Digital Activities as Online Getaways to Cultural Heritage: The Paradigm of Greek Museums During the COVID-19 Era

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Abstract The recent COVID-19 pandemic led most countries to impose lockdowns in order to confront its unprecedented health and socioeconomic impact. Museums and cultural institutions were obliged to keep their physical doors closed to the public; however, many of them undertook initiatives in order to maintain their communication with their audiences and to respond to the social need for alternative cultural experiences. They took new approaches to digital transformation and audience engagement by focusing on digital tools and solutions for innovative initiatives, virtual events, and communication activities. This paper aims to examine the museum management in Greece in the midst of the COVID-19 pandemic and to present museum initiatives that enabled the digital consumption of heritage and the increased virtual attendance of wider audiences via extrovert, online, interactive activities, and participatory experiences. For this purpose, a research was conducted in order to collect data from three Greek museums that are characterized by intense digital presence and activity: the Acropolis Museum, the Benaki Museum, and the Archaeological Museum of Thessaloniki. The research uses methods of qualitative and quantitative analysis and offers a critical insight into the particular museums' extroversion and digital responses during two COVID-19 lockdown periods. The paper contributes to the identification of trends and new ways of enabling open access to cultural heritage resources and keeping cultural content relevant to the needs of society. Moreover, it attempts to outline the existing gaps and the arising challenges and opportunities for the museums' digital strategy, resilience, and sustainability in the post-coronavirus world.

Keywords Museum · Cultural heritage management · Digital transformation · Sustainability · Greece · COVID-19

JEL Classification Z10

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1   Introduction

In early 2020, governments worldwide enforced lockdowns and social distancing to reduce the spread of COVID-19. As expected, the museum sector was not exempted from the containment measures taken in response to the pandemic crisis. Almost 90% of museums had to close their doors (UNESCO, 2020, p. 4) and postpone or cancel exhibitions, projects, education programs, performances, and events (Samaroudi et al., 2020, p. 338). The majority of museums attempted to maintain the access of their audiences to culture and education by promoting digital projects and activities organized by staff working from home (NEMO, 2020, p. 6). Three weeks after the physical closure to the public, 80% of the European museums had already increased their online activity and changed staff tasks in order to accommodate current needs—30% of tasks were assigned to digital teams—while 16% of them had increased their budget for online activities (NEMO, 2020, p. 12). According to a NEMO's survey, four out of five museums "increased their digital services" and reported "an increase in online visits", with a range between 10 and 150% during the period of the first lockdown in Europe. The survey also highlighted the importance of a professionally trained and skilled museum staff and the necessity of ensuring education and access to museum collections for online audiences (NEMO, 2020, pp. 2–3).

At first, museums in Europe used their existing resources, like "online collection portals and social media accounts"; then, they tried to deliver "new content", such as virtual tours and exhibitions, "curatorial talks" and "educational material" for "home-bound audiences" (Zuanni, 2020b). According to NEMO's survey, museums' online service activity was mainly focused on: "online learning; online exhibitions; virtual tours; podcasts; YouTube programs; special newsletters, live content; adding objects to collection online; hashtags on social media; featuring individual objects; quizzes and contests" (NEMO, 2020, p. 12). The online access to museum activities was not simply a matter of keeping institutions alive and sustainable, but also of reducing isolation, improving mental health and supporting the creative and educational needs of diverse communities around the world (Samaroudi et al., 2020, p. 338). Many museums contributed to the online edutainment of these audiences in an interesting and innovative way. They created a variety of hashtags on social media that included #MuseumFromHome, #MuseumsUnlocked, #MuseumMomentofZen, #ClosedButOpen, #ClosedButActive; inspired by famous museum collections, users created their own works and shared them online, while cultural heritage professionals participated in special activities describing and analyzing stories and cultural objects (Zuanni, 2020b). In general, an accelerated digital consumption behavior developed, which dominated the cyberspace and increased the urgency for museums to explore and introduce new and remote ways of digitally experiencing cultural heritage (Samaroudi et al., 2020, p. 338).

