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CALL FOR PAPERS



The theme of the 2024 edition of the UD conference - Unfolding Design Boundaries, promotes reflection on today's challenges through improbable design practices. Instead of fearing the unknown, this edition makes room for uncertainty and chance as the driving forces behind the design process, which is strongly mediated by a practical dimension. The nature of uncertainty is ubiquitous and transversal not only to the practice of Design, but also to its boundaries with other disciplinary territories, whose relevance requires new readings and has successfully led to new opportunities for growth and relationships with the world.

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TOPICS

Serendipity: uncertainty as a practice

Explore how uncertainty can be methodologically incorporated into Design, encouraging the formulation of new hypotheses and

MORE +

Uncover: remember not to forget

the past, revitalizing it to create new realities in contemporary design.
- What role does design play today in revitalizing (or destroying) cultural heritage?

MORE +

Decolonizing: design research through practice

Approach to the ontology of Design, exploring the limits of its scope and respective disciplinary domains, as well as the concerns that compromise the present and future of the discipline.

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In-between: design as interface

The potential of interdisciplinary synergies in the field of Design, where the intersection with other areas of the Sciences and Humanities can lead to innovative approaches and solutions.

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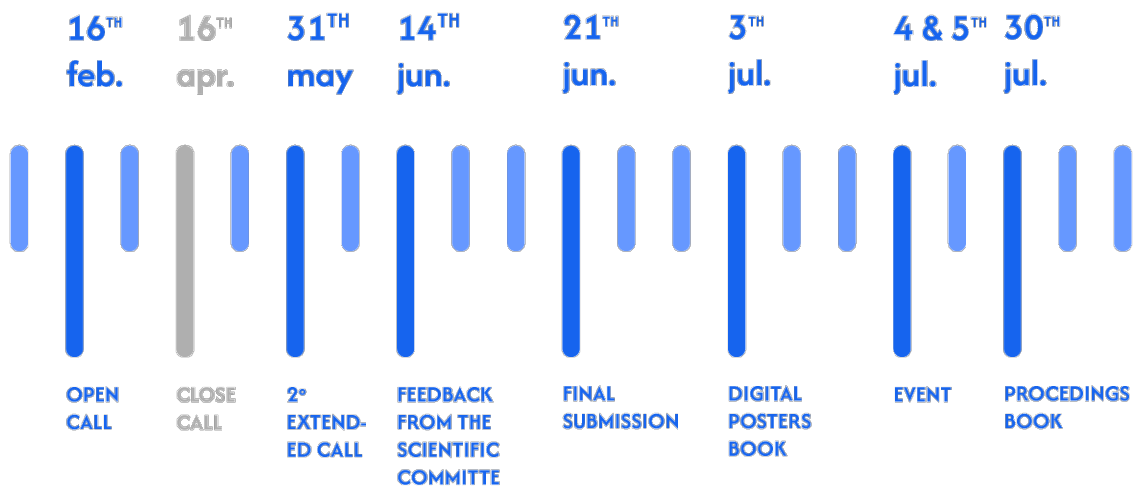
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**LIVRO DE ATAS UD24: DESDOBRAMENTO DAS
FRONTEIRAS DO DESIGN**
11º ENCONTRO DE DOUTORAMENTOS EM
DESIGN

**BOOK OF PROCEEDINGS UD24: UNFOLDING
DESIGN BOUNDARIES**
11º MEETING ON PHD DESIGN RESEARCH

**UD24 DESIGN CONFERENCE
UNFOLDING DESIGN BOUNDARIES**

**04 & 05 OF JULY 2024
AVEIRO / PT**

TÍTULO / TITLE

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**UA EDITORA – UNIVERSIDADE DE AVEIRO
1ª EDIÇÃO / 1ST EDITION – JULHO / JULY 2024**

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ISBN

978-972-789-943-2

DOI

10.48528/tth3-vc15

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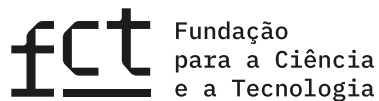
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This work was supported by FCT – Fundação para a Ciência e Tecnologia, I.P. by project reference UIDB/04057/2020 and DOI identifier <https://doi.org/10.54499/UIDB/04057/2020>.

