🏆 *reviewed paper*

Smart Culture: Digitisation Strategies of two Museums in Tuscany

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1 ABSTRACT

The importance of digitalisation in the cultural industry has been recently enlightened by various researchers (Giannini and Bowen, 2019; Ahmed et al., 2020; Fanea-Ivanovici and Pană, 2020). The purpose of this study is to analyse the impact of smart technologies in the cultural industry, which plays an important role for many urban areas in Italy. We decided to perform a qualitative case study research approach (Eisenhardt, 1989; Eisenhardt and Graebner, 2007; Yin, 2003) because of the exploratory nature of the research question and the novelty of the phenomenon. Therefore, we focused our analysis on two case studies, specifically two museums based in Tuscany. Thus, we wanted to investigate the impact of digitalization on cultural marketing, which is here considered as the impact on communication strategies and interaction with customers and users, while also including the structure that supports and precedes the final communication and interaction. We choose the museums on the basis of their characteristics and geographical location, in order to be able to analyse two different case studies. As mentioned in the existing literature (Agostino and Costantini, 2021), one of the outcomes of this research concerns the lack of appropriately trained personnel on the topics of technological innovation and marketing 4.0. It also emerged that the level of digitalisation achieved is influenced by the peculiar characteristics of each museum and their geographical location. In one case, given its specific nature as a museum showing something no more existing, the installation and use of immersive, virtual and augmented reality technologies within the museum was preeminent. In the second case study, concerning installations or works of art, a more traditional approach was preferred. Furthermore, it was noteworthy to stress that both museums, based in areas less subject to mass tourism, also targeting more a niche rather than general segments, strengthened their digital marketing strategies, thanks to the use of new technologies. This, to reach their maximum potential awareness among the public, thanks to the use of communication methods that would bring non-expert users or non-enthusiast closer to their realities. Hence, the level of digitalisation is significantly influenced by its geographical location and the type of tourism that characterises it, and this influences the museum towards the adoption of those technologies able to better satisfy visitors and to create a valuable experience for them. In any case, all the interviewees agree in saying that technology, if used efficiently, could bring great benefits in terms of improved customer engagement, efficient use of data for adapting the strategies and for creating customer value. Furthermore, technologies can lead to economic sustainability by reducing costs and increasing revenues. However, this is possible only if specialised personnel are hired and trained to support and advise visitors.

Keywords: Smart City, Governance, Cloud, Security, Compliance

2 INTRODUCTION

The characteristic of 'transformability' (Bauer et al., 2015), is nowadays essential for keeping up with the changes introduced in the marketing world by 4.0 technologies. In this context, Nosalska and Mazurek, (2020), suggest so-called 'design principles' that provide useful tools for constructing a functional and effective marketing strategy, and these are: interconnection, information transparency, technical support and decentralised decisions.

In analysing the impact that 4.0 technologies are having on marketing and consequently on the strategic choices related to it, it is necessary to look at these changes as strategic goals to which to aspire (Ungerman and Dedkovà, 2019), without, however, neglecting the issue of flexibility, which is a key element in overcoming the obstacles that these changes bring with them. The literature shows that the greatest difficulties encountered by small and medium-sized enterprises are mainly related to data protection, maintaining a good reputation and keeping up with new customer needs, which in this context will have to be aligned with the overall of distributive and promotional processes of the brand/service (Peter and Della Vecchia, 2020).

The Internet of Things has made it possible to create a new dimension, characterised by an advanced interconnection which today becomes the distinct element of marketing 4.0, which transforms marketing 3.0

and the related technologies linked to Web 3.0, into an evolved one. From these considerations, one of the four pillars of marketing 4.0 already emerged, namely brand interaction, which highlights the increase in customer engagement in the product/service design phase itself (Dash, Kieferand Paul, 2021). Brand interaction is accompanied by other factors such as brand identity, brand image and brand integrity.

What has just been observed is highlighted again in the analysis of the five key principles of marketing in the context of industry 4.0, which according to what emerged from the literature are: cooperation, conversation, co-creation, cognitivity and connectivity, which is considered the principle that most characterises the application of marketing 4.0, as it unites all new technologies and is fundamental in making the best use of them (Nosalska and Mazurek, 2020).

From the literature it emerged that some of the trends that characterise marketing 4.0 are digital marketing, which uses digital communication technologies; internet marketing, relationship marketing, which is based on building lasting relationships with the customer and mobile marketing, which bases its strategies on the use of ad hoc adverts for mobile devices such as mobile phones or tablets (Ungerman and Dedkovà, 2019).

3 THEORETICAL BACKGROUND

3.1 Marketing 4.0: a boost for companies' competitiveness

The adoption of technological innovations in the field of marketing have allowed small and medium-sized businesses to significantly improve, despite the difficulties encountered in adapting their business model to changes, the relationship with the customer in terms of connection but also of interaction and participation, also making the market orientation more evident and recognisable (Alford and Page, 2015).