The urgent matter of offering a cultural escape led the way in making museums available through new technologies and "immersive cultural experiences" (Cuseum, 2020). When social distancing measures were implemented, museum organizations used digital and virtual means to promote cultural heritage in an effort to reach

and remain connected to audiences (American Alliance of Museums, 2020b). While being on lockdown and closed to visitors, museums increased their commitment to digital access, connectivity, and interaction through a variety of channels including digital platforms, online collections, virtual reality, live streams and 360° video (American Alliance of Museums, 2020b), online exhibitions, educational and mobile games, interactive digital artworks, online viewing rooms (Cuseum, 2020). Generally, there were four main types of digital experiences, which museums could implement during the challenging time of the pandemic crisis: (i) "unique campaigns and series on social media"; (ii) "engage in real-time with live streams"; (iii) "virtual tours"; and (iv) "virtual and artificial reality" (American Alliance of Museums, 2020a).

2 Literature Review. Going Digital

In the twenty-first century, digital cultural heritage and online audience engagement are dominating the museum sector as they offer opportunities for bringing people together in a virtual space, where they can share experiences, build ideas, and express their creativity (NEMO, 2020, p. 3) in the context of the democratization of culture. During the coronavirus lockdowns, access to cultural heritage emerged as a societal need and museums focused on their digital transformation to produce online cultural gateways. In this context, museums across the world increased their digital activities and online presence (UNESCO, 2020, p. 5). They adapted existing resources or developed new ones to offer audiences a variety of ways to engage with cultural heritage content and to participate remotely in museum events or shared stories and objects to preserve and learn from the experience of the pandemic (NEMO, 2020, p. 1). Access to these cultural resources requires a certain level of digital literacy (knowledge and skills to use new technologies effectively), a device that offers a different mode of experiencing online content (computer or laptop, smartphone or tablet) and a good internet connection, premises that are not equally distributed worldwide (Zuanni, 2020a). Thus, even though digital technologies have great potential for promoting culture, simultaneously they constitute "potential barriers" for museums and people that do not have access to them, a fact that underlines the digital divide worldwide (UNESCO, 2020, pp. 6–7). Besides, the development of digital activities and digital engagement with cultural heritage demands cultural policy and strategic management, which are big challenges for the viability of the museum sector.

The digital activities undertaken by the museums in the midst of the coronavirus pandemic can be categorized into five types (UNESCO, 2020, pp. 15–17):

(a) "*Use of previously digitized resources*" by museums that focused on digitization policy, which included online collections and digital exhibitions, virtual museums and 360° tours, online publications, digital productions, games and applications, cultural content from previous exhibitions.

(b) "*Digitization of planned activities during the months of lockdown*" presented online in the form of events—concerts, talks, radio shows—live or recorded, available on social media or on digital platforms, often downloadable, characterized by more or less interactivity.

(c) "*Increased activity on social media*", such as being active on social networks like Facebook, Twitter, Instagram, YouTube, and SoundCloud channel, contributing new digital content through the museum teams and community managers and partially transforming into "diversified digital media".

(d) "*Special activities created for lockdown*", that is, original projects developed in the context of the COVID-19 lockdown, which can be grouped into three categories: (i) "specific mediation" concerning new experiences and audience engagement, like "offbeat view" of museum collections and exhibitions in the "deserted rooms", tours with robots, use of museum reproductions in video games; (ii) presentation of the "invisible" museum works, such as collection management; (iii) encouragement of "participatory actions" at an international level, like inviting online visitors and web users to reproduce famous museum art works and take photos in order to exhibit them in the near future, to participate in educational games that could involve families and support parents to edutain their children, to share stories of children or communities, to play quizzes, coloring activities, and video games.