UNFOLDING DESIGN BOUNDARIES

The theme of the 2024 edition of the UD conference - *Unfolding Design Boundaries*, promotes reflection on today's challenges through improbable design practices. Instead of fearing the unknown, this edition makes room for uncertainty and chance as the driving forces behind the design process, which is strongly mediated by a practical dimension. The nature of uncertainty is ubiquitous and transversal not only to the practice of Design, but also to its boundaries with other disciplinary territories, whose relevance requires new readings and has successfully led to new opportunities for growth and relationships with the world.

The demand for quick and precise answers via technology, adjacent to scientific thinking and rigor, does not allow room for the improbable, which is often seen as a detriment to the production of results. However, the evolutionary path that marks the History of Science is characterized by its non-linearity. This path has often been driven by unusual and even accidental advances, which have transformed and conditioned the discovery of new avenues of investigation. The uncertainty of accident presents itself as an anarchy to the formula. Its introduction into project highlights an alternative for achieving innovation and economic prosperity, through unexpected contributions, analogous to the subject being approached and/or transferred from other fields of knowledge.

Unfolding Design Boundaries thus emphasizes the unique perspectives and unexpected results

that emerge from unusual combinations, which allow for a deeper and more comprehensive understanding of Design. In addition to this fact, designing in boundary zones reflects the breadth and expansive nature of this area of knowledge, making it possible to scrutinize and signify its very essence and define new trajectories.

UD24 - *Unfolding Design Boundaries* is an event open to the scientific, academic and professional community, inviting contributions where the focus is on practices that explore the limits of the approaches used in design. The aim is to promote reflection on the introduction of unusual or lesser-known design practices, or in conjunction with other areas, broadening the territories in which design operates. It is proposed to identify a set of processes that give ground for exploration, taking advantage of the various areas of knowledge that cross the discipline of Design and its *modus operandi*.

It is hoped that these contributions will enrich scientific production, the applicability of which could have a positive impact on industry, the market and society. To this end, it is possible to submit original articles that explore one of the following discussion topics.

Uncover: **remember not to forget**

Valuing knowledge that has been forgotten and/or is about to be lost. We are looking for contributions that recover knowledge from the past, revitalizing it to create new realities in contemporary design.

- What role does design play today in revitalizing (or destroying) cultural heritage?
- How can Design play an important role in the proliferation and inheritance of ancestral knowledge, adding intellectual value?
- How can memory contribute to meeting future challenges?

Serendipity: **uncertainty as a practice**

Explore how uncertainty can be methodologically incorporated into Design, encouraging the formulation of new hypotheses and (possible) innovations.

- Can decision-making among design practices be informed by serendipity?
- How can the encounter with chance, from a methodological perspective, contribute to the production of knowledge in Design?
- How does the creative process condition the validation of projects (in and for Design)? And how legitimate is it?

In-between: design as interface

The potential of interdisciplinary synergies in the field of Design, where the intersection with other areas of the Sciences and Humanities can lead to innovative approaches and solutions.

- How can Design's mediation between scientific areas contribute to the knowledge and reflection of the discipline?
- How can Design contribute to the transfer of knowledge and new practices, interoperable in the 21st century?
- Can the economic, social and cultural fabric benefit from the inclusion of Design in decision-making and implementation processes?

Decolonizing: design research through practice

Approach to the ontology of Design, exploring the limits of its scope and respective disciplinary domains, as well as the concerns that compromise the present and future of the discipline.

- How should the boundaries of Design's ontological responsibility in the economy, society and ecology be understood?
- How is it possible to obtain validation for design projects, a process generally characterized by its abductive reasoning?
- How can design theory condition the discipline of designing?

