

Openness, Innovation, and Sustainability in Museum Organizations

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Abstract

Over the last few decades, social, economic, and technological changes have gradually contributed to modifying the core concept of museum organizations, towards their active involvement in the process of social innovation and territory growth, in accordance with the instances of sustainability. This study investigates how strategic innovation, based on the implementation of an open and sustainable museum model, as a driver of social and civic innovation, can enhance the development of the reference community. To this end, after analyzing the concept of sustainability-oriented innovation in the perspective of openness and shared value, the research investigates the role of sustainability and its specific declinations in museum management, focusing the attention on the experience of the Italian museums in the light of a substantial revision of organization due to a reform in 2014. The theoretical framework is then applied to a case study, the National Archaeological Museum of Taranto “MArTA”, in order to verify the nature and impacts of changes in the museums that take a sustainability-oriented path through strategic and technological innovation. The study provides evidence of the joint and interdependent role of openness, innovation, and sustainability as key drivers in the museums with particular reference to practices adopted to encourage stakeholders’ engagement and to contribute to social, economic, and cultural development.

Keywords: openness, innovation, sustainability, museums

1. Introduction

Faced with the social, economic, and technological changes that have characterized the last few decades, museums have gradually launched transformative policies of their core concept, rediscovering themselves as an active part in the process of social innovation and territorial development, a role that also concretely harmonizes with the global goals of the 2030 Agenda, and in particular with the goal 11, “*Sustainable cities and communities. Make cities and human settlements inclusive, safe, resilient and sustainable*”.

It is no coincidence that the recent redefinition of the Museum, approved by the Extraordinary General Assembly of ICOM (International Council of Museums) in August 2022, is much broader than the previous one, recognizing the aforementioned changes and placing the emphasis on inclusion, on openness to the community and on sustainability: “*A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets, and exhibits tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection, and knowledge sharing*” (ICOM, 2022) (see tab. 2).

According to this broader perspective, therefore, museums must be made accessible not only physically, but also culturally and economically, by eliminating or reducing material and immaterial barriers. The very concept of education, far from being interpreted as a one-way transmission of knowledge, must be considered in the sense of the co-creation of value, considering the museum as a tool for the promotion of plural citizenship, in a permanent logic (ICOM Italy, 2021).

Furthermore, in order to operate effectively at the service of society and with a view to sustainability, it must be included in a network of public and private subjects with whom to interact constantly and integrate resources, structures, and skills. In this regard, it should be noted that the museum, in pursuing the aims of enhancing and using cultural assets, is configured at the same time as an economic agent that performs functions of: a) resource control, b) implementation of forms of consumption and use of factors of production, c) creation of

economic-financial relationships with third parties (Ferrarese, 2017).

In parallel with a change in its aims and core concept, the museum, therefore, as a multi-stakeholder economic agent, appears to be the protagonist of significant managerial and organizational innovations, which envisage the adoption of a corporate approach, rather than merely “custodial” (Camarero, Garrido, & Vicente, 2011), with inevitable repercussions on accounting practices (Ellwood & Greenwood, 2016; Agostino, & Arnaboldi, 2021) and on increasingly “participatory” organizational models that consider the visitor at the heart of the process (Bonet & Négrier, 2018).

Therefore, these innovations do not only concern the creation of value, but also the methods of sharing it through a circular process: the creation of value for users should generate value for the museum organization, and the latter, in turn, should produce benefits for the community in terms of dissemination of culture, social cohesion, economic opportunities, which are then inevitably projected on users (Cerquetti, 2014).

Despite some previous studies have confirmed the role of innovation in museum organizations, these studies mainly concern the impact of technological innovation on museum activity (Nigro, Iannuzzi, Petracca, & Montagano, 2016; Massari, Del Vecchio & Degl’Innocenti, 2022) and the relationship between market orientation, service orientation, and innovativeness (Camarero et al., 2011).

Other studies, specifically aimed at analyzing Italian museums, have investigated the ways in which the measurement of performance has changed over time, in conjunction with the changes in management logic due to the reforms and with the consequent change of their role from autonomous state museums' absorbed in preservation to places focused on entertainment (Agostino & Arnaboldi, 2021), with attention on the controversial role of digital innovation.

There are, instead, a few empirical studies that concern the path of strategic innovation undertaken by museum organizations from the perspective of social and cultural sustainability (Alcaraz, Hume, & Sullivan Mort, 2009; Pop & Borza, 2016; Errichiello & Micera, 2018) and the related impacts in terms of value creation and sharing of it. The present work is contextualized in this stream of literature.

In fact, the paper intends to analyze, through the analysis of a case - the experience of the National Archaeological Museum of Taranto (MArTA), Italy - how strategic innovation based on the development of an open and sustainable museum model can, in turn, be the engine of the development of the community and driver of social and civic innovation thanks to its potential for inclusion.

To this end, the paper is structured as follows. Section 2 provides, through the analysis of the literature, a deepening of the concept of sustainable strategic innovation, highlighting the relationship between sustainability and organizational change, with a particular focus on museum organizations and on the Italian experience. This analysis of the existing literature is developed following a perspective that descends from general to particular. In fact, sub-section 2.1 reviews the general issues related to shared value and openness for sustainability-oriented innovation. Subsequently, sub-section 2.2 illustrates the conceptual relationship between sustainability and museum organizations. More specifically, sub-section 2.3 focuses on the Italian experience based on the museums' reform of 2014, and the consequent organizational changes. Then, section 3 indicates the methodology used; section 4 describes the case study, and in conclusion, section 5 presents the discussion of the case study, providing the theoretical and practical implications of the paper, as well as the limitations and possible future developments.

2. Literature

The literature review covers the following topics that are related to each other, in a perspective that goes from the general to the particular:

1. Openness and shared value for sustainability-oriented innovation.
2. Sustainability and museum organizations.
3. Changes in museum organizations: an Italian perspective.