Gupta et al., (2016), in their study, illustrate the presence of a positive correlation between the use of marketing 4.0 technologies and an increase in competitiveness for companies, and vice versa, making the use of marketing 4.0 innovations, an opportunity for a potential common benefit between manager and customer.

An increase in competitiveness for companies given by the use of marketing 4.0 technologies is related to the management of Big Data, which has increased significantly with the arrival of industry 4.0. Thanks to new technologies it is possible to use the management of this data, which will be effective and efficient, as a means to increase the quality of the business, thus increasing its competitiveness (Ungerman, Dědková and Gurinova, 2018).

Ungerman and Dedkova, (2019), explain how there are two perspectives from which it is possible to observe and therefore quantify the impact that the adoption of 4.0 technologies actually has on businesses: a purely economic point of view, which is based on the monitoring of accounting indicators (ROA , ROI) and on the control of sales volume, revenue growth and market share, from which marketing performance can be deduced; and from a non-economic point of view, observing creation of new business models; creation ad transition towards new jobs; differentiated workflows; new communication systems; decrease of occupational injury risk; increase in public relations and an increase in competitiveness which are all consequences of the potential opportunities that the use of 4.0 technologies brings to business.

Furthermore, thanks to the intrinsic characteristics of new technologies, it is possible to approach marketing 4.0 by observing it as a tool which, in addition to producing feedback, allows the company flexibility and facilitates understanding of the business (Vassileva, 2017).

3.2 Digitisation in cultural marketing

With the introduction of the new Marketing 4.0 technologies, there has been an implementation of targeted interventions by entrepreneurs of large, medium and small enterprises, aimed at implementing the transition to more digitalised marketing and communication strategies than before, which enable, facilitate and induce more interaction with customers (Lacárcel and Huete, 2023).

Following the focus of the International Council of Museums on the topic of digital transformation in the cultural sphere (Liao, Zhao and Sun, 2020), it was concretely confirmed, even within the cultural industry, what had been anticipated earlier by Amitrano, Gargiulo and Bifulco, (2018), namely that in this climate of globalisation and technological innovation, the value that marketing offers today is predominantly linked to the interaction it manages to obtain as output from the customer.

Although the cultural heritage context is characterised by the symbolic values that the works constituting it carry, it is nevertheless possible to identify three actors within this market: the author, the user and the artistic and cultural organisation (Colbert and St-James, 2014). In the context of the fourth industrial revolution, these three actors have revolutionised their dynamics of interaction within the cultural market by modifying, both from the perspective of the artist and from that of the organisation, the very conception, perception and management of art, which, precisely because of the intrinsic and symbolic value it possesses, has created various divergences and uncertainties (Bertacchini and Morando, 2013).

This analysis aims to identify the technologies used in marketing 4.0 within a cultural context, evaluating the advantages, obstacles and the degree of digitalisation achieved to date. Generally speaking, marketing 4.0 has pushed public and/or private investments towards the development of effective digital communication strategies to generate involvement in the target audience. As Lacárcel and Huete (2023) explain, this has also had a significant impact on the job market, increasing the demand for highly qualified professionals in the sector, capable of creating valuable content, managing online communities and identifying new sales opportunities.

There are different models of application of new marketing technologies in the cultural context, focusing in this study on museums and art foundations. The first model considered is online access to collections, which can improve the usability and accessibility of works if implemented effectively on museum websites. Initially conceived as mere information tools, museum websites now have the potential to become true extensions of the museums themselves, offering virtual experiences that enrich value for visitors (Bertacchini and Morando, 2013). It is increasingly important to encourage an active experience on the part of the visitor, encouraging him to become a promoter of the museum through feedback and digital interactions on social networks or via mobile apps.

Among the technologies potentially useful for this purpose we find augmented virtual reality, tablets and mobile devices physically installed inside museums or art foundations. These tools allow visitors to interact with works of art, test their knowledge through games or quizzes and enjoy multimedia content such as 3D cinema (Izzo et al., 2023). Social media play a fundamental role in cultural marketing 4.0, allowing an in-depth analysis of customer needs and facilitating the co-production of services, the creation of value and the establishment of relationships with customers (Amitrano, Gargiulo and Bifulco, 2018).

The literature analysis suggests that innovative communication strategies and channels used to actively engage visitors can be divided into two models: "inside" and "outside". The "inside" model includes technologies installed within the museum space that enrich the experience and have educational and archival potential, while the "outside" model includes technologies aimed at promoting the museum outside its physical space, increasing visitor awareness and monitoring their engagement (Leoni and Cristofaro, 2021).

Focusing this analysis on the context of Italian museums, according to the study conducted by Agostino and Costantini (2021), it is highlighted that digitalisation in these contexts is lacking in terms of preparation and updating, lack of qualified personnel within the teams, and a lack of long-term vision regarding digital transformation, with a general lack of attention towards the topic. This underlines the importance of transversally evaluating the impacts of digital transformation and conducting comparative analyses to promote knowledge and improvement. Furthermore, the Italian situation seems to be progressing more slowly than the rest of Europe, as indicated by Izzo et al. (2023).