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PALAVRAS-CHAVE / KEYWORDS

Design
Assessment
Social innovation
Italy
SME

DOI
10.48528/tth3-vc15-15

Bridging management and design assessment: Exploring social innovation evaluation in Italian SMEs

Abstract

This paper examines the role of design as a bridging factor across various fields of knowledge, specifically focusing on the evaluation of social innovation in small and medium enterprises (SMEs) in Italy. The research aims to understand how a design-centered approach can facilitate organizational change, promote sustainability, and improve business competitiveness for SMEs. Through the integration of design with management, sustainability, and social sciences, the study analyzes current assessment methods and seeks to establish strategies based on design principles such as participatory design. It emphasizes the significance of design in driving social innovation and underscores the value of interdisciplinary cooperation in tackling modern business challenges. This paper emphasizes how design has the potential to transform practices towards more socially responsible and sustainable business approaches within the Italian business sector.

Introduction

In recent years, the significance of social innovation in addressing societal challenges and promoting ethical practices across various sectors, including business and organizations, has been increasingly recognized (Dainienė & Dagilienė, 2016). Despite considerable research on the evaluation of social innovation, current methods often overlook the transformative potential of design strategies in the matter. This paper explores the strategic role of design in evaluating social innovation within Italian SMEs. By positioning design at the core of the evaluation process, the ongoing research aims to highlight how design-driven approaches can foster sustainability, enhance business competitiveness, and drive social responsibility.

Design-oriented methods have become increasingly important in the realm of innovation, especially for addressing intricate business challenges. Yet, their utilization for evaluating (social) innovation is still constrained (Foglieni et al., 2018). This represents an overlooked chance since design has the potential to provide fresh viewpoints and understanding when assessing social innovation. Design prioritizes comprehending the requirements and ambitions within a particular context of study along with considering contextual elements that may impact innovative processes.

Integration of design principles into the evaluation of social innovation, commonly conducted within management discipline, can improve the process of prioritizing user needs and adapting to specific contexts (Yu & Sangiorgi, 2018). This leads to a more thorough comprehension of the impact and effectiveness of initiatives, ultimately directing the development of responsible and effective strategies. Incorporating a design approach in assessing social innovation could advance an understanding of how these initiatives tackle societal challenges and advocate sustainable practices in corporate environments. Taking an exploratory stance aims to comprehend how social innovation assessment has been approached from various perspectives and considers the potential influence that a design

discipline may have in reshaping sustainability practices within businesses and organizations.

Italian context

In recent years, there has been a noticeable shift in the perception of innovation, with a greater focus on its impact on society (United Nations & Department of Economic and Social Affairs, 2015). While discussions on progress have traditionally prioritized economic and technological advancements, there is now an increasing acknowledgment of the importance of innovations that tackle pressing social challenges within the business sector (De Silva & Wright, 2019; Evans et al., 2017; Pless et al., 2021; Landoni et al., 2016; Porter & Kramer, 2011). This change indicates a growing interest in exploring how innovations can contribute to societal benefit.

In Italy, social innovation plays a crucial role within the innovation ecosystem. Grounded in research and innovation policy, it shows great potential in addressing societal challenges and advancing progress towards achieving the Sustainable Development Goals (Eichler & Schwarz, 2019; Piccarozzi, 2017). Specifically, small and medium enterprises have become essential to economic vitality, innovation, and job creation in Italy (Cataldo et al., 2021; De Martino & Magnotti, 2017; Festa et al., 2020, as the business environment changes. The need for SMEs to participate in social innovation is increasingly clear. This requires them to respond to market demands and adopt socially sustainable practices (Chowdhury & Shumon, 2020; Halme & Korpela, 2014; Longo et al., 2005).

