The Communication Challenge in Archaeological Museums in Puglia: Insights Into the Contribution of Social Media and ICTs to Small-Scale Institutions

Antonella Lerario

Istituto per le Tecnologie della Costruzione, Consiglio Nazionale delle Ricerche, 70124 Bari, Italy; antonella.lerario@itc.cnr.it

Abstract: Archaeological museums play a vital role in regions with ancient roots, holding a millennial image as the cradle of civilization. In the South of Italy (former "Magna Graecia") and particularly in Puglia—a melting pot of cultures where ancient Messapian, Byzantine, Roman, and Greek civilizations followed one another in ages, bequeathing a wealth of testimonies— institutions are disseminated across the region, and almost every small municipality has its own archaeological museum hosting a wealth of valuable objects and remains. The gradual structural changes in the role of museums over the last decades and the recent COVID-19 pandemic outbreak, with the sudden closing and subsequent re-opening of facilities, forced institutions to re-think and re-develop their communication practices everywhere. Museums across the world have since been conceiving original and effective strategies based on social media and ICTs. After framing the problem background, the article introduces an overview of good practice and virtuous examples in the museum field and a questionnaire-based focus survey on a sample of archaeological museums in Puglia in order to assess the status of local communication strategies’ implementation against the potential of modern technologies. The survey results allowed identifying a peculiar mix of “emergency” and evolitional approaches in the sample analyzed, main concerns and barriers to the adoption of digital strategies, but also specific strategic drivers for innovation in the very nature of local small institutions. The study’s outcomes offer a potential contribution to the alignment of institutions to current standards through informed policies that can be usefully shared in other similar contexts across Europe.

Keywords: digital museum communication; Apulian museum; digital collections; museum websites; virtual museums; social networks; museum networks

1. Introduction

The recent global crisis linked to the pandemic and the consequences of isolation measures and the closure of productive and leisure activities have caused a serious setback in all economic sectors and in all aspects of daily life. Undoubtedly, museums are among the institutions most affected by the emergency. Considering the articulated role played by museum institutions within communities and the different spheres in which cultural consumption determines its effects (cultural, social, economic, productive, and occupational), it is not easy to summarize the extent of the global impact of the coronavirus outbreak, which has been analyzed anyway in many global and national reports.

One of the most evident effects on the museum activity cycle has been the re-thinking of communication modalities, considering their implications both on the institutions’ side and on the visitors’ side. The availability of modern technologies for information and communication (ICTs) applicable to the cultural field has represented a potentially infinite resource. Undoubtedly, the push to maintain and intensify the remote relationship with
the museums’ audiences through the digital sphere has been a compelling solution due to the safety requirements for visitors and staff in order to keep on assuring the very existence of institutions and allow them to continue performing their social role. Many reports have analyzed and highlighted the different reaction capacities of museums and the variegated declinations of museums’ responses across the world [1–5].

Actually, beyond the pandemic emergency, technological advancement has triggered a more gradual innovation process in the museums’ communication means and models since long ago. This process has been developing in parallel with a progressive evolution affecting their deepest essence, related to a rethinking of the role and significance of the museum institution, that has gone on to enrich its functions for decades—with respect to the original ones of conservation and exhibition of objects—through a growing openness towards a more and more informed, interested, and exigent audience and towards its contributions. Such evolution has also been widely analyzed [6–9] and, on the other hand, was already reflected in the ICOM definition of museum in 2007 [10].

The merging of all those processes—ICTs’ advancement, conceptual revision, enlargement of missions, and organizational models—directly affects the topic of museum digital communication, activating and feeding a scientific and technological discourse addressing different aspects; first of all, the new identification of museums’ interlocutors in citizens beside tourists, the need for greater attention to the different publics and their needs, up to reflections on its material component, on space use, and on the overcoming of the traditional concept of a physical museum [11–14].

At the global level, then, it can be said that the digital transformation of the museum sector was a physiological evolution already consolidated at the time of the COVID-19 outbreak, at least in some contexts; rather, the pandemic emergency has probably only accelerated the digital transformation, making it urgent and undelayable. Actually, the crisis itself and the will to respond to it, proposing and imposing on museums new responsibilities in the social sphere (as wellbeing facilitators [15,16] and resilience activators [9], by mitigating users’ uncertainty and isolation feelings), with the need to maintain remote communication above all for these new tasks, have dramatically brought to light the persistence of long-lasting structural criticalities.

In Europe, in particular, the economic crisis of the period 2009–2013 and the gradual diminishing of EU financial support to institutions have put further stress on the sector in all countries. This has not caused, anyway, a reduction in visit flows, but on the contrary, an increase, in particular in the segment of archaeological museums, probably due to the need for stability typically felt in critical periods and to the identification of a reference element in the communities’ past [6], as well as in front of the rapidity of social and technological changes, often higher than the human ability to adapt to them [6,17,18]. Such a transition has always been much heavier and more difficult in small-dimension museums, which, besides being generally less equipped, account for the majority of a cultural heritage that is extremely diffused across the whole European territory. Italy, like many other European countries, is in a delicate context, not only because of the character of its cultural heritage but also because it has been experiencing many other events, among which the ministerial reform of state museums started in the same years [19].

As mentioned, many reports illustrate how national museums have reacted and are facing the challenges of museum online activity and communication. Nevertheless, at the local level, there can be sensible differences; the Apulian region is a very significant case in the national landscape for its wealth of resources and institutions and the marked presence of small- and medium-sized archaeological museums spread across the whole region. Unfortunately, despite its peculiarity, specific studies at the regional scale are missing that can indicate how the Apulian museum sector is performing and whether its performance is in line with national levels. Actually, official reports available look at Italy as a whole and often leave out of the census less traditional museum types, private institutions, and those museums that are not included in official definitions or classifications.
(due, for instance, to their dimension or organizational issues) but are anyway a growing part of the regional and national scenario.

In order to fill this knowledge gap and give a picture as faithful and accurate as possible for the case study region, the present article aims to assess the status of communication strategy implementation against the potential of modern technologies, discerning “emergency” and evolutionary approaches, and identifying trends, concern areas, and barriers to their adoption. In order to answer these research questions, the article presents the results of a questionnaire-based survey carried out on a sample of Apulian archaeological museums. In the following section, an overview of the literature on museum digital strategies and practices adopted across the world to respond to these complex challenges is proposed. After the description of the Italian context, the case study, and the materials and methods used, the results of the study are presented and discussed in order to deliver a timely representation of the local sector and make a contribution to the future alignment of institutions to current standards that can be useful in other similar contexts across Europe.

2. Literature Review

Over the last two decades, the availability of ICTs, their advancement and refinement, and their increasing penetration in the cultural sphere have triggered, in this field, like in many others, a deep transformation. This has been reflected also in the different institutions and particularly in museums, giving life to a global process of digital transition that, in conjunction with the ongoing “democratization” of culture (addressed in more detail in the following sections), has visibly affected, above all, museum communication practices. Consistent with the range of solutions offered by digital technologies to the museum sector, the literature on museums’ online presence, then, is extremely variegated and allows an attempt to draw its evolutionary path.

Actually, since the first decade of the 2000s, an explorative research line on ICTs’ potentialities for museum communication has been developing, focused on the use of websites, social networking, and technologies for content digitization, in which the virtualization of objects and environments plays a prominent role. Many authors have rested on the general analysis of museums’ communication strategies, highlighting in some cases the success of integrated approaches based on the contextual use of different channels and the attention paid to variegated user groups. Good examples of this approach are the “G. Antipa” museum in Bucharest [20], the Victoria and Albert Museum in London [21–23], or even the emblematic case of the Rijksmuseum in Amsterdam [24–26], and more recently, the Kunsthalle in Mannheim [27]. In all cases, strategies have been gradually built over the years, benefiting from an early start of exploration; the V&A moved in a few years (2012–2017) from a strategy where digital communication was part of a wider marketing strategy to an independent strategy based also on self-evaluation and training and a general rethinking of the museum from a social perspective, addressing also complementary spaces (bar, garden) in order to make it a place for social entertainment.

Also in Italy, virtuous examples can be found at this stage: see, for example, the MANN in Naples [28], whose strategy started in 2017 and proceeded in the following years based on the adoption of diverse immersive technologies (virtual tours, gamification, online exhibitions), the daily updating of SNs’ accounts, the creation of digital archives, and mini-documentaries, a strategy rewarded through the encouraging numbers of visit flows. Actually, as Visser [17] underlines in 2016, the change in the country is rather fragmentary, as bold innovations coexist with cases of cultural underdevelopment.

It must be said, anyway, that such results imply certain costs; in the case of the V&A museum, for instance, investments in technologies, staff, and resources have been considerable; similarly, in the case of the Rijksmuseum and Kunsthalle, equipment was a decisive key to success. In the case of the MANN, Naples, the communication strategy was implemented with the help of the public financing granted to three projects within the
Beside excellences, negative experiences also emerge in the literature that fail to make the most of available technologies through appropriate planning and strategic design of online communication; an example of this is the case of Catalan museums described by Capriotti [33], and more generally of Spanish museums (with some exception [34]), which formed the object of several studies [35–37], or the experience of Polish museums described by Jagodzińska [38].

