##### *b. Son espacios experimentales*

Como hemos podido ver, con los laboratorios ciudadanos se busca generar un espacio de encuentro que favorezca el intercambio de distintos saberes y formas de conocimiento procedentes del entorno local, académico, profesional o activista. Por esta razón, se los dota de una serie de protocolos, dispositivos e infraestructuras que permitan reunir perfiles muy diversos alrededor de los proyectos propuestos, con el fin de producir la suficiente inteligencia colectiva y sensibilidad como para problematizar y entender de formas distintas las problemáticas que afectan o conciernen a sus participantes. Son espacios que se auto-perciben como experimentales, donde se trabaja con un enfoque “indisciplinar”, esto quiere decir que no son el espacio natural

de ninguna disciplina o saber en concreto. Por el contrario, se busca activamente la combinación de saberes heterogéneos basados en conocimiento disciplinar y aquel relacionado con la experiencia de quienes encarnan una afectación concreta.

Decimos entonces que son un espacio experimental porque son un lugar al que la ciudadanía puede ir para probar y ensayar propuestas sin miedo a equivocarse. La experimentación en un laboratorio ciudadano se parece mucho a esa imagen que propone Rheninberger (1997) cuando se refiere al experimento no como un sistema cerrado que permite corroborar hipótesis y teorías preestablecidas, si no como un “sistema experimental” que se diseña y rediseña de formas creativas y que es en su ejecución donde se produce la creación de conocimiento nuevo. En un espacio plagado de incertidumbre, con una mezcla de conocimientos y experiencias heterogéneas y abierto a lo inesperado. Los experimentos se diseñan de poco a poco, en ocasiones tratando de trascender métodos y prácticas ortodoxas más propias de un entorno académico para permitir la posibilidad de resultados imprevistos que podrían desafiar las ideas convencionales.

Pero, además, es un espacio experimental porque en él se contrastan las diferentes experiencias de los/as individuos afectados que encarnan las diversas problemáticas de formas distintas. Cada cuerpo, situación socioeconómica, procedencia étnica, de género, de edad, de orientación sexual es diferente y cada persona por tanto se ve afectada de forma singular. Es en ese ejercicio de compartir experiencias y contrastarlas donde se puede generar nuevas preguntas e incertidumbres en lugar de proporcionar respuestas definitivas. Esto permite abrir la puerta a una investigación más profunda y sensible, reconsiderando teorías y suposiciones previas basadas en prenociones con sesgos colonialistas, machistas, especistas, etc.

La forma en la que se materializa la experimentación y apertura hacia lo imprevisto es a través del prototipado. En los laboratorios ciudadanos que forman parte del universo de estudio se usa la noción de prototipo para, como dice Lafuente (2015), “evocar la capacidad de anticipar, modelar o prefigurar soluciones todavía incompletas, tentativas o provisionales a los problemas. La cultura del prototipo entonces es heredera de las prácticas experimentales del laboratorio y artesanales del taller”. Un prototipo es, sobre todo, algo en una fase beta, preliminar, inacabada y puede tener múltiples formas : desde un protocolo de actuación ante situaciones de violencia de género en el aula, un mapa de espacios seguros para la comunidad LGBTQ+, una prótesis de extremidad superior en impresión 3D, una pieza textil hecha con el cuero de hongos, el modelo virtual de un cine desaparecido y reconstruido a través de las memorias de los vecinos y vecinas, etc.

Un prototipo es incompleto y poroso, y son en estas cualidades, donde se halla su mayor potencia para abrirse y congregar siempre alrededor suyo nuevas miradas, nuevas formas de pensar y sentir los problemas que afectan a una comunidad. Además de tentativo y permeable, un prototipo también es situado por dos razones: porque responde a las características, problemas y necesidades de un contexto determinado, y porque se hace con lo que se tiene a la mano en términos materiales, afectivos y de inteligencia compartida por quienes lo están desarrollando. También se hace todo lo posible por que sean de bajo costo por dos motivos principalmente: el primero tiene que ver con que el proceso de prototipado vive en un entorno de incertidumbre, reacomodo y rediseño constante y es imprescindible reducir gastos innecesarios hasta haber encontrado una ruta segura de desarrollo. La otra razón tiene que ver con la capacidad para facilitar su replicabilidad en otros contextos en los que probablemente haya menos recursos, menos capacidad técnica y/o cognitiva o menos disposición política.