(e) "*Professional and scientific activities organized in the context of lockdown*", like web conferences (webinars, talks, or meetings through videoconferencing media, such as Zoom, Skype, Google Hangouts), which focused on topics related to the pandemic crisis, but had the potential of being continued in the future, due to the serious economic and social consequences of COVID-19 that affect the museum sector in the long term.

The digital activities offered to online visitors during the COVID-19 lockdown periods could be categorized in the following different types and subtypes (Samaroudi et al., 2020, pp. 343–344):

(a) Collection (free database exploration and images database/resources, guided exploration, collection-related resources, 3D collection, collecting content).
(b) Virtual visit (gallery tour, audio tour).
(c) Learning (educational material).
(d) Home activities (creative activities, well-being activities).
(e) Events (live event, festival, competition, other event).
(f) Funding (commercial venture).
(g) Communication (social media, podcast, videos, COVID-19 communication, practical info, student/artist resources, digital publications, racism related, music lists, other communication).

This categorization of museums' digital offerings indicates their effort to meet societal and emotional needs and to stay connected with audiences and communities in the quarantine era. These needs, which arose from the conditions of the pandemic lockdown, allow an "audience segmentation" of three groups (Samaroudi et al., 2020, pp. 344–345):

(i)   "*Audiences seeking learning support*": Teachers, eager students, or parents doing homeschooling during the pandemic are included, and a traditional audience focused on formal and informal education to support online learning.

(ii)   "*Audiences seeking emotional support and entertainment*": People who seek digital content and activities that might provide benefits of support, relaxation, and well-being, as they are stressed or scared, bored, lonely, workers, or people who want to help others.

(iii) "*Stakeholders who wish to keep involved*": Audiences who hold an important position in an organization and want to understand how the pandemic affects it, themselves, and what they can do to offer support. Internal audiences, museum professionals, members, or donors as well as the local community are included.

Obviously, the museum sector is facing a digital and mainly a societal challenge, a "new normal" that has to be considered during its preparation for a new start (ICOM, 2020a, p. 4). The shift toward digital transformation is the new trend in museum management, affecting the collections' management and their access, the exhibition and display policy, and the ways of generating revenues for sustainability. According to ICOM's third survey (ICOM, 2020a, pp. 15–16), online activities continue to increase through "new digital communication channels" (collection online, online exhibitions, live events, learning programs, newsletters, podcasts, social media), while there is an increased percentage of non-full-time staff (61%) assigned to digital and communication activities. Additionally, more and more museums are aware of the fundamental importance of upgrading their "digital infrastructure and resources" (ICOM, 2020a, p. 17) and they started or are planning to rethink their digital strategy, to increase and train staff as well as to increase their budget and digital offer. Apart from the development of digital presence and services and in response to the pandemic crisis, many institutions followed new directions in their strategy, like "new/flexible work structures, increased focus on local communities, new ways to generate revenues (online), increased focus on sustainability, renovation of (part of) the building, improvement of accessibility, new research on the collections, change of partnership strategy". In addition, many of them felt the need for "essential remote work skills, building a digital strategy, digital content creation, community outreach, developing digital/hybrid events, emergency preparedness, marketing management, crowdfunding/fundraising, IT and software development, HR management" (ICOM, 2020a, pp. 23, 27).