The need for precise strategies for museums’ online communication design has led researchers to theoretical reflections on this theme as well as defining specific projects to identify improving methodologies [39,40].

Moving to examine individual technologies, the literature reports a wide experimentation activity, above all in the sector of SNs [29,30,41]; a spreading that led some authors to reflect more broadly on their different uses for museum marketing strategies, also based on general classification and frameworks [42–44].

Technologies for virtuality are another privileged resource for the museums’ digital transition due to their immediate and evident appeal and attractiveness, receiving a wide response from institutions above all for purposes related to increased visit flow. A whole vein of explorative research studies, actually, has been developed on the potentialities of those technologies and their role in museum communication, especially in the reconstruction of objects, people, and complete environments [45–47], mainly for on-site use to enrich the visit experience and add precious informative content about objects, their original context and use, or generally, their stories [48], up to hypothesizing and applying the concept of a virtual museum in its complex [49,50]. From this point of view, the perceived potential of this concept has led to meditations above all on definitions and possible classifications with respect to different levels of complexity and interactivity [6,51,52], although the first efforts to apply the concept date back several years [53].

The segment of websites appears, instead, much more mature; already before 2000, the literature showed, in general, more critical and less explorative attitudes towards quality issues; available studies reflect the need for evaluation of sites’ effectiveness with respect to fulfilling users’ needs [54–61].

Ultimately, at this first, more explorative stage, attention has been driven essentially by the investigation of ICTs’ potentialities, contextually with the establishment of a strong link between the cultural sector and tourism—at the level of the perceived value of cultural heritage as a tourist resource—and, subsequently, with the commercial sector at the level of purposes and approaches. In both cases, in terms of conceptual dependence. Indeed, the main purpose of implementations is often identified in the increase in visit flows. This is recognizable also in the terminology used (visitors are often referred to as “customers” [20,62–64]) and in the unidirectional communicative relation between museum and visitors, where the former is the owner of contents and knowledge to be communicated to a “receiving” public through those technologies that most amplify the visit experience and make it unique. Research has focused on the spectacularity of experiences, designed to astonish visitors, aimed at their repetition, and cultivated with the same approach used to conceive a consumer good in view of the next ones. Apart from websites, in the studies analyzed, the specific approach to ICTs and their implementation is mainly descriptive, mostly related to “object-oriented”, applications, while limited attention is paid to cause-and-effect relations and to the assessment of their effectiveness.
In the following years, there will be no real change with regard to the technologies developed and implemented, but rather in the way those technologies are used and applied. Due to the evolution in the very concept and mission of the museum, of its role, and of the more active one of the audiences already mentioned, often merging in the concept of “participatory museum”, initially theorized by Simon in 2010 [65,66], greater attention towards the “publics” can be observed. A shift occurs, on the one hand, towards a bidirectional communication between the museum and its audience and, on the other hand, towards the measurement of effects [67,68] and the causal relations between digital strategies and intentions of physical visits [69–73], within a general “public-oriented” or “user-oriented” approach. This is due to the new social values attached to museums [6,74–76] and their growing and visible openness, which begin to leave space for values’ and meanings’ creation on the part of communities and a search for encounters. In this picture, those same communication technologies used before mainly to inform on events and initiatives and to transmit content to passive receivers are now employed to know the audiences for the twofold purpose of proposing cultural experiences closer to their interests and receiving their suggestions and values. The pandemic outbreak has come, on the one hand, to simply accelerate this evolution, which would otherwise have been slower and less disruptive, and, on the other hand, to extend the social values of museums and give them the task of listening to people’s feelings of loneliness, understanding them, and mitigating them through empathy, solidarity, and support [77]. But above all, due to the increased importance of the remote fruition of heritage, it has produced the overcoming of studies on “groups” in favor of greater attention to “individuals”.

At both stages, more and less successful approaches and experiences have emerged. In the COVID-related emergence, museums increased their online presence by 80%, offering more interactions on social networks (SNs), virtual tours, and online exhibits, resulting in a 40% increase in online visits. Furthermore, overall digital activity has intensified after the lockdown for at least 15% of the sample studied, while online communication on social networks has involved around 50% of institutions. However, this does not speak for total success. Many museums have found themselves unprepared to manage the radical change required in communications, lacking a well-defined presence strategy beyond the mere communication and advertising of onsite activities [1]. Moreover, after the attenuation of the pandemic crisis, it has appeared clearly that the most effective strategies for digital communication are those conceived in an evolutionary, rather than emergence, perspective, availing of an early start, and carried out with an integrated approach based on “trial-and-error” models [78–80].

In particular, what stands out in the new picture is the persistence of the “virtual vs physical” antimony: Several studies investigate, even at a distance of years from the pandemic, if and to what extent the former can replace the latter [81,82], while others have perceived “virtual” as something that can integrate with “physical” without being a substitute [83] and give life to innovative and hybrid contents [84]. Or, in other words, the vision of the post-pandemic time as a “return” to the physical dimension, on one side, and the concept of the pandemic as something that has permanently changed heritage fruition and the relation between museums and visitors, on the other side, coexist and stand up to each other. Burns [85], through a comparison between different interaction modalities in the physical environment and in the digital one and between the pros and cons of each, wondered in 2015 if virtual could capture the whole physical experience. In 2022, three years after the end of the emergence, some authors’ works are still engaged in addressing this struggle [86–88]; others, instead, explore the “hybrid” concept directly applied to experiences rather than spaces [14,89,90].

More recently, the virtual component is evaluated also for learning purposes [91–93], while SNs are arousing reflections on new social values assigned to museums (as support in crises, conflict, etc.), being assessed also in this respect [94], sometimes even overcoming the museum field borders [95,96].
After the end of the pandemic crisis, many researchers proceeded to assess the level of online presence of museums [97–101]. The report from the Networks of European Museums Organizations (NEMO), which analyzed around 1000 surveys from 48 museums, mainly in Europe, has shown that 4 out of 5 museums increased their digital services to reach their audiences [5].

Few studies try to assess the validity of museums’ communication strategies in the Italian context and how they allowed them to react in a systemic rather than extemporary way to sudden closing and safety measures, except for a few virtuous examples, which decline traditional channels in planned and organic ways, respectively, in large contexts, such as the Galleria dell’ Accademia (Florence) [102] and the Parco Archeologico in Paestum, and in small museums, as is the case with the Centro Pecci in Prato (Tuscany), focused on a proximity-tourism target [103]. Actually, in the lead-up to the pandemic, the case of Turin museums [104] highlighted how digital communication was weakly linked to strategic dimensions and conceived as a “short-term” tool rather than a resource for dialogue.

Official national reports can offer more elements to understand the main characters and developments in the Italian context, which will be described in detail in the following section.

3. The Case Study’s Context: The Italian and Apulian Museum Heritage

3.1. The National Museum Sector’s Evolution

The statistics reports from ISTAT for the last few years offer a general picture of the national museum sector’s consistence, respectively, in the lead-up to the COVID-19 outbreak and at the end of the two lockdown periods:

- at the end of 2019, the Italian cultural heritage consisted of 4880 museums, monuments, and archaeological areas, 464 of which are state properties and 4416 are private or public, mostly municipal, properties; among these, 3928 museums account for 80.5% of the overall heritage [105];
- at the end of 2020, 4265 public and private museums and similar institutions, among which 3337 museums and 295 archaeological areas, were open or partially open in the country [106].

Statistics surveys for 2022 have recently started and will be completed by the end of June 2023.

Actually, museum institutions are much more numerous, since, as [107] observes and as explained in the ISTAT methodological indications [105], census statistics consider only those institutions included in ministerial and regional lists. A presumably very large number of small museums that do not match the standards required for the listing but are very often proactive and creative entities are not part of the picture. As [107] explains, it is a matter of thousands of institutions—that cannot, then, be ignored—to which particular categories of museums, also excluded from surveys, should be added, such as “diffused museums”, which have a growing presence in the national territory.

Apart from these considerations, the mentioned surveys clearly recognize, anyway, the peculiar characters of the Italian museum model, represented through a huge heritage of small museums with a widespread distribution across the country, a model that also emerged in previous reports [108]: 32.2% of museums are located in municipalities with less than 5000 inhabitants (some of which host up to 4–5 facilities), and 33% in medium-sized municipalities (5000 to 30,000 inhabitants). Overall, more than half of them (52.2%) are municipal properties.

Italy is characterized, then, by a markedly polycentric cultural offer that is homogeneously distributed across its territory, including in “marginal” areas in geographic, socioeconomic, and infrastructural terms. Indeed, 37.8% of museums are located in inland areas, constituted by intermediate, peripheral, and ultra-peripheral small towns far from
main urban centers offering modern public services, while 26.4% are located in “belt” or “peri-urban” small towns surrounding main centers.