Consequently, there is an increasing need to consistently monitor the progress and results of social innovation initiatives (Cunha & Benneworth, 2020; Weaver & Kemp, 2017; Wobbe, 2012). This underscores the importance of examining and assessing their efficacy in fostering positive change for sustainable futures. However, there is currently a deficiency in well-established indices and metrics for evaluating social innovation compared to those used for economic innovation (Antadze & Westley, 2012; Bengo et al., 2016;

Bund et al., 2013; Wobbe, 2012). Therefore, additional work on refining concepts, methods, metrics, and indicators is crucial to ensure the effective promotion of social innovation.

Social innovation assessment: Management and design perspective

Measuring the effectiveness of Social Innovation initiatives and their outcomes is a critical aspect of promoting Social Innovation at both local and institutional levels (European Commission, 2011; Oeij et al., 2010; Sinnergiak Social Innovation et al., 2014). While there have been various attempts to assess social innovation from different fields, quantifying and standardizing the subjective and intangible aspects of social impact remains a significant challenge (Howaldt et al., 2019; Jorge Cunha et al., 2022; Krlev et al., 2014; Mildenberger et al., 2020). Many existing assessment tools are not tailored to capture the full value and complexity of social impact (Alex et al., 2019; Dainienė & Dagilienė, 2016; Krlev, 2018).

Examination of the evaluation methods used in the social sector from 2002 to 2012 has revealed deficiencies, such as varying research methodologies and a lack of comparison with control groups or pre-and-post assessments. Despite claims to the contrary, most analyses predominantly concentrate on economic and socioeconomic impacts (Burdge & Vanclay, 1996; Krlev, 2018; Maas & Liket, 2011). Initial findings indicate that impact assessment strategies can be categorized into three groups: cost-benefit analysis, welfare indicators, and capability approach. These categories have been effective in enhancing understanding of social welfare and development but encounter challenges when it comes to accurately measuring specific aspects of social influence (Fig. 1).

Measuring the impact of social innovation has its roots in a positivist perspective, which narrowly defines it as a product or service rather than a process (Antadze & Westley, 2012). The measurement of social innovation impact presents distinct challenges due to its intricate and unpredictable nature (Howaldt et

	Cost-benefit Analysis	Welfare Indicators	Capability Approach
Origin	Public sector (assessing the impact of projects).	Analysis of life satisfaction.	Evaluation of development cooperation and poverty reduction efforts.
Need	Decision making.	Measure social prosperity (beyond economic indicators, GDP).	Recognizing multidimensional topics (lack of financial resources, restrictions on individuals' capabilities).
Use	Monetizing costs and benefits (even if they are not initially expressed in monetary terms).	Satisfaction quantified as the difference of before and after participation in a program.	Measuring organizational activities based on their contribution to empowerment and capability development.
Evolution	Has been adapted and applied in various contexts.	Indicators to supplement economic measures.	Gradual recognition of the limitations of solely economic measures of development.
Example	SROI.	Gross National Happiness.	Body Mass Index / Evaluation based on their impact on expanding individuals capabilities (access to education, healthcare).

Fig. 1 Impact assessment strategies categories. Visualization elaborated by the author.

al., 2019; Krlev et al., 2014; Mihci, 2020). This suggests that the positivist approach may not be sufficient (Antadze & Westley, 2012), indicating the need to redefine the subject and practice from quantitative to interpretive and qualitative analysis of social phenomena. This would allow for comprehensive measurement, encompassing diverse outcomes while also exploring processes and contextual factors linked with this type of innovation.

In the field of design, there is an increasing recognition of the importance of accurately evaluating the impact of interventions and effectively conveying these findings (Björklund, et al., 2018; Drew, 2017; Westcott, et al., 2013). The practice of assessment has become a crucial element in the design process, enabling professionals to gauge the efficiency of their work and make well-informed decisions for upcoming projects (Norman, 2014; Verschuren & Hartog, 2005; Williams et al., 2011).