Sustainable museums are of pivotal importance, so a management framework with measures for sustainable development tailored to the specific strengths, contexts, and needs of each museum and cultural institution could really be useful (ICOM, 2020b). For this purpose and in collaboration with museum professionals, studio klv built the "Sustainability Management in Museums" (SMM). It is a framework that uses a "top-down and bottom-up approach" to "improve sustainability performance across all areas of museum operations", "a cross-functional task", which focuses on four basic areas (ICOM, 2020b): "(i) People, the social dimension of museums; (ii) Planet, the environmental footprint; (iii) Profit, business case for sustainability, and (iv) Program, the museum's mission". The integration of a sustainability management
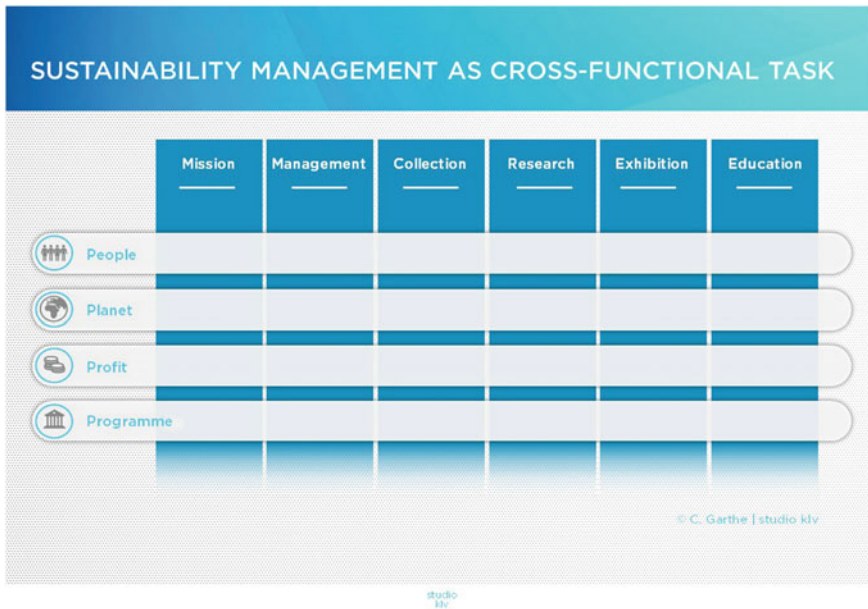
Fig. 1 Integration of sustainability management in museums' operations. *Source* ICOM (2020b)

system in museum operations is a challenge for museums, as well as a "core value" and a responsible attitude toward the society (ICOM, 2020b) (see Fig. 1).

3   Museum Digital Activities in Greece in the COVID-19 Era

3.1   Resilience of Greek Museums During the Pandemic Crisis

Cultural heritage is displayed in many museums across Greece. There are currently (Ministry of Culture and Sports, 1995–2020) about 272 museums in the country dedicated to different thematic areas, such as the archaeological, byzantine and post-byzantine, diachronic, historical and folklore, visual arts, cinema, music, nautical, photography, theater (Odysseus.culture, 2012). According to a UNESCO report, Greece is included among the countries that have 201–500 museums and 26–50 museums per million inhabitants (UNESCO, 2020, pp. 9, 11). From March 13, 2020, onward, the Greek state took radical measures to reduce the spread of the coronavirus disease, resulting in the mandated closure of museums until June 15,

2020. This was the first period of lockdown, physical distancing, and discouragement of in situ visits. The immediate reaction of the museum sector focused on the enhancement of its web presence in order to maintain a link with its audience mainly by promoting "investments made before the pandemic", like the digitization of collections and the creation of virtual museums (UNESCO, 2020, pp. 5, 14). Such responses highlight the importance of information and communication technologies (ICTs) and the urgency of digital transformation. Unfortunately, only few museums in Greece focused on digitizing and bringing to life online already planned activities or on offering new digital content and innovative actions to alleviate the challenges of the home confinement. The majority of museums developed activities on social networks and webinars, mainly for museum professionals. The digital investment and the use of social media were prioritized mostly by museums that had recently received European funding (Partnership Agreement for the Development Framework, Creative Europe, Digital Europe) or had redefined their policy regarding the promotion of their collections in the digital era.

The development of a digital presence by the museum sector in Greece during the COVID-19 pandemic comprised: (i) the use of museum web portals (websites), (ii) the promotion of virtual museum projects that had been underway previously, (iii) online collections, (iv) online exhibitions, (v) webinars, (vi) live stream events, and (vii) educational programs and material.