However, as highlighted by Leoni and Cristofaro (2021) and Bertacchini and Morando (2013), the adoption of innovative technologies linked to the fourth industrial revolution, and therefore to marketing 4.0, presents challenges and controversial issues in the cultural context. These challenges may arise from compromising financial and economic sustainability, as well as maintaining the authority and institutionality of the museum in a digital context where access to works of art is more liberalised. There is also discussion among experts (e.g. museum directors, managers and curators) about the risk that the adoption of these technologies could lead to co-destruction of value rather than co-creation for museums. This is particularly evident, especially when considering the various challenges that may arise with the implementation of 4.0 technologies. These challenges encompass issues such as the expenses associated with deploying, embracing, and sustaining such technologies, along with the manifold adverse impacts these technologies may have on visitor satisfaction. In regard to the latter, numerous studies underscore the peril posed by the sensationalization, trivialization, and commercialization of museum offerings. Additionally, visitors to museums may perceive technological tools

as hindrances in certain instances, as they may be ineffectively deployed within the museum environment, serve as distractions or isolators, or curtail opportunities for human interaction and communication. Furthermore, a research thread delves into how technologies could exacerbate the digital divide. Indeed, generational disparities influence visitors' expectations regarding technology during museum visits, as well as their proficiency in utilising the available technological resources effectively. Given the potential adverse repercussions outlined above, museums must engage in critical introspection concerning technology adoption and acknowledge that there is no singular optimal approach, but rather a multitude of optimal pathways contingent upon the museum's specific typology (Leoni and Cristofaro, 2021).

Despite this, the adoption of innovative technologies represents a unique opportunity for museums and art foundations in terms of creating value for the customer, through the implementation of interaction, as highlighted by Amitrano, Gargiulo and Bifulco (2018), and from the point of view of the strategic possibility of strengthening the importance and knowledge of culture and heritage (Izzo et al., 2023).

As highlighted in the study by Wereda and Woźniak (2019), the main challenges of marketing 4.0 in the cultural industry include building effective customer relationships and developing communication strategies adapted to customer 4.0 needs. This new type of customer requires new interaction strategies and a user-oriented approach from the awareness phase to the use of the services offered by the museum. The use of digital communication channels can improve the quality of the process of establishing a lasting relationship with the 4.0 customer and support the marketer in information management and decision-making.

4 METHODOLOGY

Considering the exploratory nature of the research, we decided to use a qualitative approach (Eisenhardt, 1989; Eisenhardt and Graebner, 2007) based on case studies (Yin, 2003).

The study was conducted by carrying out two in-depth interviews with managers of the museums, focusing our attention on marketing and customers' (i.e. visitors) interactions based on technological solutions adopted by the museums, since it represents a fundamental aspect for the creation of customer value in the smart era (Wereda and Woźniak, 2019). The cases to be analysed were carefully chosen, based on the characteristics of the two structures being analysed. Although both are located in Tuscany, an Italian region with a strong tourist vocation, and are dimensionally comparable, they each present interesting peculiarities in the field of digitalisation and marketing that are worth analysing and comparing.

We collected data through several sources. In addition to an initial desk analysis to identify the most significant subjects for our research, we carried out two interviews. This primary data was collected between July and September 2023. For each case analysed, an interview lasting approximately an hour and a half was carried out following a pattern of semi-structured questions in order to carry out an in-depth analysis of the topics of interest (Yin, 2003). The topics that are part of the semi-structured guide are the following: general questions on the structure, on the business model adopted and on the project, specific questions on the marketing strategy, as well as on the idea and its development. The interviewees were then encouraged to talk about digitalisation in marketing, the use of new technologies and their possible applications. All interviews were recorded and then carefully transcribed.

In addition to primary information, secondary data was also acquired, such as archive data, financial statements and other information available to the public and online (Gibbert et al., 2008). By doing so it was possible to triangulate the data to achieve an adequate level of internal validity (Yin, 2003; Gibbert et al., 2008).

5 CASE STUDIES

With a view to facilitating the analysis of the case studies, below are some data that allow an observation of the context where the two Museums are located from a quantitative and qualitative point of view. That is, data will be reported relating to the intensity and representative characteristics of the tourist phenomenon present in the areas of Castelnuovo dei Sabbioni (municipality of Cavriglia, province of Arezzo) and in the Chianti Senese (considering the entire territorial area of Chianti in the province of Siena).

As regards the tourism phenomenon present in the territory of the Municipality of Cavriglia, from the observations carried out by the "Visit Valdarno" project and then as reported in the 2022 economic analysis carried out by IRPET, in the Municipality of Cavriglia during the year 2022 there was the presence of

100,750 tourists, of which approximately 59% were foreigners mainly in the summer period. The tourism characteristic of the place is tourism aimed mainly at exploring the surrounding landscapes. Regarding the territorial area of the Chianti Senese, what emerged from a study carried out in 2019 by the Florence Tourism Study Center and published on the General website of the Chianti Service, throughout the pre-pandemic decade 2009-2019, is the presence of 78% of foreign tourists. The characteristic tourism of these areas is characterised by visitors in search of peace and tranquillity, who, fleeing from the big cities, seek the beauty of the landscape.