In 2020, the Italian museum sector engaged, on average, a total of 11 personnel units (including employees, consultants, external collaborators, and volunteers) per facility; 68.4% of institutions had up to 10 units (almost 50% had less than 5 units), and 12% of museums relied entirely on volunteer staff [106].

Such a peculiar composition of the national landscape has led, over time, to the establishment of formal associations taking these aspects into due consideration, such as ANMLI (National Association of Local and Institutional Museums) in 1950 and, more recently, APM (Associazione Nazionale Piccoli Musei, 2007).

ANMLI has been dedicating its efforts over the last 70 years to the improvement and promotion of an adequate protection of the artistic, historic, and scientific heritage of local and institutional bodies [109], while APM fosters the diffusion of a new managerial approach to small-sized museums that can give value to their specificities, in particular their closer link with the territory and the local community. Due to their efforts, small museums have obtained formal recognition, distinctively from other museum institutions, through Ministerial Decree n.62 (28 January 2021) [110].

The evolution of the “museum” concept—This considerable heritage, not free from intrinsic problems related to their dimension and their scattering across the region, has been affected over the last decades, like in many other countries, by a general evolution of the museums’ social function. Indeed, this process, together with the cultural dynamics induced by globalization and the growing availability of information and communication technologies, has been entwining in recent decades with a more profound and essential transformation of the museum’s role, its mission, and the “museum” concept itself in the national context, having more ancient roots in past centuries, followed in more recent times by a structural and organizational reform of the ministerial administration.

In the “cradle of culture”—as often Italy is referred to—often jealous of its inheritance and of its ancient roots, museums were originally conceived as places of “conservation and protection” of material evidence, as underlined also in the national regulation of 1913 [111]. Those “culture shrines” used to turn only to a narrow, selected, and learned public, able to understand and receive their values without the need for intermediate actions to “communicate” them. Following the economic “boom” of the 1970s, with improvements in general living conditions and higher education levels, the birth of a new and wider demand for culture consumption among classes previously excluded from it triggered a real democratization process among cultural and museum institutions. To this increased demand, as [Visser 17] underlines, museums responded, on the one hand, by integrating the didactic function with the original ones of conservation and protection of assets and, on the other hand, by moving culture consumption conceptually closer to tourist flows and activities. The presence of a more and more aware audience, then, led on the one hand to the establishment of an increasingly explicit “culture-tourism” pairing (with the subsequent need to set up adequate services and the extension to the museum sector of a business-like approach to “culture as consumer good”) and, on the other hand, to a lesser but meaningful relationship between museums and educational institutions. The assimilation of the museum sphere to other economic sectors is a global, consolidated perspective that has long identified museums or visits as sale products and visitors as customers [20,62–64]. The performance of the former started to be measured essentially in quantitative terms (visitors and cash flows), orienting design efforts towards spectacular and impactful exhibitions able to amaze and attract large user bases.

The evolution of museums in Italy has been widely studied and analyzed in literature, both with reference to specific museum categories [112–117] and as the object of relevant initiatives such as the ICOM congress of 2019 [118].

In this changed scenario, the national museum sector faces a particularly complex evolution, considering its origins, especially in its adaptation to the need to give new meanings to communication.
The reform of state museums—In the century-long process described above, a structural and organizational reform of the ministerial configuration has been introduced, urged through spending review exigencies and at the same time through the willingness to unify the administrative competencies of the culture and tourism spheres. The reform process started in 2013 and was accomplished with the cited Decree of 2014 [19]. The reform aims at building a network among the ca. 5000 museums and cultural sites in order to improve access, fruition, and sustainable management of heritage. The main objective is the creation of a “National Museum System” (SMN), focusing on sustainability, innovation, and participation, engaging not only state museums and sites but also regional, municipal, and diocesan museums, as well as private, military, or university ones. All public and private cultural sites can be part of the system on a voluntary basis through an accreditation process defined by the normative and based on a self-evaluation questionnaire for museums, a dedicated platform for process management, and a dedicated training program.

In the intention of the legislator, adhesion to the SMN represents an opportunity for the growth and improvement of all museums, regardless of their property, size, or geographic region, since it is based on the concepts of non-hierarchy and collaboration across states, regions, municipalities, local administrations, universities, and the whole education system for greater competitiveness in international tourism. The main points of the reform can be summarized as follows:

- Conferred of administrative autonomy to state museums of relevant national interest (up to that time simple extensions of ministerial superintendencies), aligning them to all other public and private museums (at the time of writing, bestowed museums are 44);

- creation of the new Regional Museum Poles (now “Directorates”), territorial branches of the General Directorate for Museums, in charge of defining common promotion strategies and objectives across the region, identifying cultural tourism itineraries, and spreading international standards among all regional public and private museums. They are constituted by state museums in each region, without administrative autonomy but with their own statute, balance, and individual mission;

- creation of the Regional Museum System, including Regional Museum Poles and all other public and private museums meeting criteria and standards defined in the Reform Guidelines and the ICOM Ethic Code, on a voluntary basis and a specific Convention with the Pole.

It was, in origin, an ambitious path aimed at the ongoing improvement of all museums, but it is still underway: up to 2022, only 200 museums out of the total number of national museums have been accredited [119].

The local museum networks—In parallel with this “systematization” process of state museums (open anyway at all public and private museums), a general and wider approach to the management of museum heritage has been developing based on the concept of “museum network”. Such an approach has been theorized with the main reference to business economy principles by [120] but recognized and analyzed by ICOM [121] in its more complex—social, economic, and informative—implications. A museum network can be defined as a structural setup produced through the formal establishment of co-operative connections among more museum institutions that becomes a “system” (or gives life to more “systems”) as soon as those predefined relationships are implemented for a specific objective, e.g., thematic networks, university museum networks, district networks.

The creation of museum systems and networks, either to organically integrate public (state or local) and private museums or to facilitate the creation of a “critical mass” across small and less known local entities is, then, a strong “call” in Italy and a great opportunity. Nevertheless, it is still in marked delay and only beginning to deliver the first results, mainly in the field of thematic networks, which are certainly still in limited numbers compared to the potential inherent in the local cultural wealth.
Online communication and heritage digitization—The digitization of museum heritage has inspired, almost contextually with the reform of state museums, the “MuD Musei Digitali” ministerial project, aimed at supporting the ca. 4000 national institutions in creating their digital identities to substantiate the desired network [122]. The project implications have later merged with the recent National Digitization Plan (PND, Piano Nazionale di Digitalizzazione del patrimonio culturale) of 2022 [123], which identifies user-centered strategies for the years 2022–2026, supported by guidelines for heritage digitization, data management plans, replicas’ acquisition and reuse, digital product classification, and a digital maturity assessment methodology for museums.

In spite of the long structural gestation of the digitization transition and the acceleration produced through the lockdown measures, as well as the efforts of the institutions to increase their digital presence, the current level of digital innovation is not encouraging. If, in the aftermath of museums’ closings, Italian museums’ response was positive, ~73% of them arranged alternative modes to stay in contact with audiences, 63.6% were committed to remote communication and information on main SNs, and 39.1% presented online their collections or interviews with experts—the Observatory for Digital Innovation in Cultural Heritage of the Polytechnic of Milan [124] reports a deceleration in the digital transition with the recovery of onsite activities, which Monti [125] also attributes to an emotional spur now extinguished. At the end of 2022, only one institution out of five had a strategic plan for digital heritage. Current deficiencies are mainly related to the post-visit phase, which is important to favor ongoing relations with visitors: only 10% of visitors are contacted after the visit, despite their marked interest in it (25% of visitors have posted content on museums’ social accounts). It is then necessary and possible to engage more users in the post-visit phase, both to maintain a dialogue and to listen to the audience’s needs; a strong exigence also emerges from the public to link heritage issues to everyday values and confront them about that. Adequate means are still limited, and dedicated staff for the management of online communities are still needed. Despite a recovery of demand, the offer is slowly consolidating the trend towards innovation brought by the pandemic, with the need for adequate competence and strategic planning. Priorities are currently related to collections’ digitization as the first step to designing innovative offers.

3.2. The Case Study: The Archaeologic Museums of Puglia

The picture of museums in the region of Puglia is so variegated that it is not easy to try an estimation that takes into account all the institutions that shield, exhibit, and share collections and other cultural resources. Very few studies exist in the literature that have tried, over time, a descriptive quantification of them [126–128]; in any case, they are rather dated, requiring updating. As [128] underlined in 2012, the official census carried out up to now is rather heterogeneous, as it usually does not consider univocal criteria and parameters to distinguish museums from other cultural sites. In their study [128], after recognizing numerous authoritative sources and guides compiled by local and central administrations and starting from the mentioned gaps, they proceeded to develop a specific analysis model to evaluate, on the field, the status and qualification of Apulian museums, based on an assessment questionnaire derived from the benchmarking of tools for the accreditation of museums in the different Italian regions and on an interpretative scheme organized into four-dimensional and functional areas. Moreover, considering the complex articulation of the study, at a distance of ten years, it was not possible to find in the literature further updates able to confirm the proposed classification of the listed museums and their actual permanence.