2.1 Openness and Shared Value for Sustainability-Oriented Innovation

The imperative that the current extreme socio-economic uncertainty imposes on organizations is to renew their own value, without limiting themselves only to creating it. This is the paradigm of change required of companies that, in order to sustain their competitive advantage, need to renew their growth conditions. It is a path that requires capacity for strategic innovation and a transition towards a broader stakeholder-oriented vision, in a synergistic and engagement perspective, capable of creating shared value (or CSV, Creating Shared Value) (Porter & Kramer, 2011). This approach is characterized by the following elements: adequate remuneration,

people development, innovativeness, openness, civic engagement, community involvement, and sustainable practices (Perrini, 2016) (see Table 1)

As shown, among the various stakeholders, the active involvement of local institutions and communities assumes growing importance for those companies that intend to base their business on the three pillars of sustainability (social, environmental, economic), integrating them in the various strategic areas. A so-conceived approach to stakeholder engagement may be an important vehicle for sustainable innovation, as it allows organizations to access and transform relevant knowledge from different sources, such as customers, suppliers, employees, regulators, and civil society. Stakeholder engagement can support organizations identify sustainability challenges and opportunities, co-create innovative solutions, and enhance trust and legitimacy among their stakeholders. In this view, combining the pillars of CSR (Carrol, 1979, Schwartz, 2011) and the perspectives of creating shared value, a model of sustainable strategic innovation emerges, which is founded on a collaborative approach necessary to consolidate sustainable relationships (Freeman, Harrison & Wicks, 2007; Lippolis, Ruggieri, & Leopizzi, 2023).

Making sustainable innovation through the creation of shared value in a multi-stakeholder perspective is, in fact, an openness-oriented strategic approach that aims to involve different actors in the creation and implementation of solutions that address social and environmental challenges (Kimpimäki, Malacina & Lähdeaho, 2022). Stakeholders' engagement can enhance the innovative capabilities of organizations by providing diverse points of view, expertise, resources, and rules. Indeed, the creation of shared value expresses the potential for openness and the degree of permeability of organizations towards the contributions of the various stakeholders, each according to their respective perspectives, through the sharing of knowledge, skills, and experiences. However, as evidenced by the studies on the subject, engaging stakeholders towards sustainability purposes also entails significant challenges, such as aligning different interests and expectations, managing conflicts and trade-offs, and ensuring mutual learning and trust (Nonet, Gössling, Van Tulder & Bryson, 2022). Therefore, organizations need to develop specific capabilities to manage stakeholder engagement effectively and efficiently (Camilleri, Troise, Strazzullo, & Brescianiet, 2023).

Table 1. CSV factors

<i>Adequate remuneration</i>	Satisfying economic return for all stakeholders is associated with governance models able to combine efficiency with transparency, plurality, and inclusion
<i>People development</i>	Better working conditions for collaborators, which ensure an organizational environment based on the protection and enhancement of people and their skills and integrity.
<i>Innovativeness</i>	Innovative products and services capable of fully satisfying the explicit or unexpressed needs of customers, conveying the message of sustainability.
<i>Openness</i>	Knowledge sharing and long-term collaboration with stakeholders to ensure transparent relationships based not on a logic of competition, but on co-evolution.
<i>Civic engagement</i>	Responsible relationship and collaboration with government bodies about the governance dynamics of growth processes at the local and national levels.
<i>Community involvement</i>	The proactive role of companies, inside and with local communities, as a real engine of development, and place of innovation.
<i>Sustainable practices</i>	Care for the environment and for the rights of future generations, by preserving natural resources and minimizing all production and consumption cycles impacts.

Source: our elaboration, adapted by Perrini (2016).

In this context, it should actually be pointed out that creating shared value is a concept that goes beyond corporate social responsibility (CSR) and aims to generate both economic and social value for businesses and society.

To this end, it is necessary to specify that CSV is not a one-size-fits-all approach, but rather a framework that can be adapted to different contexts and sectors (for example, Rialti, Marrucci, Zollo, & Ciappei, 2021; Bigliardi & Filippelli, 2022). By creating shared value, businesses and organizations can foster a culture of innovation that leverages the diverse perspectives and capabilities of their partners, while addressing the environmental and social challenges of our time, without neglecting enhancing their competitiveness and profitability (Camilleri et al., 2023).

As highlighted by the most recent literature on the subject, the dynamics of stakeholder engagement with a view to openness and to creating shared value play a key strategic role in enhancing sustainability-oriented innovation processes (Chaurasia, Kaul, Yadav & Shukla, 2020; Camilleri et. al, 2023; Lippolis et al., 2023). In fact,

sustainability-oriented innovation (SI) (Klewitz & Hansen, 2013; Adams, Jeanrenaud, Bessant, Denyer & Overy, 2016; Bogers, Chesbrough, & Strand, 2020; Bigliardi & Filippelli, 2022; Markovic, Bagherzadeh, Barkemeyer & Samara, 2023) is a concept that refers to the integration of environmental, social and economic aspects in the process of developing and implementing new ideas, products, services or business models and can occur at different levels, from individual to organizational and systemic, without neglecting their interconnections (Kimpimäki et al., 2022). It can also enhance the competitiveness, resilience, and reputation of organizations by improving their efficiency, effectiveness, and legitimacy in the market and society (Coenen & Díaz López, 2010; Hermundsdottir & Aspelund, 2021; Lopez-Torres, Montejano-García, Alvarez-Torres, and Perez-Ramos, 2022; Lopez-Torres, 2023). In this broader perspective, the pursuit of sustainability-oriented innovation targets requires a holistic and systemic approach that considers the interdependencies and trade-offs among the different dimensions of sustainability. It also needs a collaborative and participatory process that engages diverse actors and stakeholders in co-creating and co-implementing solutions, such as firms, customers, suppliers, governments, NGOs, and communities, who share a common vision and goal of creating positive impacts for society and the planet. (Arnold, 2017).