5.1 Museo Mine

Mine Museum is located in Castelnuovo dei Sabbioni, which is a village in the province of Arezzo in Tuscany. We had the opportunity to interview the scientific director.

The Mine Museum is situated within the picturesque village of Castelnuovo dei Sabbioni, nestled in the Valdarno region of Tuscany, renowned for the passage of the Arno river amidst its settlements. Castelnuovo dei Sabbioni and its surrounding environs, including Santa Barbara, were once vibrant locales characterised by the extraction of lignite from mines, prompting the establishment of a purpose-built village to accommodate miners and their families. In the late 1930s and early 1940s, Leonardo Lusanna orchestrated a project pertaining to the briquette factory in Castelnuovo dei Sabbioni, aimed at harnessing lignite briquettes for energy production. The factory, erected in the early 20th century alongside a power plant, sought to optimise the utilisation of lignite by transforming it into compact briquettes for commercial purposes, thereby addressing Italy's fuel scarcity predicament. Historically, the inferior quality of lignite compared to foreign coals had impeded its market viability, leading to the closure of numerous mines. However, the advent of lignite briquette production offered a pragmatic solution, owing to the favourable attributes of these briquettes, namely their low moisture content, minimal ash residue, and higher calorific value, rendering them suitable for both domestic and industrial applications. The manufacturing process encompassed various stages, including lignite fragmentation, drying, compression into briquettes, and the utilisation of a thermal power plant to generate requisite steam and electricity for processing. In 1940, Leonardo Lusanna elucidated the project's intricacies in a technical report, delineating the patented design of the factory, comprising a thermal power plant and a dedicated briquette manufacturing facility. Regrettably, four years later, the advancement of German troops precipitated the destruction of the mining plant and power station in Castelnuovo dei Sabbioni, marking a poignant conclusion to this chapter of industrial history.

Historically, Mine Museum was born with the perspective to be a scholastic museum, whose materials were supplied by a scholastic organisation belonging to the territory which, starting from 1970, guided by the need to pass on the history of the place, had collected and handed over all the assets of the museum. In the years that followed, the museum evolved into a true historical documentation centre, a kind of archive for the Castelnuovo dei Sabbioni community. The plan to open a museum, however, was born between 2007 and 2009, and then materialised in 2012, when the Mine Museum that we know today was officially opened. Museo Mine was therefore born as a historical-anthropological museum, already innovative at the time of its opening and especially in the territory of the municipality of Cavriglia, which already made it an interactive place when it was set up. The initial idea behind the Museo Mine project is based on a chronological order, a dimension in which different types of media act synergistically, starting with the physical and ending with the use of files and multimedia devices "used with the aim of creating an immersive environment even without real immersive technology".

The majority target segment of the Mine museum is undoubtedly represented by the population of Castelnuovo dei Sabbioni and neighbouring towns. The reason for this lies in the very nature of the museum "proving to be self-representative for the community", reconstructing a collective imaginary through the use of historical pieces, testimonials and documents that the local community itself had decided to preserve and share with the Museum. Furthermore, a second reason, which justifies the above, is given by the dimensions of the Museum itself, whose restricted area appears to be an obstacle to a more intense tourist phenomenon characterised by mass visits and therefore limits access. Continuing the analysis, it emerged from the interview that another target segment is represented by foreign and/or Italian visitors, who, passionate about the theme of mining, seem to appreciate the uniqueness of what is shown in the museum, in this context the Mine museum also boasts some recognition at a European level, being part of some circuits specialised in the

mining sector, thus also implementing the promotion of the museum itself abroad. However, it remains a niche area, therefore not very well known and visited compared to other museums. This difficulty also emerged from the fact that Museo Mine is the only mining museum in Italy without mines to visit. Another target segment for the museum is represented by the local schools and surrounding areas. The children who are taken on a trip to the mine museum are offered activities that encourage and invite participants to reflect on the issues dear to the museum, first of all energy sustainability, but also the value of sharing and memory. These activities, proposed through games or in other forms based on the age of the participants, appear to be appreciated.

The scientific director explains how for the museum the digitisation process, contextualised in the marketing field, has made it possible to analyse and compare the visitor's perception, accepting the need for careful observation of the visitor's needs and feedback. Digital marketing in this context is mostly used through the creation and sharing of videos and films. In any case, other technologies are also used within the museum itself, such as QR codes which, being directly connected to the museum's YouTube channel, are very simple and usable for both adults and children.

Within the application it is possible to find a guided tour route and the development of a film production in LIS is underway.

From the interview carried out, it emerged that the evidence of a trend of improvement in terms of customer value and engagement emerged following the introduction of the use of new technologies, used while always respecting the values of the museum such as sustainability over time aimed at avoiding the onset of interoperability problems between different software or technologies.