Considering that the purpose of the present study lies outside strictly typological or standard-related issues, taking into due consideration the national statistic surveys’ undersizing limitations mentioned above, and as the mentioned studies are now outdated, for the quantitative consistence of regional museums, the ISTAT report of 2021 can be quite a reliable knowledge base [106]: among the 131 museums and similar institutions of Puglia (data for 2020), archaeological museums take the lion’s share (32, accounting for 24.43%
of all museum types and cultural categories, almost twice the corresponding national percentage of 12.48%). Actually, the archaeological heritage is even larger, considering that museums from other categories often include archaeological sections in their facilities [129].

It must be observed that such consistence has undergone rapid growth between the end of the 1960s and the end of the 1980s; [126] highlighted how, whilst in 1980 the number of Italian municipalities hosting at least one museum (809) has little more than tripled compared to the census of 1922 (253), the corresponding number for Puglia has more than quintupled, from 8 in 1922 to 45 in 1980, and the total number of regional museums has quadruplicated. Those data are in line with the statements from [6] about the evolution that occurred in the 1960s and 1970s. Jalla defines the region of Puglia as “a reality that, for museum-related issues, is continuously in progress” [126].

The Apulian archaeologic heritage represents one of the main connective and identity-making elements of the region, due to the number of finds, the variety of their dating, their widespread diffusion, and their potential distribution in more museum itineraries that, if appropriately promoted, can give the right visibility to the different local entities that, for their strong rooting in their reference micro-contexts, are markedly different from each other. The long absence of visible cultural networks has not allowed visitors, up until now, to form an exhaustive picture of the region’s historical evolution, also with respect to the whole nation’s, but only to collect fragmentary knowledge about the different resources. Up until ten years ago, the only network available was the state museum network, which lacked homogeneous management. One of the three physical networks at the time of the mentioned studies, the Si.M.A. (Archaeological Museum System), could have set the premises for this evolution, but its traces have gone lost in the general restructuring process.

The Regional Museum Directorate of Puglia—The Regional Directorate (former Pole) for Museums of Puglia, a peripheral body of the Ministry of Culture, acts on the regional territory with the objective of giving value to and allowing the fruition of state museums, monuments, and archaeological sites. Its mission is to favor the ongoing dialogue between state and local institutions and between different public and private ones, promote the establishment of the regional museum system, and assure a high-quality integrated cultural offer through the definition of common objectives and the promotion of integrated fruition paths. At the moment of writing, the pole includes 15 museums (mainly archaeologic and civic), archaeological sites, and castles, among which the UNESCO site of Castel del Monte) [130].

The Museum Networks—In April 2022, the process for the constitution of three museum networks came to an end, giving life to the “AltApulia” (formed by museums of the Provinces of Foggia and BAT), the “Salento” (museums of the Provinces of Brindisi, Lecce, and Taranto), and the “Terra di Bari” (museums of the Province of Bari) networks. The process, based on a participatory basis promoted by the Regional Administration in October 2019 and proceeding despite the pandemic outbreak, engaged the museums’ directors together with municipalities, associations, and institutions from the third sector [131]. Their main purpose is a rethinking of the role of museums within their local communities and the definition of regional-scale projects through experience exchange.

Along with these three territorial networks, a thematic network is also to be mentioned, dedicated to the “Man of Altamura”, a “Homo Neanderthalensis” skeleton rediscovered in 1993, representing one of the most extraordinary paleontologic finds in Italy, dating back between 128,000 and 187,000 years ago [132].

Communication and digital contents—No study in the literature has yet assessed the status of digitization in the region to the knowledge of the author; studies portraying the status of the online presence of museums in the case-study region are actually missing. Only one research work by Raimo [133] can be found in the literature up to now, aimed at examining the level of digitalization in a limited sample of three Apulian museums, concentrated in the region’s capital (Bari), through a mixed methodological approach. The
study concludes that the adoption of digital technologies in the three case studies is mainly linked to the increase in visit flows and has been accelerated by the COVID-19 pandemic. This knowledge gap was the main motivation for the present study.

4. Materials and Methods

4.1. The Survey on Museums: Aims and Design Issues

At the time of writing, specific studies focusing on the Apulian museum field are not available, either describing individual experiences, virtuous examples, or extended reviews at the regional scale. Widening the gaze, many studies on national, European, and worldwide institutions are based on direct interviews with museums’ directors. In other cases, they concentrate directly on overviews of applications, then center on the final product, like in the literature described above, or on the presentation of individual case studies or projects by their respective authors.

Since the aim of this study was to build a portrait of the case-study region’s museums by, on the one hand, understanding their consistence, characters, and problems and, on the other hand, measuring their advancement or distance from a wider potential landscape through concrete solutions and approaches adopted, a survey based on questionnaires to be handed out to museums’ managers or directors appeared to be the most complete and appropriate investigation method. Indeed, the global reports available [1–5] analyze the museums’ response to the challenges posed only by the COVID-19 pandemic without correlating it to the museums’ personal “story” and their ongoing evolution and without delving into motivations and context conditions, as an unavoidable consequence of the cross-sectional character of the analyses and their strongly aggregated quantitative data. Studies sounding out the structural problems of museums in a specific geographic and administrative context are missing in the international literature as well as in the national reports. Then, a dedicated questionnaire was specifically designed by the author, identifying the two main thematic areas of online communication and digitization (as marked by different technological skill levels) and pursuing the managers’ awareness both towards future challenges and towards existing resources and their ability to make the most of them (points b. to e. in the following sub-section). Considering the managers’ general difficulties in attending to many different institutional tasks in staff shortage conditions and the amount of time required on both sides to plan, possibly reschedule, and perform one-to-one direct interviews, the questionnaire option allowed interviewees to proceed more easily in the compilation at their convenience, also collecting the necessary data among the staff. A recurring principle in the survey is the effort to acquire data comparing current and pre-pandemic situations.

The method did not include the direct observation of museums’ websites and social network pages, as it would not have allowed deducing problems and exigencies; instead, the use of a questionnaire was preferred, to be submitted directly to museum managers or directors, in order to collect both quantitative and qualitative data through the use of open questions.

4.2. The Sample

As mentioned before, the case-study region is markedly characterized by the presence of archaeological museums and sites of interest, which represent the prevailing type in the entirety of institutions. Along with those, also museums falling into different reference categories have been considered, containing anyway also archaeological collections, e.g., civic or ethno-anthropological museums (“primary category”) with an archaeological section (“secondary category”).

The geographic distribution of the sample museums across the region’s provinces substantially reproduces the actual geographic distribution of the total consistence. As explained by studies on the South Italian context, it is part of a general museum heritage
that is extremely diffused—or dispersed—on the territory, with the majority of institutions located in municipalities, even in very small ones, rather than concentrated in the main cities. The sample is, then, marked through a small-to-medium dimension: medium in the case of province seats and small in all other cases.

On the whole, 32 museums responded to the participation call; the sample definition was complicated by the difficulty in finding updated telephone, URL, and email contacts on the Internet; not a few museums among the ones listed in the sources preliminarily consulted turned out to be temporarily or permanently closed.

Data sources used for the definition of the sample consist of relatively dated works, in particular a printed guide dating back to 2006 [134], a 2013 study on regional museums and collections [128], the constantly updated website of the Regional Directorate for Museums (for state museums), the “Cartapulia” database (an interactive platform based on a geo-referenced mapping of sites of cultural interest, elaborated by the Puglia Regional Administration [129]), and the search on the Internet (keywords: “museum” + “archaeologic” + “puglia”).

4.3. The Questionnaire

Museums from the selected sample were handed out a questionnaire; the chosen modality was the sending through email of questionnaires in fillable module pdf format, fast and easy-to-use for almost anyone, together with a brief description of the research purpose as the reason for the invitation, together with direct telephone calls to solicit participation and offer support for compiling or further information.

The questionnaire was structured into five sections, one for museum identification data and four thematic sections, with close-ended questions (both single and multiple choice) and grids where necessary (both multiple choice and checkbox grids). For a better knowledge of museums’ peculiarities and their orientation, open questions have also been used, in particular, to explore the motivations of choices made by managers and their perceptions and expectations. Whenever relevant, the questions referred to both the lockdown period (or the one immediately before) and the current situation for useful comparisons. The main topics of each section are as follows:

1. Museum’s data;
   • identifying data (denomination);
   • legal state (public/private property, public/private management);
   • public bodies in charge of preservation, fruition, and promotion;
   • contact person for the questionnaire.

2. Online communication
   • Existence of a specific communication strategy and target;
   • communication channels (website and social media): channels presently active for the museum, perceived efficacy, problems encountered, year of activation, reason for possible dropout;
   • dedicated staff and related policy;
   • regularity of website and SN accounts monitoring/updating, at present and during the lockdown;
   • type of information shared on communication media before the lockdown and at present;
   • visit flows before the lockdown and after reopening;
   • visit flows in the three years preceding the lockdown;
   • communication means preferred by the public to communicate with museums;
   • current priorities in museum management.