Design-driven approaches have played a significant role in driving progress, particularly in addressing complicated business and societal

challenges (Brown et al., 2009; Villari & Mortati, 2014; Manzini, 2014). Nevertheless, there is still ongoing exploration into the assessment of innovation, especially social innovation (Foglieni et al., 2018; Foglieni et al., 2018; McKenney & Reeves, 2014; Owen et al., 2022). A design-focused approach to evaluating social impact is valuable because it prioritizes understanding human behavior and user experience while considering contextual factors that can influence innovation processes. Integrating design-centric methods into assessing the impacts of social innovation has the potential to enhance our understanding of how these initiatives address societal issues and promote socially responsible behaviors (Drew, 2017).

Methodology

The research methodology employed is research through Design (Stappers & Giaccardi, 2017), which seeks to create design insights through practical steps and thoughtful analysis (Zimmerman et al., 2010). This approach examines the function of design in appraising social advancement within small and medium-sized businesses in Italy by involving stakeholders actively, encouraging shared knowledge development from different viewpoints, and generating findings that improve comprehension of evaluating social innovation in Italian SMEs.

The ongoing research consists of three key phases. Phase 1: literature review, which involves a comprehensive review of relevant literature to identify case studies and assessment frameworks across economics, finance, management, and design impact evaluation methods with the objective of mapping common areas and indicators used for assessing social innovation in organizational settings. Phase 2: prototyping, where a prototype will be developed by integrating insights from existing assessment frameworks in management and design involving collaboration with design professionals, SME representatives, and innovation experts, aiming to analyze the involvement of Italian and foreign SMEs with social innovation and design principles, considering and applying key design

principles such as user-centered design, co-creation, and iterative testing. Finally, Phase 3: participatory research involving collaborative participatory research with stakeholders from selected companies to map future scenarios, define roadmaps, pilot the tool, assess its viability, identify potential improvements, and explore future applications. Stakeholders, including SME managers, employees, and experts, will actively participate in workshops and feedback sessions to refine the tool and enhance its practical utility.

Through these phases, the research aims to develop a robust and practical framework for evaluating social innovation in SMEs.

Preliminary results

Social innovation measurement and impact

Social impact assessment tools are crucial in evaluating social interventions and initiatives (Western & Lynch, 2000). It is important to have reliable instruments for assessing social impact to guide the measurement process and ensure accurate reporting (Arvidson & Lyon, 2013). While there has been a proliferation of methods and tools for measuring social performance over the last two decades, there has been limited systematic analysis and comparison of these approaches (Arena et al., 2014). Formal methods for measuring social impact aim to standardize, verify, and establish accountability (Molecke & Pinkse, 2017), but it's important to recognize that their development context significantly influences them (Burdge & Vanclay, 1996).

This study identified more than 100 tools, methodologies, models, approaches, frameworks, and methods for measuring social innovation. After applying filters to the initial pool, such as data type considered, tool type, business orientation and complexity, eight cases were selected based on their appropriateness for corporate use and existing literature documentation (Fig.2). These methods are appropriate for qualitative research as well as for use by social enterprises and organizations.

Business	Data type	Tool type	Business oriented	SO applic.	Objective
Social Enterprise Balance Scorecard	Quantitative/Qualitative	Scorecard	Business	Yes	To assess if an intervention is worth the investment.
Theory of change	Quantitative	Conceptual framework	Business/Out of business	Yes	Provide a roadmap for how a program is intended to achieve its long-term goals and create meaningful impact
SROI	Quantitative	Methodology	Business	Yes	Evaluate if an intervention worth the investment
Stated Preferences	Quantitative	Research technique	Business/Out of business	Yes	Expressing benefits in money terms
Revealed Preferences	Qualitative	Research technique	Business/Out of business	--	Compare alternatives and infers the value of benefits
Best Available Charitable Option	Quantitative	Methodology	Business	--	Compare costs and impact of alternatives
CBA	Quantitative	Analytical tool	Business	--	Express the costs and benefits of interventions in money terms

Fig. 2 Selected case studies pool on social innovation assessment. Visualization elaborated by the author.