3.2 Methodology of Investigation

The aim of this paper is to understand how museums in Greece adapted to the COVID-19 health crisis and responded digitally during the two periods of physical closures and coronavirus lockdowns. Greek museums were compelled to remain closed to the public during March–June 2020 and November 2020–May 2021. The paper examines the extroversion and digital resilience of three important cultural heritage institutions renowned for their reach collections, the Acropolis Museum and the Benaki Museum in Athens and the Archaeological Museum of Thessaloniki. It is an overview of their digital activities and initiatives and an in-depth analysis of their response to the crisis. The paper is based on an investigation during which data were collected from the museums' official online portals. The paper tries to document the impact of the health crisis on the museum sector in Greece and the application of creative solutions based on existing and new digital resources for distance audience engagement.

3.3   The Acropolis Museum

Starting with the Acropolis Museum in Athens, whose core mission was the public outreach, it responded to the pandemic by upgrading its digital presence (Acropolis Museum, 2021, p. 2). Its digital presence mainly gave emphasis to the official website (Acropolis Museum, 2020a), an online portal that offers free public access to the exhibitions and artifacts, scientific and research material. The museum introduced a Computer-Based Documentation and Collection Management System for its collections (*MuseumPlus*) in 2014 (Acropolis Museum, 2020c). On the museum website, online visitors can find multimedia technology offerings. Digital applications (virtual representations, virtual tours, online educational games, interactive timeline with the history of the Acropolis and its Museum, interactive projects) and videos (films, VR 360° video for panoramic tour, representation of three-dimensional models, activities, events) render all of the Museum's displays accessible to the global community (Acropolis Museum, 2021, p. 10). The multimedia applications were "designed in accordance with the general philosophy and museological approach of the Museum", employing experiential, interactive methods, complementing its exhibits and increasing their comprehensibility, taking into account the diversity of the visitors' age groups, promoting communication and interaction, and offering a cutting-edge experience to online and in situ visitors (Acropolis Museum, 2021, p. 10). These digital resources were available before the lockdowns and few were offered during the COVID-19 lockdown period; however, none of them was created for the lockdown.

As regards the museum's social media presence during the two periods of physical closure, hashtags on Facebook and Instagram presenting exhibits of the Acropolis Museum were the main activity *(#StaySafe* with the exhibits of the Acropolis Museum, *#StayHome* with the exhibits of the Acropolis Museum, *#EasterInGreece*) (Acropolis Museum Facebook, 2020). This fact revealed the absence of a professional team assigned the production of digital content on social media.

Moreover, two additional websites were released on December 22, 2020, although they were not designed especially for the second period of lockdown. The *Digital Acropolis Museum* (2020) provides a contemporary multilingual platform for audience engagement and interaction with digital exhibits and applications of cultural, educational, and touristic content, based on multimedia technology; the *Acropolis Museum Kids* (2020) *was* created especially for children 6–12 years old to have fun with the fascinating world of the museum via inspiring games, amusing videos, and a series of inventive activities. Both are part of the program "Creation of the Digital Acropolis Museum" that was integrated into the R.O.P. "Attica 2014–2020", an ambitious aim and an organic part of the museum's communication, museological and educational approach to different audiences, either local or international, actual and online visitors (Acropolis Museum, 2020b, p. 10). Within the context of this project, which follows international trends and practices on museums' digital transformation, the equal and free access to the Acropolis Museum's collection, the enhancement and enrichment of its exhibitions, and a wider audience engagement are

the main goals of its strategy for the years to come, by embracing innovation (Acropolis Museum, 2020b, p. 2). Visiting this kind of digital museum can be a special and meaningful experience. During the period June 2019–May 2020, the virtual attendance at the Museum was 659,041 people (Acropolis Museum, 2020b, p. 8), while during the period June 2020–May 2021, it was 289,789 people (Acropolis Museum, 2021, p. 8).