3. Digital content and digitization issues
   • Starting year of collections’ digitization process;
   • current percentage of digitized objects on the total of owned objects and of objects stored in deposits on the total of digitized objects;
• percentage of digital objects realized specifically for the lockdown;
• problems encountered;
• other digital contents and products elaborated by the museum and their perceived usefulness in remote or on-site mode;
• interest in digital products shown by audiences during the lockdown and after reopening;
• dedicated staff and related policy.

4. Museum networking
• Connections/collaborations established with other museums from the local or national territory, purposes (thematic or managerial);
• perceived usefulness of museum networking, in general and with specific reference to the lockdown period.

5. Prospects
• Previsions on future use of the different communication channels (increase, reduction, dropout) and motivations;
• previsions on future feeding of the different content or sections of communication channels (enriching, reducing) and motivations;
• most concerning challenges for the museum’s future competitiveness;
• key factors requiring specific attention and practical solutions to address such challenges at best.

5. Results

In the present section, the survey results will be presented according to the main topics identified in the questionnaires.

5.1. On-Line Communication

The first point assessed through the questionnaire is the strategic vision of museum communication across the sample; only 20 out of the 32 museums in the sample (62.5%) turned out to have defined and formalized a specific communication strategy (Figure 1).

![Presence of a formalized communication strategy for the museum](image)

**Figure 1.** Presence of communication strategies in the sample museums.

The sample museums were then asked to indicate the privileged interlocutors or targets of their communication strategy, whether formalized or not; each museum had the possibility to indicate from one to all four proposed targets. More combinations, then, were indicated, showing anyway a trend to orientate towards the widest possible audiences (“whole community”, “user groups”, etc.), leaving habitual visitors at the bottom of responses, below tourists (Figure 2).
As for the main online communication channels currently active in the sample museums, less than 60% proved to have their own websites, whereas the presence of institutions across social networks (SNs) appears definitely larger (96.88%) (Table 1).

Table 1. Online presence of the sample museums.

<table>
<thead>
<tr>
<th>Communication Mode</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Museum websites (active)</td>
<td>59.38%</td>
<td>40.63%</td>
</tr>
<tr>
<td>Active accounts in SNs</td>
<td>96.88%</td>
<td>3.13%</td>
</tr>
</tbody>
</table>

In particular, more than 70% of the selected institutions have active accounts on more than one SN (Figure 3).

Figure 3. Museums’ presence in SNs.

Facebook and Instagram are the most used channels; anyway, among those museums that have opened an account in an SN, they leave it unused (Table 2).
Table 2. Use percentage of main social networks’ accounts.

<table>
<thead>
<tr>
<th>SN</th>
<th>Active</th>
<th>Dormant</th>
<th>Absent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facebook</td>
<td>96.88%</td>
<td>0.00%</td>
<td>3.13%</td>
</tr>
<tr>
<td>Instagram</td>
<td>68.75%</td>
<td>3.13%</td>
<td>28.13%</td>
</tr>
<tr>
<td>YouTube</td>
<td>15.63%</td>
<td>9.38%</td>
<td>75.00%</td>
</tr>
<tr>
<td>Twitter</td>
<td>9.38%</td>
<td>9.38%</td>
<td>56.25%</td>
</tr>
<tr>
<td>Other</td>
<td>15.63%</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
</tbody>
</table>

Out of the whole studied sample, only 1 museum (3.13%) does not have either a website of its own or any account on social channels. Overall, most online communication channels (websites and social accounts) were activated long before the COVID-19 outbreak (Table 3).

Table 3. Activation period of online communication channels.

<table>
<thead>
<tr>
<th>Activation Period</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before the pandemic outbreak</td>
<td>78.13%</td>
</tr>
<tr>
<td>During/after the lockdown</td>
<td>18.75%</td>
</tr>
<tr>
<td>N/A = no answer</td>
<td>3.13%</td>
</tr>
</tbody>
</table>

Among those museums that activated their online communication channels before the COVID-19 outbreak, a small number added new channels due to the pandemic. Facebook and Instagram prove themselves to be the most effective ones in terms of public response, according to the perception of museum managers who activated at least one account on SNs (31 out of 32 museums) (Figure 4).

![SN's perceived efficacy](image)

Figure 4. SNs’ efficacy perceived by museums in terms of the public’s response.

On the public side, among the communication means used by users to contact museums, SNs are prevailing, but the use of more traditional means such as e-mail and telephone calls remains not negligible (31%) (Figure 5).
Among the problems encountered in the activation and management of communication channels, the financial resource requirement (53.13% of the sample) and the lack of adequate skills among the staff (46.88%) were mostly mentioned, along with the need for clear procedural indications (23.34%). 23.34% declared not to have had problems, while 6.25% had to face problems in all three areas. With specific reference to websites, 4 museums out of 32 (12.50%) stopped using them for technical or economic problems (e.g., hosting costs). The museums’ policy related to the staff’s commitment to keeping social media accounts running was also assessed (Figure 6).

Furthermore, with reference to staff shortage problems, 31.25% indicated the acquisition of new dedicated staff for this activity as a preferred option, 50% would choose training the existing internal staff, and the remaining 18.75% considered collaboration with external consultants/collaborators as optimal.

In order to deduce indications of the impacts or effects of the pandemic on museums’ practices, the participants were asked to indicate the regularity of their monitoring and updating activities about websites and SNs’ accounts, both currently and during the lockdown periods (Figures 7 and 8).
Unexpectedly, in both cases, the recurrence appears generally low compared to current values; this point will be better analyzed in the Discussion section.

In order to collect as many elements as possible about the present scenario of museums, other comparisons were made. First of all, the questionnaire tried to catch the differences in the contents published online, both on websites and in SN accounts, between the present time and during the lockdown (Figures 9 and 10).
Museums were also asked to express their current prior objectives; responses show higher values for quantitative issues related to the increase in visit flows and exhibition capacity and for qualitative issues related to the relationship with users (differentiation of cultural offers and interactivity). Lower values were observed for ICTs and digital contents (Figure 11).
5.2. Digital Content and Digitization Issues

Moving to digital contents, 62.50% of the sample declared to be engaged in objects’ digitization activities. Out of this sub-set, the majority (65%) started activities well before the COVID-19 pandemic, while only 15% started collections’ digitization in concurrence with the spread of the pandemic, and another 20% only very recently (Figure 12).

Figure 11. Museums’ current priorities.

Figure 12. Starting period of digitization activities (percentages on sample sub-set).

Figure 13 represents the advancement of collections’ digitization across the responding museums (81.25% of the whole sample); the remaining 18.75% of the selected institutions did not answer this specific question.
Figure 13. Advancement of collections’ digitization in responding museums (percentages on sample sub-set).

Of the subset of museums that responded positively (>0%) about commitment to collections’ digitizing (20 museums, accounting for 62.50% of the sample), 75% line up on very low values; only 5% have brought the digitization beyond the half of owned objects (Figure 14).

![Digitization activity during the lockdown](image)

**Figure 14.** Digitization activity during the lockdown (percentages on sample sub-set).

Out of the same subset, slightly more than 30% have included unexposed objects among the ones digitized and published online. When asked to indicate the main obstacle or barrier to completing collections’ digitization, the participant mainly hinted at budget constraints and excessive requirements in terms of time and organization efforts (Figure 15).

![Main barriers to full collections’ digitization](image)

**Figure 15.** Perceived barriers to collections’ digitization.

As for personnel resources committed to digitizing operations, 71.88% of the sample declared not to have a staff specifically dedicated to this activity, while only 12.50% can rely on internal dedicated staff and 16% turn to external collaborators (Figure 16).
Museums’ directors and managers were then asked about their perceived usefulness of several types of digital content (for on-site use, remote use, or both uses), returning variegated responses (Table 4).

Participants were then asked to indicate the interest expressed by users towards specific digital products or tools, comparing the lockdown period with the present time (Table 5).

![Figure 16. Dedicated staff for digitization activities.](image)

Table 4. Contents’ usefulness perceived by museum managers.

<table>
<thead>
<tr>
<th>Use</th>
<th>App</th>
<th>Dig. Catalogues</th>
<th>3D Models</th>
<th>Virtual Tours</th>
<th>Online Lessons</th>
<th>Didactic Labs</th>
<th>Podcast</th>
<th>Video</th>
<th>Audio</th>
</tr>
</thead>
<tbody>
<tr>
<td>On-site</td>
<td>3.13%</td>
<td>0.00%</td>
<td>15.63%</td>
<td>3.13%</td>
<td>0.00%</td>
<td>84.38%</td>
<td>6.25%</td>
<td>12.50%</td>
<td>15.63%</td>
</tr>
<tr>
<td>Remote</td>
<td>6.25%</td>
<td>53.13%</td>
<td>25.00%</td>
<td>71.88%</td>
<td>78.13%</td>
<td>3.13%</td>
<td>43.75%</td>
<td>3.13%</td>
<td>3.13%</td>
</tr>
<tr>
<td>Both</td>
<td>81.25%</td>
<td>43.75%</td>
<td>50.00%</td>
<td>18.75%</td>
<td>15.63%</td>
<td>9.38%</td>
<td>34.38%</td>
<td>78.13%</td>
<td>71.88%</td>
</tr>
<tr>
<td>N/A</td>
<td>9.38%</td>
<td>3.13%</td>
<td>9.38%</td>
<td>6.25%</td>
<td>6.25%</td>
<td>3.13%</td>
<td>15.63%</td>
<td>6.25%</td>
<td>9.38%</td>
</tr>
</tbody>
</table>

Table 5. Public’s interest in digital contents.