In this sense, Adams et al. (2016) provided a conceptual framework of SI, a model that observes three degrees of analysis in companies and organizations: (i) the degree of strategic orientation and innovation, distinguishing between a *technology-oriented* and a *people-oriented* approach; (ii) the degree of openness in terms of developing organizational relationships, comparing approaches focused on the company individually (*insular*), with a more ecosystemic and inter-organizational vision (*systematic*); (iii) the degree of internal extension of innovation strategies, with a dichotomy between initiatives involving individual units or functions (*stand-alone*) with those that instead totally permeate the company organization (*integrated*).

2.2 Sustainability and Museum Organizations

As already highlighted, analyzing the recent definition of ICAM Museum (2022), the concept of sustainability turns out to be intrinsically linked to the very essence of the museum organizations. Already Worts (2006) considered sustainability as embedded in the mission of museums, which is embodied precisely in preserving and enhancing cultural heritage and its value, and at the same time contributing to the cultural well-being of the community (Lord, Lord & Martin, 2012; Pop & Borza, 2014; Pencarelli, Cerquetti & Splendiani, 2016), in the multidimensional perspective of sustainability understood as a process and, at the same time, as a goal.

In the analysis of the literature on sustainability in museum management and organization, it is possible to trace strands that privilege aspects of the environmental, economic, and social dimensions, but which, especially recently, much attention reserves to its cultural dimension (Loach, Rowley, & Griffiths, 2017; Errichiello & Micera, 2018; Pop, Borza, Buiga, Ighian, & Toader, 2019).

With reference to environmental sustainability, the literature has focused above all on the methods used to reduce the environmental impact of cultural activities in museum organizations (Zannis et al., 2006; Bickersteth, 2014) or how such organizations take action to promote public education on environmental issues (Gustafsson & Ijla, 2016). Issues linked to the evaluation of museum activities' impact are included in this subject (Brophy & Wylie, 2008): for example, some tools have been developed to measure the collateral effects of museum activities on the environment (National Museum Directors' Conference, 2009; Pencarelli et al., 2016).

Economic sustainability, on the other hand, is linked to the nature of museums of multi-stakeholder economic agents, who pursue a purpose of general interest and receive, at least partially, public contributions (Woodward, 2012). This attention to economic sustainability has accelerated over time due to various factors: a context of growing competition; increased control to ensure the proper management of cultural organizations; the development of complementarity between cultural offer and tourist offer, and accountability needs (Roberts & Scapens, 1985; Sibilio Parri, 2009; Anselmi, Lazzini, & Ponzio, 2012). These transformations have encouraged increasing attention of museums toward economic and managerial aspects (Bagdadli, 2000; Rispoli & Brunetti, 2009). In this regard, it is possible to note how the museum is composed, in addition to an institutional dimension, of a corporate dimension that does not disregard the institutional aspects of the organization but aims to incorporate them into the management practices that govern the structure (Ferrarese, 2017). Indeed, to achieve the goals of the cultural institution it's necessary to achieve simultaneously: a) according to the accounting perspective, the balance between the following aspects: economic equilibrium; sustainability of the use of resources and investments to be made; financial equilibrium, the result of matching financial needs with sources; b) from a managerial perspective, efficient use of resources and effective governance; c) in a temporal dimension, the permanence of the characters of autonomy from the different stakeholders (Solima, 2009; Ferrarese, 2017).

However, it remains difficult to identify correct performance measures for several reasons: the heterogeneous

nature of the resources that museums manage, the complexity of the services provided by museums, and the very nature of museum organizations, which are often public or non-profit ones (Del Barrio, Herrero & Sanz, 2009; Venturelli, Caputo, Palmi, Tafuro, & Mastroleo, 2015). Recent studies have proposed financial performance measures (for example Ellwood & Greenwood, 2016; Woon, Chatterjee, & Cordery, 2019), combined with non-financial measures from customer satisfaction surveys, to give relevance to the participatory dimension of museums. Other surveys show that visitor numbers remain the most useful measure, but that a variety of interpretations of it are possible. The same digital technologies can support museum directors in identifying new measures to quantify the mission of “increasing knowledge”; a circumstance that in practice is reduced due to limited technical and digital skills (Agostino & Arnaboldi, 2021).

With reference to social sustainability, it should be remembered that the expression “*in the service of society*” (ICOM, 2022) has a twofold, important value as it assimilates the museum to public service and, at the same time, highlights how museums do not operate only for visitors, but for society as a whole. In this regard, the literature analyzes the contribution of museums to the well-being of the community through social programs, educational, conferences (Sutter & Worts, 2005; Merriman, 2008), as well as through responsible behavior toward citizens and future generations (Janes & Conaty, 2005). Venturelli et al. (2015) considered the concept of social effectiveness; in this perspective, cultural organizations can contribute to the development of communities by building social networks and increasing relationships among museums, heritage organizations, academies, universities, and other associations (Jacobsen, 2014). In this sense, they can create social capital (Bourdieu, 1986; Nahapiet & Ghoshal, 1998) and provide opportunities for education and sharing of knowledge through the nodes of the network.