Como vemos entonces, la cultura del prototipado tradicionalmente relacionada con el mundo del diseño y desarrollo tecnológico se conjuga como la lógica que permite guiar y democratizar procesos de innovación y participación ciudadana. De esta forma se trasciende el prototipo como objeto, siendo a través de él que se conjura un ensanchamiento del espacio público al alumbrar nuevas realidades antes veladas por la ceguera disciplinar o metodológica a través de la comunidad de hacedores que se reúne en torno a él, reevaluando y remodelando simultáneamente su propia práctica. Prototipo y comunidad se retroalimentan, o como lo llama

Kelty (2008) al analizar las comunidades de software libre, se convierten en un “público recursivo”, donde la “recursión” se refiere a esta capacidad para auto-fundar sus propios deseos político-técnicos: donde el proyecto se escribe simultáneamente como producción y se reescribe como infraestructura. Es decir, la comunidad al producir el prototipo lo va dotado de una serie de valores que a su vez prototipa una comunidad que los sostiene y es sostenida por él.

Es evidente que, aunque los prototipos generados en laboratorios ciudadanos nacen en un contexto estricto de aprendizaje, pueden tener un destino que vaya más allá. Es más, es deseable que muchos de esos prototipos acaben por generar impacto, más allá de la pequeña escala experimental. Para estos casos, existen diversos entornos, instituciones o proyectos, diferentes a los laboratorios ciudadanos, que pueden ser de ayuda. Desde organizaciones cívicas dedicadas a influir sobre las políticas públicas, a comunidades ciudadanas que pueden hacer suyo el prototipo e implementarlo o incluso incubadoras o aceleradoras que pueden ayudar a aquellos equipos que deseen desarrollar su prototipo con un modelo empresarial. Lo importante es entender que en los laboratorios ciudadanos estudiados se establece una distinción entre prototipado y generación de impacto, los cuales son dos procesos que adquieren toda su potencia cuando se separan y secuencian en el tiempo de modo que en una primera fase las personas estén centradas en la compresión y creación experimental y en una segunda se enfocan exclusivamente en la generación de impacto.

### c. Son espacios de cuidados

Para que un laboratorio ciudadano pueda ser un espacio abierto a todos y a todo y para que en él se pueda experimentar mezclando saberes y experiencias diversas, es fundamental que se configure como un espacio hospitalario donde reine una cultura de cuidados. Los cuidados son las tareas que permiten hacer accesibles los espacios para que nadie se sienta excluido, éstos sirven como la argamasa que posibilita construir relaciones, tejer redes entre las personas participantes, ayudando a pensar objetivos comunes y afianzar una comunidad. Son como dicen B. Fisher y J. Tronto (1999, 30), “todo aquello que hacemos para mantener, continuar y reparar nuestro mundo, para que podamos vivir en él lo mejor posible”. La dificultad y la importancia de los cuidados en un laboratorio ciudadano, radica en que al promover entre quienes participan la mayor heterogeneidad posible, estos provienen de culturas epistémicas muy distintas, es decir, “todas esas amalgamas de arreglos y mecanismos (alcanzados a través de la afinidad, necesidad y coincidencia histórica) que, en un campo disciplinar concreto, determinan cómo conocemos lo que conocemos” (Cetina, 1999). Pero, por si esto fuera poco, todas esas personas reunidas alrededor de un prototipo también provienen de culturas afectivas diferentes, o sea, de arreglos y mecanismos concretos que determinan cómo sienten lo que sienten. Esto implica distintas formas de relacionarse con el tiempo de concentración en actividades que requieren de un periodo de focalización prolongada, la forma en la que se confrontan ideas y se enfrentan discusiones o el grado de tolerancia que se tiene a la incertidumbre, incluso, al fracaso.

La perspectiva feminista añade otra dimensión al papel de los laboratorios ciudadanos en la creación de comunidades de práctica. La noción de “reproducción comunitaria de la vida” de Gutiérrez y Lohman (2015) enfatiza la importancia de las tramas comunitarias y la cooperación en la provisión de cuidados y recursos necesarios para la vida cotidiana. En este sentido, los laboratorios ciudadanos pueden ser vistos como espacios que promueven la comunalización de los cuidados al enfocarse en problemáticas locales y contribuir a la mejora del bienestar colectivo. Tendemos a pensar que hay una serie de personas que se deben de encargar de estos asuntos, pero al observar la práctica cotidiana no es del todo así. Los cuidados suelen desbordar a quienes están asignados para su práctica. En los laboratorios ciudadanos que hemos descrito, esta tarea está principalmente destinada a los/as mediadores y el personal de mantenimiento. Sin embargo, luego ya en la práctica, la labor de cuidar es algo que compromete a la totalidad de las personas, infraestructuras y conexiones involucradas, reconociéndose en ellas mediaciones naturales y



espontáneas que permiten hacerse cargo del cuidado de los demás haciendo del laboratorio una construcción bien engrasada en la que la participación pueda suceder. De esta forma cuidar se convierte en una forma de mediación y la mediación en una forma de cuidado.