<table>
<thead>
<tr>
<th>Products/Tools</th>
<th>Period</th>
<th>Children</th>
<th>Young People</th>
<th>Adults</th>
<th>Elderly</th>
<th>Scholars</th>
<th>Schools</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apps</td>
<td>LD</td>
<td>6.25%</td>
<td>9.38%</td>
<td>12.50%</td>
<td>3.13%</td>
<td>3.13%</td>
<td>12.50%</td>
<td>62.50%</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>6.25%</td>
<td>18.75%</td>
<td>15.63%</td>
<td>3.13%</td>
<td>3.13%</td>
<td>6.25%</td>
<td>59.38%</td>
</tr>
<tr>
<td>Digital</td>
<td>LD</td>
<td>3.13%</td>
<td>9.38%</td>
<td>15.63%</td>
<td>6.25%</td>
<td>15.63%</td>
<td>15.63%</td>
<td>53.13%</td>
</tr>
<tr>
<td>catalogues</td>
<td>PT</td>
<td>3.13%</td>
<td>9.38%</td>
<td>12.50%</td>
<td>6.25%</td>
<td>12.50%</td>
<td>9.38%</td>
<td>56.25%</td>
</tr>
<tr>
<td>3D models</td>
<td>LD</td>
<td>9.38%</td>
<td>18.75%</td>
<td>18.75%</td>
<td>9.38%</td>
<td>12.50%</td>
<td>12.50%</td>
<td>59.38%</td>
</tr>
<tr>
<td>Virtual tours</td>
<td>LD</td>
<td>15.63%</td>
<td>28.13%</td>
<td>37.50%</td>
<td>6.25%</td>
<td>15.63%</td>
<td>28.13%</td>
<td>46.88%</td>
</tr>
<tr>
<td>Online lessons</td>
<td>PT</td>
<td>6.25%</td>
<td>12.50%</td>
<td>12.50%</td>
<td>6.25%</td>
<td>6.25%</td>
<td>18.75%</td>
<td>50.00%</td>
</tr>
<tr>
<td>Didactic labs</td>
<td>LD</td>
<td>18.75%</td>
<td>25.00%</td>
<td>9.38%</td>
<td>3.13%</td>
<td>3.13%</td>
<td>25.00%</td>
<td>56.25%</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>6.25%</td>
<td>56.25%</td>
<td>15.63%</td>
<td>0.00%</td>
<td>9.38%</td>
<td>59.38%</td>
<td>9.38%</td>
</tr>
<tr>
<td>Podcast</td>
<td>LD</td>
<td>6.25%</td>
<td>9.38%</td>
<td>12.50%</td>
<td>9.38%</td>
<td>9.38%</td>
<td>9.38%</td>
<td>65.63%</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>6.25%</td>
<td>6.25%</td>
<td>3.13%</td>
<td>0.00%</td>
<td>3.13%</td>
<td>9.38%</td>
<td>62.50%</td>
</tr>
<tr>
<td>Video</td>
<td>LD</td>
<td>25.00%</td>
<td>37.50%</td>
<td>50.00%</td>
<td>18.75%</td>
<td>25.00%</td>
<td>37.50%</td>
<td>34.38%</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>34.38%</td>
<td>43.75%</td>
<td>43.75%</td>
<td>28.13%</td>
<td>28.13%</td>
<td>37.50%</td>
<td>25.00%</td>
</tr>
<tr>
<td>Audio</td>
<td>LD</td>
<td>12.50%</td>
<td>21.88%</td>
<td>28.13%</td>
<td>18.75%</td>
<td>18.75%</td>
<td>18.75%</td>
<td>50.00%</td>
</tr>
<tr>
<td></td>
<td>PT</td>
<td>9.38%</td>
<td>12.50%</td>
<td>9.38%</td>
<td>15.63%</td>
<td>9.38%</td>
<td>18.75%</td>
<td>46.88%</td>
</tr>
</tbody>
</table>
Responses report a marked decrease in interest towards virtual tours, online lessons, podcasts, and audio materials, more or less homogeneously across the different user groups, and an increased interest towards apps (young people and adults), 3D models (children, adults, schools), didactic labs (almost all groups), and videos (children, young people, elderly, and scholars). The increase is generally limited, while the percentage of institutions reporting no sensible interest in any of the contents mentioned is very high.

5.3. Museum Networking

The sample museums were consulted about recent collaborations with other institutions in the sector (Figure 17).

![Museum networking chart]

**Figure 17.** Recent institutional collaborations.

Overall, collaborations had a thematic nature (e.g., joint cultural initiatives) in 71.43% of cases and a managerial nature (e.g., common problem solving, resource optimization) in the remaining cases. Figures 18 and 19 show the perceived usefulness of institutional cooperation in the local/regional museum sector in general and with specific reference to the lockdown period.

![General perceived usefulness of museum networking chart]

**Figure 18.** Perceived usefulness of museum networking (general).
Perceived usefulness of museum networking in the pandemic period

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very useful if continuous</td>
<td>21.88%</td>
</tr>
<tr>
<td>Very useful for thematic purposes</td>
<td>6.25%</td>
</tr>
<tr>
<td>Very useful for managerial purposes</td>
<td>3.13%</td>
</tr>
<tr>
<td>Useful in general</td>
<td>43.75%</td>
</tr>
<tr>
<td>Not so useful</td>
<td>6.25%</td>
</tr>
<tr>
<td>Little useful</td>
<td>3.13%</td>
</tr>
<tr>
<td>&quot;I don’t know&quot;</td>
<td>15.63%</td>
</tr>
</tbody>
</table>

Figure 19. Perceived usefulness of museum networking (COVID-19 pandemic period).

5.4. Prospects

Through the last section of the questionnaire, participants were asked about their prospective visions or intentions in relation to their use of the different communication channels (increase, decrease, suspension) and the respective motivation for them; the same goes for the contents or specific sections of channels (widening, reduction). About the first point, Figure 20 shows prospects in continuity with current and previous orientation, with websites, Facebook, and Instagram on the frontline, followed by YouTube and other SNs.

Figure 20. Prospects for future use of communication channels.

Figure 21 presents higher values for news and events and for more “static” content, and lower values for more interactive products (virtual tours, games). In both cases, not many interviewees gave a motivation for their decisions, and the few that did were too variegated to try a categorization or form a percentage hierarchy.
The last questions of the survey were related to museums’ main concerns for the forthcoming years. Managers were asked to identify the most demanding and serious challenges threatening their institution’s future competitiveness and the key factors to best meet those challenges, choosing from the listed items (more options were possible). As Figure 22 shows, the participant museum managers currently put visit flows and onsite visits at the top of their list of major concerns. Once again, lack of financial resources and specialized skills are mentioned as critical factors that can hinder or facilitate problem solutions (Figure 23).
6. Discussion

In line with the studies by [17,105,135], also in Puglia, a strategic vision of digital communication has not been developed yet in the analyzed context. Although 62.50% of consulted museums have declared to have defined and formalized their own communication strategies, the descriptions of those strategies are rather heterogeneous, demonstrating ambiguities in the interpretation of the term. Actually, while the importance of maintaining an institutional website appears undervalued (less than 60% of the sample has an active website), the presence of Apulian museums in SNs is instead widely diffused: around 97% have an active account on at least one channel and 72% on more than one (mainly Facebook and Instagram, perceived as the most effective ones). It is interesting to note that, although the majority of users prefer contacting museums through social channels, the respective percentage is not as high, as a sensible part of them (31.25%) still put more traditional means (email, telephone) first. It must be added that almost 22% of museums’ directors or managers have not been able to answer this question, which seems to suggest some lack of monitoring of the relationship with users. As for the regularity of online communication, which means monitoring and updating, websites cannot rely on regular activities as they are mainly updated upon needs or time availability, whereas SNs can count on higher rates of daily or weekly regularity. Overall, awareness of the importance of online presence and communication monitoring appears to have increased to some extent in comparison with the pandemic emergence period. Nevertheless, the results about the kind of content conveyed through online channels actually show a prevailing orientation towards unidirectional communication, little interaction, mainly aimed at the transmission of information on access, news, and events, and “top-down” thematic knowledge (insights on collections or photo galleries), rather than bidirectional and interactive (Q&As, games, quizzes, virtual tours). Interactivity levels appear to have increased slightly after the lockdown experience. The status of collections’ digitization activities is very low, mostly below 20% of owned objects. These data, together with data on the starting period of digitization (in many cases dating back to several years before the pandemic) and the low percentage of digitization specifically occurring during the lockdown year, seem to suggest a sluggish activity, probably due to an underestimation of the importance of digitization, which was not sensibly intensified even during the lockdown. A lack of awareness, anyway, could be only an additional cause, as 72% of the sample mentioned the lack of dedicated staff and budget, time, and skills limitations in fulfilling digitization tasks through internal staff, attending at the same time to other ordinary duties.
for online communication management, around 69% of institutions can rely on staff specifically dedicated to the running of the various channels, mainly among internal personnel and, to a lesser extent, among external collaborators.