The concept of cultural sustainability, on the other hand, presents a double articulation: the one aimed at emphasizing the need to preserve cultural resources to ensure “*the continuity of cultural values that link the past, present, and future*” (Pop et al., 2019), from a process perspective. The other articulation of this concept is linked to the “educational” role of museums, aimed at transmitting the values of a community, as well as encouraging the development of new interpretations and meanings of heritage in increasingly diversified and multicultural social contexts, with a view to civic innovation (Hawkes, 2001; Soini & Birkeland, 2014). “*Cultural vitality*” is a concept that summarizes the dual dimension with specific reference to museum organizations and that can contribute to the achievement of economic, social, and ecological goals. Very often cultural sustainability has been considered in the literature as part of the social dimension of sustainability, without its own specific identity. (Stylianou-Lambert, Boukas, & Christodoulou-Yerali, 2014). Recently, an increasing number of scholars, instead, have started to theorize its autonomous role by analyzing its impacts on organizations, management, and public policies. Specifically, Errichiello and Micera identify three possible approaches to the link between sustainability and the cultural dimension: the first considers it an independent fourth pillar, at the same level as the others (ecological, social, and economic ones). The second representation considers material and immaterial culture only as instrumental to other pillars (Loach et al., 2017). The third, defined as “*Culture as Sustainability*”, considers sustainability as embedded in culture and leading to eco-cultural civilization (Errichiello & Micera, 2018).

Scholars highlight the close interdependence between the dimensions of sustainability investigated above aimed at configuring the creation of a “museum ecosystem” in which “*economic and social dimensions of sustainability can be used by museums as tools for implementing cultural sustainability-oriented strategies*” (Loach et al., 2017; Pop et al., 2019).

Museums that act according to economic sustainability have more sources to carry out their activities. At the same time, socially and culturally responsible behavior allows museums to receive a higher level of public funding, which, in a circular perspective, affects their performance in terms of cultural heritage conservation. According to this ecosystem perspective, therefore, the museum is the guardian and at the same time promoter of culture; it can be defined as a “hub” for the social, cultural, and economic development of the territories and communities, in compliance with the goals of the United Nations 2030 Agenda. In this sense, recent international literature suggests that all museums, designing their projects, should consider how to meet social issues and contribute to the development and sharing of knowledge, from a sustainable development perspective (Van Praët, 2019).

2.3 Changes in Museum Organizations: An Italian Perspective

In light of what has been said, it is essential to point out how corporate models and practices are perfectly combined with museums as well when they define strategic tools, organizational structures, and management models. In fact, although museums have eminently cultural institutional purposes, it is precisely in their

management that the need to define the *museum organization* as “the *economic dimension of the museum-institution*” (Bagdadli, 2000; Grandori, 1995; Venturelli, 2007; Dubini, 2017) is identified. It carries out economic activity, since in the implementation of its strategic objectives it inevitably finds itself managing resources of a different nature, thus operating “*in a logic of continuous creation of economic value*” (Rullani & Vicari, 1991). However, as regards the issue of strategy within cultural production organizations, reference should be made to the debate on whether they are characterized by a specific and different “strategic orientation” from other organizations. This debate reveals the difficulty in automatically applying management theories and practices to such activities (Rispoli & Brunetti, 2009). Chong highlights, for example, the difficulty in reconciling managerial, economic, and aesthetic objectives, which in his perspective are the following: excellence (international, national, or local) and artistic integrity, accessibility and audience development, cost-effectiveness e public accountability (Chong, 2002). With specific reference to the latter, it is appropriate to highlight the tension towards the constant search to maximize the economic and social benefits obtainable with public and private funds, and at the same time, the need to communicate the results to the various stakeholders involved (Curtolo & Tamma, 2009). This commitment is particularly complex due to the difficulty of finding measures to evaluate the results obtained and communicate them to the various stakeholders with different goals (Venturelli et al., 2015).

Despite the complexity of the reconciliation of various goals, the museum can be conceived in its economic and managerial dimension as a dynamic and complex, cognitive and open system (Pisoni, 1996; Cerquetti, 2014) since it establishes links with other organizations, maintaining continuous relationships with the external environment and, as shown in the previous section, also with reference to its degree of openness, innovation, and sustainability-oriented approaches (Harsanto, Mulyana, Faisal, & Shandy, 2022; Allal-Chérif, Climent, & Berenguer, 2022). As already said, the museum organization is not indifferent to profitability, not so much deriving from the direct collection of tickets or additional services, but rather from public funding, the entity of which is affected by the appreciation shown by the public and therefore by the value produced. It follows that the economic and cultural objectives do not necessarily have to be considered in conflict, rather than the economic objectives can benefit the social ones if they are oriented towards the pursuit of the objectives set by the mission and by the role strategically played by the museum in the area.

The strategic policies activated by museums must be evaluated on the basis of their ability to adequately respond to a demand for culture, and in particular for cultural heritage, which is not only growing but also changing and increasingly heterogeneous, through the identification and satisfaction of expressed needs by new audiences. Therefore, analyses, tools, and dynamics linked to organizational and strategic changes are largely loanable to museums, supported by the further function of civic innovation and socio-cultural growth.

It should also be highlighted how, in recent years, Italian museums have undergone radical changes, aimed at tackling, with transformative actions, the necessary reorganization of the Italian Ministry of Culture, object, in 2014, of the powerful redesign of its activities, brought about by the so-called “*Franceschini reform*” (Italian Prime Minister Decree of August 29, 2014, n. 171 and Ministerial Decree of December 23, 2014). In particular, the establishment of a limited number of museums with special autonomy is marked by an innovation in the organizational structure, preparatory to their functioning; the reform introduces, in this sense, a clear renewal and a total recomposition of both the museum functional areas and the governance bodies, which are responsible for guaranteeing the fulfillment of the museum's mission, verifying the cost-effectiveness, efficiency, and effectiveness of the museum activity, as well as ascertaining the scientific quality of the cultural offer and conservation practices, fruition and enhancement of the assets consigned to the museum.

Table 2. Evolution of the museum definitions

Definition provided by ICOM 2007

A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates, and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study, and enjoyment.