The museum's major partners are municipal and regional bodies and associations that are part of the European circuit interested in the mining issue. It is interesting to notice that an important portion of the partners is composed of private citizens who, since the opening of the museum, have been donating the finds that characterise the museum.

Museo Mine currently has four different social channels such as Facebook, Instagram, YouTube and a website, recently renewed thanks to a collaboration with a company based in Salerno. Going into detail it is possible to observe how a certain communication strategy was chosen for the website, using it as an information collection point for the visitor, who by opening it can discover basic information such as opening hours and days, where the Museum is located or a small mention of its history or subscribe to the newsletter to stay updated on proposed events or news. From the site it is also possible to access various spaces, including a multimedia section which acts as an archive of projects and another which refers to a previous website of the Museum which displays a very vast selection of photos and documents for the visitor, with the aim of share the memory of the local community as much as possible.

 The Mine Museum website was voluntarily designed with the priority of obtaining very simple management in order to be more usable and always easily modifiable.

Analysing instead the three social media channels used by the museum, such as Facebook, Instagram and YouTube, it emerged that the most used as a channel of interaction with the visitor is Facebook, which represents for the museum, but also for the user, a sort of stock market diary always updated on news and which allows a real possibility of dialogue thanks to the numerous comments and interactions. The strategy that is chosen for the use of Instagram sees it as a well-curated and elegant photographic archive that tells the story and curiosities that revolve around the Mine Museum.

However, considering the strong heterogeneity of the public between the two social platforms, lately the possibility of adopting a more homogeneous and synergistic communication strategy in the two channels is being considered, with the aim of reaching and involving as many people as possible.

Given that Museo Mine is also accredited in the museum system of Valdarno (province of Arezzo, Tuscany), it was involved and participated in a project aimed at the implementation and improvement of digital communication in the cultural industry and in particular museums, leading to the development of a virtual tour of the museum, as well as the sponsorship of the latter through the Ambassadors, i.e. young people from the area, who told its story on Tik Tok. Other local platforms have also decided to take part in the digital narration of Museo Mine, such as the visitvaldarno website and the regional systems that are developing promotional programs that focus precisely on culture contextualised at an industrial level.

Another digital channel used by the Museum is that of a podcast, carried out by some local kids, which can also be accessed via the museum's Instagram channel.

Furthermore, with the desire for a conscious use of technology, aimed primarily at narration and dissemination, all the events held at the museum are recorded and published on the various social profiles so as to extend participation to those who were unable to be physically present and given the great attention to the topic, the museum is thinking of activating chat boxes to allow greater interaction.

The Mine Museum is also accredited for the national museum system.

Finally, touching on the topic of sustainability, what emerged from the interview is a lack of use of new technologies in the field of environmental sustainability, a consequence of a lack of funding in this sector. On the contrary, however, as demonstrated by the development of the application in LIS and the presence of various technologies that can be used by all people with hearing or visual disabilities, the value of social sustainability and inclusiveness is supported.

5.2 Chianti Sculpture Park

The interview with Chianti Sculpture Park took place in two separate moments, in an initial phase with the owner of the park, Piero Giadrossi, while we also interviewed Chiara Bozzi, who plays a fundamental role within the park, including marketing management.

The owner Piero Giadrossi explained in the interview the history of the park.

Initially, he and his wife initially owned an agritourism in Chianti which was called La Fornace having previously been a real furnace, linked to the Superintendency. On the other side of the road there was an oak and holm oak forest of about 14 hectares. They decided to buy it to make sure that no one would build houses in that area. In this forest there was an animal enclosure that occupied about half the space. The animals were later sold and thus found themselves with a fenced and usable area.

As Piero Giadrossi writes in his book "From Trieste to Chianti" (Giadrossi, 2021), while in Africa, they used to visit the Kirstenbosch botanical gardens and once organised an exhibition of Shona sculptors who came from the state of Zimbabwe, north of South Africa. Seeing this exhibition of mostly black marble sculptures that looked great against the green background of the gardens, it occurred to Piero Giadrossi that he could do something similar on his own property in Chianti. But the idea was not enough and so by delving into the topic he discovered that in the United States, in Hamilton (New Jersey) there was "Grounds for Sculpture" (https://www.groundsforsculpture.org/), a non-profit organisation founded in 1992 which in addition to make beautiful exhibitions every year organised a course for those interested in Sculpture Parks. Therefore, as he returned to Italy, he asked a surveyor from Gaiole to create a ring route (very irregular) in the former enclosure. Hence, he started thinking about a park with main characteristics guiding the choice of sculptors being two: their great internationality and the variety of materials used. Initially he organised two meetings at his house with some experts in the sector but without obtaining a decisive contribution.

In the end it emerged that the best and most concrete thing was to invite the sculptor into the woods, ask him to choose a place and then make a proposal as integrated as possible to the chosen place. In fact, the integration between contemporary art and nature is the third element that characterises the Chianti Sculpture Park. In any case, after three years of intense work the inauguration of the park took place in May 2003.