Overall, the production of digital content is seemingly not specifically linked to lockdown-related exigencies, as it has been started mostly several years before. The twofold usefulness of digital content for real visits and for remote fruition is not fully perceived, but rather, it is limited to apps, 3D models, and audio/video material, while, for example, didactic laboratories keep on being perceived mainly as onsite experiences, then in their physical dimension. The high percentage of museums reporting not having observed particular interest for any digital product or tool among the different user groups during or after the lockdown arouses some attention, suggesting the opportunity to assess both products’ quality issues and feedback modalities as well as the user engagement level of the design process adopted in the future steps of the research.

Institutional networking is generally perceived as “useful” or “very useful”, but museums seem not to have made the most of it in the occurrence of the pandemic crisis, probably because it represents a resource mainly aimed at the organization of joint thematic on-site initiatives (visit itineraries, exhibits), indicating an unfulfilled systematization of museums across the region.

The sample museums’ future prospects include mainly the increase (or activation) of websites (currently not very high) and of consolidated SNs, confirming also for the forthcoming years the prevailing trend towards the one-way transmission of ready-made content with low interactivity levels. Concerning these points, only a few museums have expressed their motivations, which are disparate and fragmentary. All those facts suggest a lack of awareness of communication channels’ potential and the absence of reflections on the possibilities that they can form the basis for a dialogue and for the listening of the public and their expectations.

The institutions’ main concerns for their future competitiveness, then for their very existence, have been identified mainly with reference to the physical visit (increase in visit flows, higher on-site interactivity) and the strengthening and livening up of their relations with the public (which connects to the general intention to increase the use of SNs). Nevertheless, it is somehow odd, in light of previous responses, to observe how the increase in the use of ICTs and in contents’ digitization (actually, the starting point for any strategy) is not perceived as a basic and crucial factor for this purpose. This hints at a vision of digitization as something that “must be done”, a fulfillment or duty requiring time and resources, the use and potential of which are not really perceived. The gain and expression of their own uniqueness across the territory and of a greater remote interaction are not connected, in museums’ perceptions, to their future “life expectancy”. All this returns the picture of a sector that is still to be sensitized towards the importance of digital communication and to the unperceived need to integrate it into their practice, but also towards their own importance of perception and their own identity and how to best propose it to audiences. The COVID-19 emergency seems not to have left the sample museums with a greater awareness of the need to make the most of the possibilities offered by ICTs (and, right before this, of the new and wider social role they are called upon to play).

For the specific type of institutions investigated (archaeological museums), the possibility to share collections remotely is, instead, particularly important, considering that, as stressed by Budge and Burness [136], especially in this sector user attention is driven by objects and that, as highlighted by Draskalaki et al. [137], in archaeological museums there is in general a limited interaction between collections and visitors (probably also due to a psychological feeling of awe in front of objects representing an ancestral past, along with the material sensitiveness and fragility of relics). The possibility of remote fruition, then, would greatly extend exhibits’ potential, matching the needs and likes of a public that is increasingly in search of interactivity.

The topic of the remote relationship between museums and audiences deserves, at this point, some consideration. As Monti [125] explains, the pre-existing gap between
small and large museums across the country has become, over time and especially due to the pandemic outbreak, even wider, and it has not really to do with the visitors’ number or the service range but rather with the museums’ vision of themselves. Based on this statement, there is then a case for making this gap an opportunity to let diversity emerge and give value to unique features. For a small local museum, innovation can be measured in other ways than flow numbers, such as by knowing personally habitual visitors and establishing daily relationships with them or with local businesses and institutions, or by focusing on a specific international slot of potential visitors. ISTAT statistic reports [106,108] highlight the huge presence across the whole country of small museums, and Monti [125] underlines how they are strongly rooted in the territory, differently from main attractors that, gathering objects from the most disparate locations, sometimes end up de-contextualizing them and becoming neutral containers themselves. Such features of minor museums should be considered potential, able to offset the limitations derived from their dimension (e.g., staff shortages, lack of skills, budget constraints). A small local museum can be the engine for the development of the territory not simply through the leverage of large tourism flows, such as, for example, the Uffizi or other excellences, but rather through the recovery of the community’s identity as well as the territory’s identity and its values on the part of the community. The lesson of the Rijksmuseum as a new “neighborhood museum” is lending an ear to people’s stories. De Jong [138] is a great one and has nothing to do with financial resources or technological equipment. Rather, it is about small museums using online social channels to not only inform people about events and call people back to facilities but simply to let collections and the whole museum (people, activities, inspirations) enter—permanently—the persons’ daily lives. It is simply intuitive that “local” museums should focus on “local” audiences, but it is also a concept that the whole of ICTs itself leads us to, through sage reasoning on their most appropriate use. In this way, small local museums would succeed, even more than main attractors, in fulfilling both the economic function and the more important social and cultural one, getting into the communities’ daily existence as virtual “places” to meet, dissolving isolation and loneliness feelings in hard times, and raising their own popularity, especially among young generations, at the same levels as cinemas and theaters. Leaving aside followers’ and sharings’ analytics, the attention of local museums can focus on how to improve communication of their image and activities through a more planned and mindful use of SNs and websites. And this is even more important in a sector where each institution, particularly the small ones not included among those “codified” as such, is unique in itself, with its own concepts and organizational models (e.g., “family museums”). Although the survey question about the type of online communication strategy’s target allowed multiple answers among the ones available (“whole local community”, “specific user groups”, “tourists”, and “habitual visitors”)—then “whole local community” was not exclusive and many combinations were possible—the “tourists” option obtained a higher percentage than “habitual visitors”. This clearly hints at a perception of the museum as a tourist destination—at least more than a habitual reference point—and, actually, at the lack of attention to the dialogue with actual audiences and the limited efforts currently made to maintain an ongoing relationship with users in favor of the pursuit of an undefined increase in flows.

Undoubtedly, structural conditions exist that can make innovation difficult, in some respects, in the whole national museum sector. On the one hand, it must be considered that those contexts with a marked cultural identity and a rich and important heritage are the ones that most strongly resist technological innovation trends, the democratization of cultural offerings, and the establishment of an open dialogue with audiences. This is due to a particular “inertia” rooted in the century-long role as the “cradle of culture” and in the consequent conservative and almost jealous approach towards heritage [139]. The long-lasting delay in the national museum sector is, then, structural to some extent. Similarly, there are other problems that only more advanced and open national legislation
could solve, creating the conditions for real innovation of small museums. “Communication”, as an example, is not expressly mentioned in Art.1 of the Reform Decree [140], which would have favored an alignment to the ICOM definition of museums, while the Guidelines [141] have added “territorial relationships” to the more traditional functions of “preservation and management of collection” and “services and relation with the public”, as a declaration of intent still awaiting concrete implementation. In the latter case, things will depend on the right interpretation, but in the former, there is still a long way to go.

Questionnaire responses have also highlighted, through a low but non-negligible “no answer” percentage, a partial inability to deliver data, possibly due to the non-coincidence between the decisional and operational actors of communication strategies. Although competence fragmentation is traditionally made heavy by the national legislation (the data from the questionnaires’ anagraphic section brought to light also a substantial fragmentation among owners, bodies in charge of preservation, bodies responsible for promotion and fruition, etc.), and awaiting that regulations put in force more rational governance models, each facility can surely do its part to improve internal communication. Actually, online communication is often left to associations, volunteers, and agencies, who attend to channels’ running and result monitoring.

Furthermore, the lack of specific skills that emerged in the survey has an important role to play in the problem. At the national level, both the “National Museum System” (SMN) and the “National Plan for Digitization” (PND) set up by the Ministry for Culture can rely on wide and organic training programs, but this is not enough. If membership to the SMN, though voluntary, cannot prescind compliance with criteria and standards, it becomes obvious that many “atypical” museums will remain excluded from it, particularly those that cannot afford the adaptation to requirements. How can the system assure that training programs and financing will also benefit those small museums “deserving” such support for the originality of their offer or of the proposed model, or for their strong and unique relationship to their territory, if they remain excluded by official listings for dimensional or organizational reasons, and resources are destined for the improvement of those already accredited? Moreover, consequently, how can they ever become part of the system if they cannot be admitted against the established criteria?