Definition provided by Italian Culture Ministry Decree of December 23, 2014

The museum is a permanent, non-profit institution at the service of society and its development. It is open to the public and carries out research concerning the tangible and intangible testimonies of humanity and its environment; it acquires, preserves, communicates, and exhibits them for the purposes of study, education and pleasure, promoting their knowledge among the public and the scientific community.

Definition provided by ICOM 2022

A museum is a not-for-profit, permanent institution in the service of society that researches, collects, conserves, interprets, and exhibits

tangible and intangible heritage. Open to the public, accessible and inclusive, museums foster diversity and sustainability. They operate and communicate ethically, professionally and with the participation of communities, offering varied experiences for education, enjoyment, reflection, and knowledge sharing

Source: our elaboration.

In particular, the establishment of museums with special autonomy (to date, the institutes and places of culture assigned to museums and archaeological parks with special autonomy are now forty; in principle, the reform included only twenty including, even then, the MARTA of Taranto) is marked by an innovation in the organizational set-up, necessary for their functioning. The reference legislation focused on organizational streamlining and modernization of Italian museums, eliminating structural redundancies and relaunching innovation and HR training policies, by introducing: a) the new five museum functional areas (Direction; Structures, fittings, and safety; Care and management of collections, study, teaching and research; Administration, finance and HR management; Marketing, fundraising, services and public relations, public services management), b) the governance bodies (Director, Management Board, Scientific Committee, Board of Auditors), which are responsible for ensuring the fulfillment of the mission of the museum, verify the cost-effectiveness, the efficiency and effectiveness of the museum's activity. Indeed, they have the responsibility to authenticate the scientific quality of the cultural offer and of the practices of conservation, use, and enhancement of the assets consigned to the museum (see Pencarelli et al., 2016). This definition of the museums' organizational functions, with the appointment of a manager responsible for 'marketing, fundraising, services, and public relations, public service management' was the formal declaration that museums had the main objective of providing a service to this public. Great attention was given to the measure of visitor numbers: museums had to report on their visitor numbers monthly, distinguishing between non-paying and paying visitors (Agostino & Arnaboldi, 2021). The autonomous museums, indeed, were required to prepare a budget and, at the end of the year, an annual report according to the Italian accounting principles for public organizations.

As shown in tab. 2, the innovative vision of this reorganization starts from a new definition of museum, in line with the international standards dictated by *ICOM, International Council of Museums* (2007; 2022).

3. Methodology

The research question aims to highlight how the dynamics related to the creation of shared value - in terms of openness, innovation, and sustainability - significantly reinvigorate the positioning of the museum organization and its role as a driver of social and civic innovation.

The methodology adopted is the analysis of a single case (Yin, 2017), those of the National Archeologic Museum of Taranto, the MARTA. The use of the methodology of the single case enhances the in-depth nature of the analysis because it allows the researchers to get a richer understanding of the phenomenon (Montemari & Chiucchi, 2013; Veltri & Venturelli, 2015), and could be particularly useful in supporting the multi-perspective dimensions of the research in cultural tourism (Smith, 2015).

The analysis of the state-of-the-art of literature, developed in the previous sections, has been useful for the definition of the core research question (Table 3). Then, the Museum for the case study has been selected.

The research strategy and the methodological structure of the investigation (see Table 3) are based on the triangulation of multiple sources (Janesick, 2000; Patton, 2015; Yin, 2017) (see Table 4), in order to allow, through the development and deduction of converging evidence from different perspectives, the strengthening of the validity, both internal and external, of the studies conducted on the selected case (see Table 5) (also in terms of relative accuracy both to the perspectives of the subjects interviewed and to the objectivity of the facts and events reported (Kirk & Miller, 1986)).

Then, a longitudinal analysis of regulatory acts, and public and institutional documents (Corbetta, 2015; Lucidi, Alivernini, & Pedon, 2008; Yin, 2017) - in addition to the website and official social platforms of the MARTA Museum - was supported by some unstructured, discursive, and conventional interviews (Scapens, 2004; Granot, Brashear, & Motta, 2012; Corbetta, 2015; Cardano, 2017 and 2021). According to Scapens (2004), unstructured interviews allow the researcher the flexibility to pursue new issues and explore emerging dimensions of inquiry.

Table 3. Data analysis: the protocol followed

<i>Research question</i>	How strategic innovation, based on the development of an open and sustainable museum model, can be the engine of the development of the community and driver of social and civic innovation.
<i>Organization</i>	MARTA (National Archeologic Museum of Taranto)
<i>Managers involved</i>	Three managers are recorded and analyzed through manual content analysis.
<i>Period and duration</i>	Three interviews were carried out from February 2020 to February 2021 each with an average duration of 2 h
<i>Source of data</i>	Triangulation of data from interviews, observation, and documentary analysis
<i>Validity</i>	Multiple sources
<i>Internal and external validity</i>	Systematization of data to evidence the relationship between openness, innovation, and sustainability in museum organizations. The external validity is granted by the replicability of the methodology used.

Source: our elaboration.

To provide a multi-perspective dimension of the analysis carried out, the interviews were conducted, in the museum site, with an average duration of two hours each, maintaining as guidelines three declinations of the concept of innovation (technological-digital, strategic-organizational, and civic-social) and were addressed to three subjects who, with different roles, work at the MARTA: (i) Director of the Museum, (ii) Museum archeologist officer, (iii) Museum fab lab “MarTa Lab” manager and co-founder.

Three main steps were defined to process the data collected through the interviews: data reduction, data display, and data interpretation. With reference to data reduction, the material of interviews was organized for further analysis. This reduction of data was useful to identify any further themes and subthemes about the above-mentioned guidelines in investigating the three dimensions of innovation. The interpretation of data, then, was realized: first, a deep description of the key findings was prepared under the primary themes identified, and a second interpretive narrative was realized to give a more focused representation of the findings themselves (O’Dwyer 2004; Venturelli et al., 2023).