3.4 *The* Benaki Museum

According to its mission statement, the Benaki Museum in Athens aims to "maintain a dynamic connection with ongoing cultural processes in Greece and beyond" (Benaki Museum, 2016a, 2016b). The museum uses multimedia technology in order to offer the opportunity to visitors to immerse in culture via its website and digital applications (Study International, 2020). The official website of the Benaki Museum (2016a, 2016b) is an online portal, designed for all, which offers free public access to seven museums with diverse collections and designates the dialogue of the Greek culture with world cultures (Benaki Museum, 2019, p. 5). In addition, in this platform, the museum's E-shop (Benaki Museum Shop, 2020) operates as a cultural venue, where online visitors enjoy a shopping experience enriched with unique highlights of the Greek history, jewelry, visual and applied arts, design, fashion, and architecture. Moreover, the inclusion of the museum in international cultural platforms, such as the Europeana and the Google Arts and Culture, made it resilient to the pandemic. The digital resources of the museum's collections, library and archives (Benaki Museum, 2019, p. 40), the online multimedia applications, like 360° virtual tours of all galleries that are supported by an audio guide in six languages (Benaki Museum, 2020a), and multimedia productions present the Benaki Museum to the online audience in an interesting way (Benaki Museum, 2016–2021).

All the digital resources mentioned above are part of its standard digital policy and philosophy, thus being available even before the lockdown. However, the Benaki Museum developed special digital activities for the lockdown period as well. The "CLOSE UPS" video series, starting with Season#1 during spring 2020 and continuing with Season# 2, available during the second period of lockdown in Greece, highlighted fascinating stories behind the museum's objects and people associated with them, inaugurating a way to reconnect and stay in touch with the audience. At the same time, the "Hellenic Together", an online lecture series of two periods (spring–summer 2020 and autumn–winter 2020–2021), which took place on a web-based conference platform and was accessed by a varied audience from around the world during the period of the global pandemic, aimed to showcase the museum's treasures, research, exhibition activities, and projects (Benaki Museum, 2020d). "Covintius the Terrible" (Benaki Museum, 2020c) was another digital activity created for the lockdown period. It was an online educational program–movie workshop, available since spring 2020, where children 9–12 years old created short narrative videos from home drawing inspiration from the Toy Museum collection.

During the second period of the lockdown, the Benaki Museum also organized the "Bid for the Benaki", an online auction of objects and works of art in support of the museum (Benaki Museum, 2020b). As it was expected, an increased activity was observed on social media with the hashtags #StaySafe, #MuseumFromHome, and #throwbacktime; by presenting its exhibits, the Benaki Museum tried to remain "open" despite the closure of its physical doors. Just as importantly, #ExpoInLock-DownMode, an online exhibition, took place during the second period of lockdown (January 2021) and was based on the digitization of a planned activity with a free online-guided tour (Benaki Museum, 2021a).

Additionally, during the pandemic, the Benaki Museum organized the "1821 Before and After" anniversary exhibition to celebrate the bicentennial of the Greek War of Independence. It was a tribute to 1821 (Benaki Museum, 2021e), the year when the Greek Revolution was declared, which resulted in the country's independence. The exhibition would be open to the public for 8 months (March–November 2021); however, due to continuance of the pandemic, the exhibition was inaugurated on May 14, 2021, attracting 44,493 visitors (Benaki Museum, 2021e). On December 15, 2020, the Benaki Museum invited the audience to join a live streaming presentation of the "1821 Before and After" exhibition, entitled "Unfolding 100 years of history within an exhibition «1821 Before and After»". Two historians–curators guided the online visitors to the backstage of the exhibition, discussing its identity and structure and giving them the opportunity to experience the "atmosphere of a museum show setup" (Benaki Museum, 2020e). Furthermore, videos were especially produced and made available on YouTube, and a 360° virtual tour presented the preparations for the anniversary exhibition and the exhibition itself, accompanied by an audio tour (Benaki Museum, 2021b). Moreover, the "1821 Digital Archive" (Research Centre for the Humanities, 2021) was a pioneering research program that aimed to create an open, free access, multi-layered digital platform referring to the 1821 Greek Revolution. It was dedicated (a) "to the collection of various archival material" deriving from Greek and international archives, libraries, private collections, museums, universities and research centers, and (b) "to the conduction of a series of new research, which promote modern scientific discourse". The research results would be disseminated to the public through the program's official website and the "1821 Digital Archive" exhibition, an installation in a physical space at the Benaki Museum (2021c). This museum space explores what an archive does and how "from a spatial perspective", "as well as the dynamic narrative that results from the approach of documents regarding the 1821 Revolution in diverse ways". It is treated as a "temporary studio for relaying physical and online meetings" (Benaki Museum, 2021c) and as a place for digital exhibits. The "How do we remember 1821?" (1821 Digital Archive, 2021), a local history school project (Research Centre for the Humanities, 2021) and crowdsourcing collaborative initiative, is an interesting example. Primary and secondary education students compiled "a dynamic digital archive that records the traces of 1821 in the public sphere"; they were encouraged to delve into their local history and describe monuments, museum objects, books/manuscripts of the early nineteenth century.