At the moment the Park hosts artists from 19 countries on 5 continents, many are well known in their countries of origin.

As for the materials, the variety is great: 5 works are made of glass (a material rarely seen in parks), then we have iron rod, volcanic lava, sounding steel cubes, and of course marbles of different colours and travertine.

Furthermore, in 2012 the Amphitheatre was added using a natural slope of the land.

Also, from the marketing and managerial perspective some interesting aspects emerged. This was mainly possible thanks to the interview with Chiara Bozzi.

It emerged that the most important target segment at the time of the inauguration and opening of the park was made up of foreign tourists. This fact is explained in the very nature of the tourism present at the time, but also today, in the Chianti area, a tourism characterised mainly by French, German, Spanish and Dutch tourists. However, despite these data, following the pandemic there were slight variations in the target

segments of prevalence, and in fact it is assumed that the lockdown stimulated the local population to take more trips out of town in the areas surrounding their homes or in general in the regions nearby, today in fact another important segment for the park is made up of Italian tourists coming from Tuscany or other regions. In this context it is equally important to underline how the massive use of social networks by the park due to the pandemic has also seen the increase in foreign tourists. A target segment that has remained unchanged and constant since the opening of the park is that of contemporary art enthusiasts.

With a view to increasing the loyalty and involvement of tourists and visitors to the area, the park has recently started to offer events and concerts, also taking advantage of the presence of the amphitheatre. These activities were designed with the aim of creating greater involvement in the visitor, transforming the park into a place not only of art and culture but also of sharing, thus making it a potential point of reference. The difficulty that the park encounters in this area is certainly given by the fact that in Italy contemporary art is still an attraction considered niche.

Another initiative created to also involve the local community is that of the B.A.C. project. i.e. Pievasciata Borgo d'Arte Contemporanea which is a recent initiative which has involved the contribution of institutions and private individuals, i.e. the owners of the land to whom an "integrated" sculpture is proposed, this initiative has contributed to creating a tourist flow in an area very little known in Chianti and has also helped to recover some disused or abandoned areas of the village.

The use of technology has always played a fundamental role in the communication of the Chianti Sculpture Park. The first approach to technology used as a means of communication and interaction with users occurred with the creation of the park's website, which occurred shortly after the opening. An initial online presence of the park immediately allowed greater awareness also to international tourists visiting Italy. Furthermore, as mentioned previously, the park immediately used another channel of digital excommunication, which is that of social networks, developing and updating its strategy trying to keep up with the times. Instagram functions perfectly as a promotional tool and therefore its use has been made a key element of the park's marketing strategy. This was done through the creation of reels by some influencers visiting the park, which significantly increased visits, also expanding the phenomenon to TikTok, registering a large audience of both young and adult viewers. The Instagram profile is normally updated three times a week with the publication of photos and videos, and daily through stories which allow great interaction with the public. Given the increasingly evident needs of having a good online presence, the park is thinking of investing in staff training aimed at professional data monitoring and in possible ways of promoting the online park.

As regards the use of technology inside the park, Bozzi explained how in 2014 an ad hoc app was created to be used as a self-guide. This application, thanks to a loan won in 2022, was recently updated, making it available in four languages and adaptable to all devices. The application appears to be greatly appreciated by visitors to the park who often express positive opinions and appreciate its ease of use but above all they consider it a very useful tool for fully enjoying the experience of the visit, as thanks to the simple self-guiding, the contemporary art is made understandable even to the less experienced, increasing the value and quality of the visit itself.

The park is also often sponsored by blogs and businesses in the area that suggest the Chianti Sculpture Park in their guides via the website link. The park is affiliated with the FAI and touring club, who include it in their online guides, it has also been mentioned in publications in National Geographic, Corriere and recently by the La7 television channel and TG2, thus managing to reach a wider audience. Bozzi explained that the newsletter is structured through the use of two lists, the first being that of the "aficionados", to whom a newsletter is most frequently sent containing information relating to events, concerts and activities organised by the park, and a another, which updates visitors every two months with more generical information. Social networks are very valuable in terms of interactions and are used by many visitors or potential visitors to ask for information or curiosity. The park also constantly records statistics on the origin of visitors and the way in which visitors learned about the park, so as to be able to consciously refine promotion and communication strategies. The offline communication and distribution component still remains of fundamental importance for the park, even if decreasing, especially given its geographical position and the type of tourism present in the area, as underlined by Bozzi in fact, in the specific case of the sculpture park of Chianti "online cannot exclude offline", in fact the use of brochures is still present, left above all inside the accommodation facilities

in the area, to also reach tourists who are less inclined to use technology or who prefer to explore the area without creating plans by searching online.