Specifically, the findings of the qualitative research highlight the existence of a relationship between strategic-organizational innovation and civic-social innovation, also following the profound changes brought about by the Franceschini reform. This link is enabled by a strategic orientation of museum management to the key factors of openness, sustainability, and technological innovation.

Multiple reasons guided the selection of the case of MARTA. First, MARTa is one of the most important Archeological museums in Italy. It was established in 1887, as the first "territorial" Museum of Apulia, a region in which the city of Taranto and its larger territory - recognized over the centuries for its dominance in the area of Magna Graecia – have represented in the following decades as the focal point of archaeological protection.

Second, this case study reveals (without pre-established limits, linked instead to the use of standardized techniques (Marradi, 2007)) the experience of one of the first Italian museums with special autonomy, within the innovative framework provided by the Franceschini Reform (see section 2.3), with a focus on changes in the organizational structure, strategic dynamics, and accountability. Furthermore, it represents an interesting case of analysis for understanding how sustainability in its dimensions is capable of permeating museum organizations, (Alcaraz et al., 2009; Pop & Borza, 2016; Errichiello & Micera, 2018) and the related impacts in terms of value creation and sharing of it. A further and more peculiar motivation regarding the choice of the case is linked to the specific area in which the MARTA museum is located, the city of Taranto. Taranto is a city that has paid a very high price for the development of the iron and steel industry, with the environmental and health damage caused by polluting emissions and the consequent significant increase in pathologies linked to the population's exposure to toxic substances. Taranto, therefore, represents an emblematic case of how economic development has been unsustainable for a long time because it was not accompanied by corporate social responsibility. In this scenario, the MARTA museum emerges as a bulwark of sustainability, an important engine of social innovation that can contribute to a wider cultural change in favor of more responsible development of the city. For the territory of Taranto, in fact, the MARTA plays a crucial role, as one of the various stakeholders who are now contributing to the construction of a new future, with a sustainable strategy of urban regeneration and territorial redevelopment (see www.ecosistemataranto.it), also in view of goal 11 of the UN Agenda 2030 “*Make cities and human settlements inclusive, safe, resilient and sustainable*”.

Table 4. The methodological framework for triangulation of sources

<i>Interview types</i>	Unstructured, discursive, free
<i>Interviewees</i>	<ul style="list-style-type: none"> ▪ Director of the Museum ▪ Museum archeologist officer ▪ Museum fab lab “MarTa Lab” manager and co-founder
<i>Average duration (h/interview)</i>	2
<i>Triangulation with other sources</i>	<ul style="list-style-type: none"> ▪ Regulatory acts ▪ Public and institutional documents ▪ Official website ▪ Official social platforms
<i>Organizational changes</i>	<ul style="list-style-type: none"> ▪ Change of leadership (since 2015) ▪ Reorganization based on Franceschini Reform (since 2014): <ul style="list-style-type: none"> → New functional areas; → New museum governance bodies.
<i>Strategic change</i>	MarTa 3.0 (since 2016)
<i>Levels of strategic innovation</i>	<ul style="list-style-type: none"> ▪ Technological and digital ▪ Strategic and organizational ▪ Civic and social

Source: our elaboration.

Table 5. Features of the selected case

<i>Company age</i>	135 years, since 1887 (since 2014 it has become a museum with special autonomy, since December 1, 2015 under the direction of Dr. Eva Degl'Innocenti)
<i>Sectors of activity</i>	Museum; Art and Culture; Tourism
<i>Location</i> and	Taranto, Apulia, Italy
<i>Internationalization degree</i>	
<i>Stakeholders (internal and external)</i>	Visitors (local, non-local and foreign), community (local and national), public bodies (local and national), universities, research bodies, schools, companies and startups, and employees.

Source: our elaboration.

4. The Case of the “MARTA” of Taranto

Due to its connotation as a site museum and not a mere collection museum, the finds and works exhibited at the MARTA come from the territory; this feature distinguishes it from other museums and recognizes it a strategic role in the socio-cultural scenario of the Mediterranean for an inclusive museum model participated by the community. Indeed, it is a museum model that opens its display cases to the local area, overcoming the boredom museum paradigm, and becoming a driving force for alternative and complementary development to large-scale industry and environmental pollution which for several decades has been the image of the Apulian city of Taranto. It is a concept that looks not only to the visitor-tourist, but that puts the visitor-citizen at the center, as part of the territory and community, who becomes the protagonist and co-owner of the artistic and cultural heritage valued by the MARTA.

In this sense, the vision is that of a museum belonging and opening to everyone (even to non-experts) and supports the idea of full accessibility, which is not only limited to diversities but which, more generally, raises the question of how easily the contents of access to the works and exhibits on display are understandable to all categories of the public. The aim is also to fill a cognitive bias, it is not to popularize cultural heritage but, instead, to educate about cultural heritage by simplifying all its descriptive references.

Therefore, the role of communication by the MARTA is fundamental: it has changed its visual identity, also acquiring a new payoff (see Figure 1), “*past for future*”, a clear expression of the awareness that there is no innovation without an adequate recovery of tradition; a link enclosed in the thought of Riccardo Francovich, according to whom it is necessary to communicate to people that archeology “*is not only used to understand the past but to build the present and the future*”, by intervening not only in the reconstruction of local traditional values but by connecting these to more sustainable protection of cultural heritage, in an urban planning perspective too (Piccinni, 2011).



Figure 1. Comparison between the old and new logo of MArTA

Source: our elaboration, based on documents provided by the direction of MArTA.