Y es que, frente a otros espacios de producción en los que el énfasis está puesto en el resultado y su impacto más directo, los laboratorios ciudadanos son espacios dónde se antepone el fortalecimiento de la sociedad civil, explorando nuevas formas de relacionar producción de conocimiento y convivencia o como dijo Illich (1971), de “convivialidad”, creando espacios en los que las personas puedan aprender y colaborar de manera autónoma y libre, sin las limitaciones impuestas por instituciones rígidas. Por tanto, el fin último de un laboratorio ciudadano es generar las condiciones necesarias para que durante el proceso de prototipado el grupo de personas involucrado en su desarrollo pueda conformarse como una comunidad de práctica.

Estas comunidades son procesos de aprendizaje social que ocurren cuando personas con un interés común por un tema o problema y no necesariamente por una cuestión de identidad, colaboran con autonomía (para definir sus objetivos, métodos de trabajo y modos de gobernanza) por un período de tiempo prolongado para buscar soluciones colectivas y crear innovaciones (Wenger, 1998). Estas comunidades potenciales, esto es, “por venir” en términos de Agamben (1996), anuncian el surgimiento de una nueva forma de comunidad que se construye a partir del hacer juntos, en contraposición a las comunidades identitarias o las que son cooptadas por estructuras de poder y exclusión.

## 5. Conclusión: Retos e incertidumbres de los laboratorios ciudadanos

La popularización del término “laboratorio,” en general, y “laboratorio ciudadano,” en particular, refleja el creciente interés en sus contribuciones. Sin embargo, esta popularización también ha llevado a un uso excesivo del término, donde muchos proyectos se autodenominan “laboratorios,” incluso si no están orientados a procesos de producción y prototipado. Esta sobreutilización del término “laboratorio” devalúa su significado y dificulta la comunicación de sus objetivos.

En este sentido, existe una cierta confusión terminológica al usarse en ocasiones el término “laboratorio” tanto para la identificación de espacios e instituciones como para definir los procesos colectivos de producción. Así, por ejemplo, MLP utilizaba el término “taller de producción o prototipado” para identificar sus formatos intensivos (normalmente de 2 semanas) como en el caso de “Interactivos?”. Sin embargo, estos talleres de producción se han ido popularizando y se han extendido a otras instituciones (es el formato que por ejemplo utiliza SEGIB para referirse a los LABIC) y su denominación ha ido evolucionando hacia “laboratorios de innovación ciudadana”, “laboratorios ciudadanos” o simplemente “laboratorios”. En este caso se opta por hacer la distinción entre “laboratorios ciudadanos permanentes” para aquellos que cuentan con un espacio físico dedicado y “laboratorios ciudadanos como evento” para los que son itinerantes o se manifiestan en un momento determinado y en un lugar concreto. Siendo así los “talleres de prototipado” su unidad básica y metodológica de trabajo.

Una parte relevante de los laboratorios ciudadanos han nacido desde iniciativas culturales y/o los agentes culturales han sido claves en su desarrollo. Es el caso de dos de los ejemplos analizados en este artículo, MLP y LABNL. Este hecho refleja la mejor tradición de la cultura entendida no como un sector o una industria sino como una forma amplia de entender de manera crítica el mundo y por tanto una manera de anticipar cambios y generar contextos donde cooperan agentes diversos. Sin embargo, la asimilación de los laboratorios ciudadanos con “lo cultural” puede llevarlos a mantener un enfoque y lenguaje disciplinares y enfocarlo a los problemas más relevantes para el mundo de la cultura. Por esa razón, en muchos casos es un enorme reto atraer a los laboratorios a personas del mundo de la ciencia o la ingeniería, por poner algunos ejemplos, o a los ciudadanos que no tienen un interés temático específico y de este modo generar el contexto “indisciplinar” necesario. El excesivo protagonismo o la patrimonialización

de un laboratorio por un grupo gremial es un serio riesgo al que se enfrenta el modelo y que debe ser gestionado.