Chianti Sculpture Park today creates great value for the visitor, for the tourist, for the families and for the citizens of the local communities, who always greatly appreciate the experience of visiting the park, as it offers a harmonious and stimulating fusion between art and nature, which encourages visitor participation and creativity thanks to the presence of works with which it is possible to create a real interaction, touching them or exploring them internally, fully immersing oneself in the visit experience. Precisely due to its characteristics and its naturalistic environment, Chianti Sculpture Park offers a particular and different experience compared to that of a normal museum or artistic foundation, and has succeeded over the years, also thanks to the use of facilitation tools such as the app, to reach even the least expert in artistic terms.

Chianti Sculpture Park recognizes the values of sustainability, especially environmental and social, as fundamental values present right from the start in the conception of the idea of the park, immersed in a wonderful naturalistic environment, which the park wishes to make known with its art and nature project and educate to respect, love and care for nature, offering "an essential link between art and nature" as Bozzi explained during the interview. Therefore, in compliance with these values, the park has some bans such as smoking inside the park, and since January 2023 the park has joined the "carbon neutral" Sienese alliance and organises various events in collaboration with them. Technology was used in this context in order to reduce waste, especially paper and plastic which has been significantly reduced, and for energy efficiency. The value of social sustainability is carried forward by the park through various activities, the most striking is that of the Borgo D'arte di Pievasciata as it is "a project by the community for the community", the park also engages in cultural dissemination activities and social themes also represented in the works of the park themselves, in this context a lot of attention is also paid to inclusiveness, organising guided tours for people with visual disabilities, the park is also affiliated with Siena Sociale, to which it had made free tickets available for volunteers, encouraging social value through community and sharing.

6 DISCUSSION

In order to reach our conclusions, we decided to conduct the following analysis from a comparative and thus cross-sectional perspective in order to provide as broad a view of the subject as possible.

With regard to the Mines Museum, what emerges from the interview is a picture of a museum that fits into a very particular niche of interest, that of mining routes and history, which, however, is not tangibly witnessed within the museum, since mines no longer exist there, a factor that significantly influences the characteristics of the majority target segments and gives rise to the museum's need to use a certain approach towards the adoption of new technologies, which is reflected in the case of Museo Mine with the use and installation of many virtual and augmented reality devices inside the museum, which guarantee the user an immersive visiting experience. On the other hand, however, analysing the Chianti Sculpture Park interview, what emerges is a reality that approaches, from this point of view, in a more traditional way to the use of new technologies, since the main attraction of park consists precisely in the observation and interaction that the user can have with the sculptures that are already present and tangible within the park. However, other needs that arise in the context of the Chianti Sculpture Park are highlighted, which have led to the adoption of new technologies in other areas, such as training and education, in fact, as emerged from the interview, the development and use of a application for mobile devices was of fundamental importance in educating the visitor to understand the contemporary art sculptures present along the route of the visit, which can often be difficult to understand for those less expert in the subject. This approach used by Chianti Sculpture Park is also confirmed by the choice of its marketing and digital communication strategies with users, which are channelled through the use of social networks, especially Instagram, with the aim of bringing potential visitors closer to a reality which in Italy is still niche and often misunderstood, like that of contemporary art, with the use of promotional strategies such as influencer marketing and the publication of reels and illustrative posts, but which at the same time seeks to build a relationship of trust and interaction with those who already know the park, making them participate in everyday moments using tools such as Instagram stories. As regards the communication strategy adopted by Museo Mine, it emerges that this is mainly influenced by the type of target to which it refers, and therefore it was chosen to use four communication strategies diversified based on the audience present on the Museum's various social channels, such as Facebook and Instagram, keeping the website as a reference point from an information point of view and

using social channels to generate greater interaction. It is possible to find confirmation of what has just been described in the lower part of Fig. 1, which shows the interpretative framework.

From the above is highlighted a different conception and approach to the use of new technologies: in the first case, that of Museo Mine, we observe a small town reality that approaches new technologies considering them mainly as a facilitator of activities and management of the same, which at the same time allow the museum to create great value for the visitor by offering unique experiences. On the other hand, however, we observe a reality that deals with a niche interest, and which therefore, as anticipated, approaches and defines the method of adopting new technologies as an educational and promotional tool.

In general, considering the information reported above, in both cases a lack of trained personnel emerges in terms of digital transition in the cultural field, which confirms what was anticipated in the literature in the study by Agostino and Costantini (2021). This difficulty is also found in monitoring the data obtained from interactions with the social channels of the two museums and in this context both highlight the need to invest more in this area.

Furthermore, analysing the content of the two interviews it is also clear that the geographical position of the two museums and the type of tourism that characterises them, as reported at the beginning of paragraph 4, strongly influences the online and offline marketing and communication choices made by the two realities, which have been manipulated to create as much value as possible for the visitor and at the same time create greater awareness for the potential user. We find confirmation of this in the fact that Museo Mine, being closely linked to the community of Castelnuovo dei Sabbioni and to visitors who are usually already well informed on the subjects covered in the Museum, has managed to almost completely eliminate offline communication channels, managing to concentrate everything in effectively in digital ones. The Chianti Sculpture Park on the other hand, being in a place that tends to be more subject to international or national tourism, is also still linked to offline communication channels that allow it to reach certain types of users that would be lost only with the use of digital, this strategy it is implemented, as explained in the interview, through the use of brochures within accommodation facilities and similar (see Fig.1).