The image that the interviewees associate with the MArTA is that of a real “agora” (the central square of the ancient Greek polis, where the social, political, and commercial life of the city took place) of the 21st century, of an inclusive and community museum, participated and connected to the territory; the role of the museum proves to be multi-purpose, as it assumes responsibility for multiple social missions: education, research and training center, territorial project and territorial governance tool (as a sustainable vehicle of civic innovation and socio-cultural redemption). It could be considered a witness of values and custodian of that bond of identity belonging to Taranto and its Magno-Greek origins, a hub of urban regeneration, an engine of development and co-planning with local stakeholders. The multifaceted social function of the museum is supported by the strategic innovation process undertaken with the MArTA 3.0 project, funded by the National Culture and Development operational program (ERDF 2014-2022). This project aims to transform and integrate the museum offer, making use of important technological innovations (see Table 6), providing new and more interactive contents that provide for the emotional involvement and active participation of the visitor, no longer considered a mere target in marketing policies of the museum itself (Fornasari, 2021; Massari et al., 2022).

Table 6. MArTA 3.0 project phases

<i>Phases</i>	<i>Technologies involved</i>
<i>Phase 1. Technological and digital infrastructure of the back office and museum environments</i>	Wi-Fi; intranet; specific management software; digital inventory; shared storage; 3D printing
<i>Phase 2. Digitization of the museum experience</i>	RFID; QR-Code; AR (augmented reality); Interaction platform
<i>Phase 3. Digital experience outside the museum</i>	Digital platform (website); 3D printing; smart wearable (3D glasses and headphones)
<i>Phase 4. Establishment of a fab lab</i>	3D printing

Source: our elaboration, based on documents provided by the direction of MArTA.

Among the strategic objectives linked to MArTA 3.0 there is a broader vision aimed at a process of redevelopment and relaunch of the museum that can extend and reflect on the socio-cultural context of the Taranto area, placing itself in an evolutionary process of the territory capable of regenerating itself in a more sustainable way. The use of digital technologies supports the provision of the museum offer, by improving the visitor experience, making it more immersive, in an inclusive perspective of accessibility (cognitive or physical), considering the needs of disabled people, otherwise excluded. The expected results from the pursuit of the strategic objectives of the MArTA 3.0 project are evidently:

- More efficient management and promotion of the museum;
- The evolution of the museum offer;
- The increase in the number of visitors (particularly local);
- The improvement of accessibility;
- The strengthening of dialogue and cooperation policies with the territory and the community (public bodies, schools, associations, and private individuals...).

Particularly, the creation of the MArTA Lab, the museum fab lab, appears to be the first experience of an Italian state archaeological museum in this sense (the other experience is that of the MUSE Lab, the fab lab of the Trento science museum which, however, is obviously not an archaeological museum; see www.fablab.muse.it). This digital craftsmanship lab uses 3D printers and scanners, as well as laser cutting machines, constituting an active laboratory that aims, in line with the other objectives of the project, at greater involvement and centrality of the visitor (including students and researchers) (Palmiotti, 2015). According to one of the subjects interviewed, there are five goals that this creative industry sets out to achieve:

- a. *“Expositive*, inside and outside the museum spaces, for greater dissemination of perfect copies of the finds in the territory, an operation that obviously would not be possible with only the original works exhibited;
- b. *didactic*, thanks to the ability of 3D technologies to reproduce the finds faithfully compared to the originals (but at a low cost) to facilitate the study and analysis of the details. This purpose of didactic support also includes the construction of a story linked to specific works (storytelling);
- c. *conservative*, due to the particular applicability of 3D printing to more precise restoration and/or reconstruction operations of portions of works;
- d. *inclusive*, in the light of the fact that an exhibit reproduced in 3D printing has a negligible value and is certainly not comparable to the original; this makes it possible to provide a multi-sensory approach (touch, for example) which can improve, in terms of accessibility, the experience of visitors;
- e. *promotional*, since the 3D reproduction of works and exhibits could be used for purely communication and marketing purposes, as well as merchandising of museum gadgets” (quoted by one of the interviewees)”.

With reference to inclusivity, for example, multisensory artwork locations have been installed, such as the one dedicated to the bronze statue depicting Zeus in the act of throwing lightning. This location is composed of the following parts: a three-dimensional reproduction of the statue in scale, the same artwork in 2D, and the reference captions in Braille. Finally, two emitters provide the speech synthesis function (Pinnelli & Ruggieri, 2021). In the museum, there are also tactile laboratories supervised by specialized personnel.

As it is known, museums around the world faced unprecedented challenges due to the COVID-19 pandemic, which has severely affected their visitor numbers and revenue streams (Agostino, Arnaboldi, & Lampis, 2020; Markopoulos, Ye, Markopoulos, & Luimula, 2021). To adapt to this new reality, many museums are embracing gamification as a way to engage and attract audiences, both online and offline (Cirulis, De Paolis, & Tutberidze, 2015; Negrușă, Toader, Sofică, Tutunea, & Rus, 2015; Wu, Chao, Xiong, & Luh, 2023). To this end, the MArTA of Taranto has created *“Past for Future”*, its official scrolling 2D role-playing game providing the opportunity to develop immersive role-playing games that allow visitors to interact with museum exhibits and characters through an app. This app permits the collection of digital memories that can be later turned into digital collectibles and offers virtual events and experiences that enable visitors to access museum content from anywhere in the world and participate in interactive activities and challenges that enhance their learning and enjoyment.

The MArTA experience helps to understand how museums nowadays aim to become centers of education, training, and research, but even a territorial and civic governance tool (quoting one of the interviewees, *“a tool of social educativity”*), thanks to its contribution to physical and social planning of the city, to the inclusion and development of communities. The MArTA of Taranto, conceived as an inclusive and community museum, can be considered a vehicle of urban requalification, a regeneration hub, and a development engine, due to its ability to co-design with the territory and its innovative and shared vision.