Design	Data type	Tool type	Business oriented	SO applic.	Objective
Design Ladder	Quantitative/Qualitative	Scale	Business	Yes	Degree of design maturity
Design Audit	Quantitative/Qualitative	Questionnaire	Business	--	Design performance
Design Management Staircase	Qualitative	Matrix	Business	Yes	Degree of maturity in design management
Design Thinking Impact	Quantitative/Qualitative	Scale	Business/Out of business	Yes	Identify form of design impact
Design Capacity Model	Qualitative	Chart	Business	--	Identify and manage degree of maturity - Design related
Design Value Scorecard	Quantitative/Qualitative	Scorecard	Business	Yes	Identify and manage degree of maturity - Design related
Design Management Audit Framework	Qualitative	Questionnaire	Business	--	Evaluate design processes

Fig. 3 Sampling criteria on design assessment approaches. Visualization elaborated by the author.

A design-oriented view of assessment and evaluation

A design-focused viewpoint on social innovation aligns with the increasing focus on user-centered and participatory methods for evaluating innovation (Björklund & Keipi, 2019; Marel & Björklund, 2022). By integrating design principles into the evaluation of social innovation alongside traditional quantitative measures, organizations can achieve a more comprehensive understanding of the social impact they create. Nevertheless, there is still a limited exploration of design in evaluating social innovation (Foglieni et al., 2018; Owen et al., 2022).

Design approaches to measurement are notorious for providing empirical measures of project outcomes, as well as evaluating the impact of design roles within organizations (Cisero et al., 2017; Junginger & Sangiorgi, 2009; Landoni et al., 2016). The literature emphasizes the growing understanding of the role of design in organizations and its importance in driving innovation and shaping organizational strategies (Brown, T., & Katz, B., 2009; Marel &

Björklund, 2022; Martin, 2009; Mortati & Villari, 2016). The sampling criteria in Fig. 3 identified relevant methods for measuring design value and maturity within organizations. Their application demonstrates the tangible contribution of design to companies and how a strategic and integrated role within organizations increases success.

Mapping Small and Medium Enterprises in Italy: Social Innovation and Sustainable Practices

Examining the interconnection between Italy, social innovation, and sustainability offers a thorough grasp of the current state of the country and its potential for driving social innovation. Analysis of company annual reports with substantial impacts on society and the environment in Italy from 2021 to 2023 (Landoni et al., 2023) was instrumental in creating a landscape of businesses involved in sustainable practices and social innovation. This assessment delineated an area for further research into social innovation within Italy, identifying regions where notable levels of social impact have been observed recently.

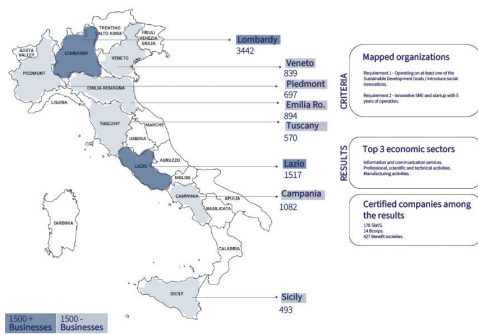


Fig. 4 Map of business with significant social and environmental impact in Italy and top economic sectors. Visualization elaborated by the author informed by (Landoni et al., 2023)

A study detailing Italian enterprises' network significantly contributing to both societal and environmental aspects is presented in Fig. 4. The visual illustration encompasses various entities, including for-profit and non-profit organizations, as well as hybrid initiatives striving to integrate societal responsibility with financial sustainability impactfully. This diversity reflects Italy's business sphere concerning its commitment to sustainability and societal accountability. Consequently, the concluding stages of this research entail focusing on Lombardy, Piedmont, and Emilia-Romagna, culminating in an ensuing prototype phase.