De la misma forma que ocurre con otros modelos o formatos que tratan de producir innovación social existen algunos retos importantes como el problema de los sesgos de representación a la hora de participar en los procesos de innovación, pudiendo estar sesgados hacia personas con mayor acceso a recursos, tiempo libre, habilidades técnicas o manejo del lenguaje. Esto puede excluir a grupos vulnerables y perpetuar desigualdades en la participación y los resultados. Para derribar las barreras que impiden el acceso a cualquier persona, el laboratorio debe incrementar los esfuerzos de mediación para atraer a los colectivos más vulnerables y dotarse de herramientas que permitan la horizontalidad en los tiempos y los espacios para garantizar su acceso: como abrir en horarios que amplíen la participación, reducir y hacer más intensivos los periodos dedicados al prototipado de propuestas, dedicar presupuesto a espacios para infancias, o promover espacios accesibles y seguros para las diversidades. También hacer entendibles las convocatorias y mensajes que publica, con un lenguaje y códigos comprensibles. Otro reto a tener en cuenta es el de posibles cooptaciones por parte de grupos, corporaciones o instituciones que puedan apropiarse e instrumentalizar el proceso de innovación ciudadana para fines ajenos a los de las comunidades involucradas. Esto puede socavar su naturaleza participativa y su capacidad para generar un cambio transformador. El uso de los procesos participativos para legitimar intereses particulares o para blanquear la toma de decisiones y acciones políticas o empresariales es un fenómeno muy parecido al ya conocido *greenwashing*. Por esta razón los laboratorios ciudadanos deben hacer constitutivo de cada proceso de trabajo el *nihil de nobis, sine nobis* (“nada sobre nosotros sin nosotros”) e incluir a las comunidades y colectivos afectados en el proceso de investigación e innovación, ya sea en el diseño y producción de los prototipos o en su validación, tomando siempre sus conocimientos y experiencias en cuenta.

Ya hemos dicho que los laboratorios ciudadanos son espacios experimentales y que, al menos en los casos de estudio expuestos, tratan de establecer una diferencia entre la etapa de experimentación creativa y la de impacto. Esto puede despertar algunas dudas respecto a la falta de escalabilidad y sostenibilidad de los prototipos. Por lo general, los proyectos prototipados carecen de recursos suficientes, estructuras de apoyo y continuidad para perdurar más allá de la fase inicial de experimentación. La forma habitual de proceder de los laboratorios implica un doble esfuerzo. Por un lado, trabajar por la apropiación del prototipo por parte de la comunidad afectada o concernida. Por otro lado, abrir canales que conecten las propuestas con otras instituciones, proyectos, empresas, aceleradoras, fundaciones o universidades que puedan darle una segunda vida y garantizar su sostenibilidad. Para que pueda suceder, el laboratorio debe articular una red de actores, proyectos, infraestructuras e instituciones que permitan tener continuidad al proyecto. Por esta razón el trabajo de vinculación del laboratorio es primordial para la vida de sus comunidades.

En conclusión, la aparición del modelo de laboratorios ciudadanos nace en un momento determinado en el que confluyen una serie de cambios sociales estructurales que permiten replantear la relación entre las instituciones públicas tradicionales y una ciudadanía emergente que pide más y mejores espacios de participación activa. Estos espacios, con sus retos e incertidumbres, se convierten en una oportunidad para generar propuestas innovadoras en un sentido de abajo arriba (*bottom-up*) y entre pares (*peer to peer*) en el que los ciudadanos toman un mayor protagonismo en la decisión y producción de las propuestas que exploren o den respuesta a las problemáticas comunes que los concierne.

Desde una perspectiva de políticas públicas, los laboratorios ciudadanos permiten abordar problemas con enfoques que no son posibles dentro de los marcos de actuación convencionales. Su carácter abierto, exploratorio y experimental los convierte en formas de 1) identificar problemáticas y procesos ciudadanos emergentes, y 2) producir nuevos marcos de actuación y herramientas para el abordaje y la solución de los problemas sociales. Pero esta doble función

sólo puede cumplirse si se preservan las características esenciales que describimos anteriormente; para ello el laboratorio debe ser protegido de presiones finalistas que amenacen la creatividad de los colectivos involucrados en la producción.

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