In both cases, however, a positive outcome emerges in terms of feedback, interaction and communication with users, resulting from the use of marketing strategies based on the use of new technologies and communication and promotion tools such as social networks

Finally, as regards the topic of sustainability, in both cases we find a good application of technology in the field of social sustainability aimed mainly at breaking down cognitive and linguistic barriers, especially thanks to the tool of applications and QR codes with audio guides. From an energy sustainability point of view, however, there is still a low use of new technologies for energy efficiency and the massive reduction of waste, due to a lack of funding in this area.
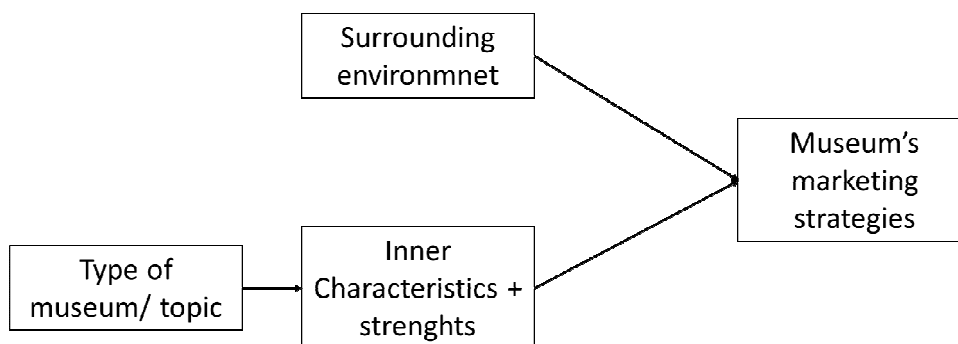

Fig. 1: Interpretative Framework 1. Source: own elaboration.

7 CONCLUSION

In conclusion, the qualitative cross-sectional analysis carried out between the two case studies gives us an image of the Italian cultural industry which confirms what was anticipated in the literature, i.e. an increase in competitiveness, value created for the user and interaction with it found following the adoption of the new marketing 4.0 technologies also in the structuring phase, as well as implementation, of the marketing and communication strategies of each museum.

However, all of this is counterbalanced by the need to hire or train personnel who have specific skills in the field of digital transition, in order to exploit the maximum potential that the adoption of new technologies in the cultural field can offer.

Furthermore, other conclusions also emerge from this analysis; it is in fact clear that the intrinsic characteristics of each of the two case studies and their geographical position are two elements of great influence in the choice of the technologies used and the marketing and communication strategies chosen and more in general of the level of digitalisation of the two case studies. The strong bond with the Castelnuovo dei Sabbioni society and with the community of mining route enthusiasts who characterise the main target segments of the Mine Museum, as well as its geographical position which excludes it from mass tourism, have meant that it has built and strengthened a certain communication and marketing structure based on inclusion and dialogue with the user, choosing to do so via the website and social channels, mainly used, albeit with diversified content, like a museum logbook. On the other hand, however, we observe how the reality of the Chianti Sculpture Park, given its geographical position, decidedly subject to non-mass but still consistent international and national tourism, and considering the particularity of the contemporary art sculptures that characterise it, has decided to base its strategy on the use of social media mainly as a promotional tool aimed at creating as much awareness as possible about the existence of the sculpture park, and as an educational tool so as to increase the quality of the visit for the user, making it more aware and engaging, as well as managing to attract new potential visitors, this also thanks to the use of influencer marketing. These factors also implied the possibility of doing without, or not, offline distribution channels, which in the first case was possible, while in the second case, considering some reference targets, it was not.

It also emerges that the use of new technologies, in addition to bringing enormous benefits from the point of view of creating customer value and awareness, if channelled effectively and efficiently could also bring great benefits from the point of view of environmental sustainability, reducing waste and optimising consumption, thus increasing profits. However, to achieve this objective, the need arises to have specialised personnel as anticipated, as well as to obtain greater funding in this area.

Finally, another interesting aspect is also highlighted from this analysis: we observe how the concept of the use of technology for both cases analysed is mainly reflected in the desire to create an authentic value for users, creating awareness on important issues for the two museums, but also as a tool that makes the two realities known and appreciated.

From this research it is also possible to offer an interesting suggestion to museums and institutions with similar characteristics of the two analysed. It would be worthwhile to plan sustainable strategies in the museums. Particularly, considering the nature and the location of the analysed ones, environmental sustainable actions might not only be beneficial for the company and the surroundings, but they could also catch the attention of those customers with a particular attention to the environment.

This research is not without limitations. In particular, we analysed only its cases, with the risk of subjectivity in the analysis of the results (Gibbert et al. 2008). However, this also gives the possibility of suggesting future lines for research, therefore indicating the possibility of validating the first results obtained thanks to the development of research based on multiple case studies that also include companies from other countries.

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