Among the examples of this, it is possible to highlight the Project *“First steps at MArTA”*, which consists of a series of activities aimed at children in kindergarten and in the first years of primary school, to enrich the offer of educational paths and give the opportunity to discover the museum with the assistance and guidance of an expert able to stimulate curiosity and learning. There are also activities that the MArTA carries out in collaboration with schools of the territory: the internship courses are flanked by those of School-Work projects, which allow young people to acquire heritage education skills, learn about the museum's collections, and deal with its functions and management (www.museotaranto.beniculturali.it).

The project of the MArTA Lab and, more generally, all the objectives included in the MArTA 3.0 strategy are enhanced and strengthened by a shared value approach, shown by the presence of a wide and multi-layered network of collaborations and partnerships already undertaken by the museum of Taranto with the most various

social stakeholders (municipality of Taranto, Public Health Service, schools, universities, cultural and musical associations, theatres). Moreover, the synergistic cooperation with local schools and education bodies made possible the construction of community maps: maps of the Taranto area which, from a co-planning perspective, have made it possible to highlight the knowledge and perception of the same by pupils and students, as citizens and as the future of the city.

5. Discussion and Conclusion

Museums are cultural institutions that preserve and showcase the heritage and diversity of human creativity. They have a responsibility to engage with the public and foster a sense of curiosity and learning. However, museums also face many challenges in the 21st century, such as changing audience expectations, technological advancements, social and environmental issues, and financial constraints. To overcome these challenges, museums need to embrace openness and innovation in their practices and strategies. In the perspective adopted in this paper, openness means being transparent, collaborative, and inclusive in the way museums communicate, interact, and co-create with their stakeholders. Innovation means being creative, adaptive, and experimental in the way museums design, deliver, and evaluate their programs and services. By adopting openness and innovation, museums can enhance their relevance, impact, and sustainability in the changing world.

To this perspective is added the one linked to culture as a further dimension of sustainability. As highlighted by the recent literature, cultural sustainability requires a holistic and participatory approach, in a shared value perspective, that involves all relevant stakeholders: governments, communities and civil society, public and private businesses, academia, artists, researchers, media, and both local and national authorities, and policymakers. It also requires a balance between safeguarding cultural heritage and promoting its dynamic evolution in response to changing contexts and needs. Cultural sustainability implies, indeed, respecting the rights of cultural groups and communities as well as fostering cross-cultural learning and exchange, to build bridges of knowledge and values.

As noted before, to align with the dynamics of cultural sustainability, museums need to rethink their missions, visions, and strategies, by developing new ways of collecting, interpreting, and exhibiting their collections, leveraging digital technologies and platforms to enhance their impact. In this context, the case of the National Archaeological Museum of Taranto aims to highlight the link existing between cultural sustainability (understood, in its multidimensional conception, both as an objective and as a process) and strategic-organizational innovation, oriented by shared value dynamics and approach. This requires a higher level of engagement that reaches all stakeholders. It is a museum model that can fully represent an engine of civic-social development and innovation, thanks to its potential for inclusion, but it can also be a strategic tool for the analysis of decision-making processes. The case of MARTA thus provides a dual perspective of analysis: first, it allows us to represent the management logic of Italian national museums, in the light of the 2014 reform on organization and functioning; second, it analyzes the impacts of organizational (as well as technological) innovation policies aimed at an openness-oriented and inclusive museum model. The transformative approach adopted by MARTA, albeit in the wake of a reorganization at the national regulatory level, helps to understand how the logic of sustainability is capable of bringing together the three declinations of innovation that directed the interviews carried out. The collaborative wealth of MARTA turns out to be beneficial for its organization as it allows the museum itself to establish a solid and authoritative territorial reference, capable of providing new and more sustainable scenarios of social and urban development.

As the managerial implication, this study first suggests the need for a cultural change aimed at considering the museum as a driver of social and cultural sustainability and innovation. This perspective has relevant consequences inside and outside the organization. Inside, it is necessary to adopt solutions based on knowledge management, empowerment, and flexibility. Specifically, museum managers need analytic and creative skills to individuate changing needs of the community, demographic transformations, and cultural waves (Jacobsen, 2014). Referring instead to the relationship with the stakeholders, the study highlights the need to improve synergies based on a territorial strategic perspective that can bridge the gap between the identity and image of the territory itself. This latter could rely on the active participation of visitors, involved in a sort of experiential protagonism, and on multi-stakeholder partnerships, aiming at reinforcing the identity link between the museum offer and the artistic, historical, and cultural heritage of a territory.

In this sense, the research can provide useful indications to the management of museums in order to develop organizational and managerial processes that emphasize the implementation of *sustainability-oriented innovations* aimed at encouraging the sharing of resources, funds, technologies, and competencies. At the same time, as highlighted, this could be also necessary to reach economic sustainability and financial equilibrium. This

consideration reveals not only the particular applicability of the tools and frameworks of strategic innovation in museum organizations but, even more evidently, the essential correlation between these and the sustainability goals included in the UN Agenda 2030. In fact, with reference to local policymakers, the study can also provide useful insights for the development of policies aiming at supporting the influx of resources to the museums, investing in leadership and professional development, and achieving social, and cultural sustainability goals.

In this regard, it should be clarified that the adoption of the aforementioned innovative and inclusion policies implies a broader and more systemic tourist orientation, that concretely involves all economic and institutional agents, but also, consistent financial resources with the need for high investments both in market research as in new technologies and infrastructures (with the additional need for a greater response from the community).

To this end, future research perspectives could focus both on the analysis of the consequences of this new strategic-organizational approach on museum and territorial marketing and on the study of innovative fundraising tools valid for all museums, with or without special autonomy.

The limitation of the present research is represented by the investigation of a single case, although based on an in-depth analysis. Future research should focus also on the comparison of the MarTa organization and strategic changes with the dynamics that involved other museum organizations, through a multiple case study (Yin, 2017).

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