Undeniably, the top-down call to “work in system” is clear and recurring, but small museums express the need for coordination and planning for the activation of networks, which does not leave them alone with this task. The regional administration could appropriately play this supervision role, allowing for the declination of national objectives and a unified ICT language according to local peculiarities and potentials.

The structural difficulties that, beyond the responsibilities and possibilities of individual museum managers, hinder the sector’s innovation are, then, manifold; however, there is also space and premises for positive advancements. What really appears strategic, for instance, is the possibility to take full advantage of Art.150 of the reform Decree, allowing the local management of state assets, which, if extensively interpreted, can make way for the definition of cultural offers based on connections among objects unhampered by geography or physical localization. On one hand, this can lead to fully exploiting the technological implications of exhibits’ virtuality, and on the other hand, it highlights the need to abandon digital communication management practices at the scale of individual institutions in favor of a networked digital strategy based on a unified language that facilitates dialogues across distributed resources while respecting individual peculiarities. This would avoid the fact that, in contexts similar to the one described, museum communication mainly results in a number of monologues by small, isolated entities. A sphere that could benefit from the association and integrated management practices is, indeed, the field of competence for digital museum communication. Even if within each individual institution the conditions to acquire dedicated specialized skills may be absent, it could be economically feasible for a museum network to gain them on a reliable basis, better still if recruited in cooperation with the research domain, relying also on a scientific basis to assure a wider strategy rather than a simple execution. This would allow, at the
same time, to reduce costs through economies of scale from the perspective of institutional collaboration. More in detail, while the mere digitization of finds can be easily performed as a simple incremental elaboration of images and 3D models, the digital connections among objects can be conceived in such a way as to support both internal and external communication of museums as well as among different museums and with the other cultural references on the territory (signs, evidence, urban and rural places) and in the social fabric (education institutions in the first place).

At the operational level, digital museum communication, although it can rely on a wide range of sound technologies, is an equally complex theme; but it is possible to make some distinctions about the degrees of such complexity. Certainly, virtualization is an important component of the online presence of museums; although the related technologies are numerous, they can match different uses and purposes substantially through growing levels of sophistication. On the contrary, social networks are rapidly evolving and constantly increasing, with variegated differences across the various platforms and mainly being used with limited awareness, as some studies and the questionnaire results show. The literature indicates in the “trial and error” model [29,78–80] a “good practice” for successful SN social strategies, and the future prospects of increased use in the sample analyzed represent, in this sense, a positive premise. Within certain limits, it is surely easier for museum managers to define and communicate the desired level of elaboration and technical refinement for a virtual museum, a virtual tour, or a virtual reconstruction to the staff in charge of execution, according to its intended use. On the contrary, it is much more difficult to supply indications on how to design and structure their presence on SNs when relying on specialized external operators, since other considerations come into play that are less technical and more linked to the knowledge of strategic communication principles and the cultural value of the museum itself. The role of external collaborators, here, is more about helping managers express and formalize their own needs for the development of the institution and the strategy according to the specific mission to support, presenting the potentialities and implications of each platform and the obtainable results. Often, developers themselves are unable to give a complete picture of possibilities, as this also implies knowledge of the museum context and audience. On the other hand, many museums from the consulted sample have the possibility and the practice of delegating internal staff to social channels’ operations (more than digitization activities). In such a case, it is probable that more definite collaboration and internal communication between decision-makers and operators can be the key to significant and low-cost improvements and the realization of unique digital identities. Several studies indicate the need and opportunity to define personalized communication strategies according to the specific museum vision, relying on common technologies and well-tested platforms, and differentiating and planning their use in a conscious and finalized way.

Additionally, the subsector of the so-called “diffused museums”—included in a small ratio in the sample in order to account for their recent but growing presence in the scene—can represent an interesting technological challenge because of their peculiarity as institutions not focused on the conserved objects but rather on the connections among the evidence on the territory. In particular, the modalities for the definition of digitization solutions for those connections can form a specific and stimulating field of investigation for future research.

The ultimate lesson that the pandemic emergency has left to museums, compared to the physiological and more gradual evolution of the last decades, consists in the opportunity to catch an essential difference between two “ages” of digital communication. In the first one, from the 1990s up to the start of the pandemic, ICTs have been gradually revealing their ability to support and concretize the “dialogue” between museums and audiences, while in the second one—due to isolation—the COVID-19 pandemic has allowed, or forced, ICTs to enable both to “enter” the daily lives of one another, getting them to mutually know each other from the inside. And this has allowed, differently from be-
fore, to demolish the barriers between the two spheres. This result—probably also unexpected for ICTs—is the real potential that should not go wasted. If museums are able to get into the “every-day” of their interlocutors and vice versa, the ultimate function of cultural heritage can be finally fulfilled, maybe for the first time independently from the economic purposes of the tourism and commercial spheres, whose methodological principles too often dominate culture management. On the other hand, if the transformation of the Ministry itself, from “Ministry for Cultural Heritage and Activities and for Tourism” (MiBACT) into “Ministry for Culture” (MiC) seemingly suggests such an evolution, ICTs can concretely contribute to its realization. Although our country and the whole of Europe find in cultural tourism an invaluable economic resource, to the promotion of which ICTs will anyway continue to give support, if local museums succeed in understanding this, the pandemic and the other emergencies that may come will sensibly contribute to a positive evolution instead of being considered only as periods to overcome, to come back to the “as-before”.

7. Conclusions

The COVID-19 pandemic has overlapped and intertwined with the general and complex evolution of museum institutions and their social role across the world. In any context, the event has represented a real blow to practices, ingraining a sharp acceleration of collection digitization processes and an amplification of the online presence of institutions, imposing emergency approaches that, when supported through aware strategies, have ended up producing, indeed, effects destined to modify future practices permanently, revealing in all respects an undeniable evolutionary value. Over the last three years, many reports have given concise quantitative indications on the character of the restart of the museum sectors at the global, regional, and national scales, based anyway on highly aggregated and, in some cases, partial data, while studies at the subnational and local scales are missing. The present study tried to fill this gap by surveying a sample of archaeological museums in the Apulian region (Puglia), a sector that is a strong identity marker for the context studied. The analysis was performed through a questionnaire-based survey. Based on the results obtained, the pandemic has not seemingly modified the practices, intensity, and pace of online museum communication affected by a lasting structural delay with respect to the national average performance nor induced awareness-raising processes about the need for definite digital strategies and the potentialities of the available technological means. In this respect, it can be assumed that, whilst the attitude of the sample museums in their perception of the pandemic event has had an emergency nature in its desire to come back to, and reproduce, the physical dimension of the cultural experience and of the relation with audiences, their approach adopted in reacting to it has somehow been “evolutionary” only in that it does not differ substantially from the slow and lagging evolution already in course. Although the generally difficult situation of small museums (budget constraints, staff shortages, and lack of specialized digital skills) is well known and many external, structural factors—some of which are difficult to solve—also share responsibility for this, the peculiar characters of small local museums, first of all, their marked diffusion across the region and their strong rooting in it, with the resulting uniqueness, represent their other side of the coin and their greatest potential. A strategic and more conscious use of online communication channels and of ICTs that make the most of indications coming from recent and current experiences to improve the presentation of their own identity to a mainly local audience and establish really “daily-life” relationships with it would allow this important museum sector to act as an engine for regional development, not simply through the leverage of tourist flows, as in the case of main attractors in big cities, but rather through the recovery of the community’s identity as well as of the territory’s identity and its values from the community. Social networks in particular, with their cross-sectoral nature and their ability to mitigate the digital divide, can be strategic in this, on condition that they are used in a personalized mode on the content side and a more dialogic and informal one on the language side. Given the high number of small
local museums in the whole nation, the potential of this healthy evolution appears paramount, and the similarity with the characters of the whole European museum heritage can further amplify and boost it through the exchange of experiences and the stimulation towards an innovative networking that is less dependent on the physical dimension.

Although the sample is sufficiently representative in typology and territorial distribution (between main and small towns) of institutions, the study has anyway some limitations, essentially linked to the dimension of the investigated sample compared to the total number of the region and the difficulties in finding updated information and listings to establish contacts with all the existing structures and rely on a larger sample, net of the physiological number of museums that chose not to participate in the survey. As the present study has specifically focused on the implementation status of museums’ online communication, future research steps could usefully enrich the analysis with the help of interviews exploring in depth the motivations for some specific results (often unexpressed) and analyzing in detail the different organizational models of each institution involved, whose variety has indirectly emerged in the course of the survey, highlighting the possibility of direct implications on communication choices.

Funding: This research received no external funding.

Data Availability Statement: Data sources are mentioned in the text.

Conflicts of Interest: The author declares no conflict of interest.

References


Heritage 2023, 6, 4956–4992.


Disclaimer/Publisher’s Note: The statements, opinions and data contained in all publications are solely those of the individual author(s) and contributor(s) and not of MDPI and/or the editor(s). MDPI and/or the editor(s) disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the content.