Assessment areas and indicators

A comparative study is utilized to examine methods for selecting case studies and to recognize commonalities and potential for broader implementation (see Fig. 5). This has resulted in an initial identification of assessment areas that integrate social innovation evaluation and design assessment insights, combining approaches from both fields to assess the impact

Areas	Social Enterprise Balanced Scorecard (SE-BSC)	Design Value Scorecard (DVS)
Purpose	Measurement tool to assess the social and environmental performance of companies, especially social enterprises.	Assess the value of design in projects and organizations, focusing on aspects such as innovation, user experience and competitive differentiation.
Methodology	Structured balanced scorecard approach that combines financial and non-financial metrics to evaluate performance.	Design-centric approach that incorporates specific design-related metrics such as creativity, aesthetics and usability.
Metrics	Metrics related to social and environmental impact, such as customer satisfaction, community impact and environmental sustainability.	Metrics related to design value, such as customer perception of design quality, product differentiation capability and ability to generate new ideas.
Adaptability	Use in a variety of business contexts, but is especially designed for social enterprises and organizations with a focus on social responsibility.	Use in different sectors and types of organizations, but is especially designed for projects and companies that value design as a key strategic factor.
Ease of use	Relatively easy to use once the framework and metrics used are understood.	Requires a deeper understanding of design principles and how they can be applied to assessing design value.

Fig. 5 Comparative analysis and criteria. Visualization elaborated by the author.

of social innovation within organizations from a design-oriented perspective.

The primary integration tools identified were the Social Enterprise Balanced Scorecard (Somers, 2005) and the Design Value Scorecard (Westcott et al., 2013). These tools assess organizational performance from various perspectives. In addition to financial aspects, the SEBSC evaluates social impact, environmental sustainability, stakeholder engagement, and other non-financial dimensions of social sector organizations. On the other hand, the DVSC gauges how design influences innovation, customer satisfaction, and alignment with strategic business objectives.

By integrating assessment criteria for social impact with frameworks that evaluate design value, a comprehensive understanding of the overall impact can be achieved. This enables socially focused businesses to utilize design as a strategic resource for enhancing their social impact, while also allowing innovation-driven companies to integrate environmental and social factors into their design processes, resulting in more sustainable and socially accountable

solutions.

An initial assumption regarding the criteria and indicators to be taken into account in the comprehensive assessment approach may cover essential criteria commonly recognized and adapted for inclusion in different evaluation frameworks often employed for impact assessment.

The subsequent stages of the study will further develop the findings presented over the next two years, although it is possible that the anticipated outcomes may evolve.

Conclusions

The assessment of outcomes and impacts in social innovation is heavily influenced by financial viewpoints aimed at strategically allocating funds. Existing evaluation methods for social innovation often come from management, which may not completely fulfill the needs of this field. While these approaches have their benefits and uses, they also possess limitations. Therefore, there is a need to develop new assessment strategies customized specifically for social innovation endeavors. Moreover, incorporating practices from design could transform the conventional perspective and enhance the measurement of success in such initiatives.

From a design perspective, there is a strong requirement to establish a shared comprehension of how to evaluate the influence of social innovation within an organization. The importance of assessment in design theory and application has not been thoroughly studied, resulting in fragmented approaches for gauging outcomes. However, this creates an opportunity for researchers and practitioners to delve deeper into the subject and promote a more evaluative mindset within the design domain. Design-driven approaches provide more accurate and context-specific insights and encourage stakeholder engagement while fostering interdisciplinary/interdepartmental collaboration.

Assessing social innovation extends beyond just quantifying concrete results and effects. The character of social innovation demands a more inclusive and all-encompassing method

for evaluation. This involves considering the environmental factors in which the social innovation functions, along with both the deliberate and unforeseen outcomes that may occur.

By demonstrating the value of design in the context of social innovation evaluation, this study contributes to the ongoing discourse on interdisciplinary collaboration and the strategic role of design in business and organizational development while highlighting the need for policymakers and industry leaders to adopt design-centered approaches to better address the complexities of social innovation and drive meaningful change within the business sector.

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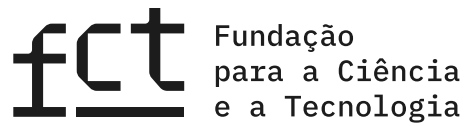
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