Similarly, the bicentenary of the 1821 Greek Revolution is celebrated at the e-shop of the Benaki Museum. Visitors can find original souvenirs (Benaki Museum Shop, 2021), created by traditional craftsmen, artists, and contemporary designers, who "researched for months the symbols, the iconography and the main actors of the Greek War of Independence", especially for this important anniversary (Benaki Museum, 2021d). Thus, the Benaki Museum appears to stay focused on a digital strategy that enabled its resilience and sustainability during the difficult times of the health crisis.

3.5 *The Archaeological Museum of Thessaloniki*

The Archaeological Museum of Thessaloniki organized extrovert cultural activities addressed to everyone according to its philosophy and tagline "A Museum for all" (Archaeological Museum of Thessaloniki, 2021a). Its unique collection of ancient artifacts is accessible via the official website of the museum that was designed in 2017. Since the outbreak of the COVID-19 pandemic, the Archaeological Museum of Thessaloniki developed alternative ways and digital events for citizens to access culture (Archaeological Museum of Thessaloniki, 2021b). At the same time, it maintained an intense digital presence on social media, especially on YouTube, with the hashtag #amthvlepoume (26 April–31 May 2020), offering free online access to its audiovisual productions referring to its permanent and periodic exhibitions, as well as to the fields of archaeometry and preservation of antiquities (Archaeological Museum of Thessaloniki, 2021c). During the nationwide lockdown to restrict the spread of COVID-19, the Archaeological Museum of Thessaloniki continued cultivating its relation with online visitors by offering them the "opportunity of a creative new approach of its antiquities" (Council of Europe, 2020f) through online actions that have been characterized as good practices of Strategy 21 (Council of Europe, 2020b).

The first online action, which was related to the Strategy 21 Social component (S) "S2—make heritage more accessible" (Council of Europe, 2020c), was entitled "Poetry in the shape of things" (Council of Europe, 2020f). It was organized on the occasion of the "International Museum Day" (18 May 2020) and lasted from May 18, 2020, to June 24, 2020. It was inspired by "visual poems known as calligrams, whose text is arranged in such a way that it creates the image of a thematically related object" (Council of Europe, 2021, pp. 57–58). Their origins date back to the "technopaignia" of the Hellenistic era (c. 300 B.C.), while they were used by Guillaume Apollinaire in his homonymous poetry collection in 1918 (Council of Europe, 2020f). The main goal of the museum was to reintroduce its collections as a "source of inspiration, imagination, self-expression and creativity" and as a challenge for "creative connections with present and past artworks". Thus, it encouraged people to get through the difficult situation of the pandemic closures by drawing strength from the inner power and beauty of cultural heritage (Council of Europe, 2020f). The museum produced online videos that were presenting two ancient objects of

its collection as calligrams, inviting visitors, regardless of age, country of origin or educational level, to choose texts and poems written in their language and "to give them the form of their favorite objects", ancient or contemporary (Council of Europe, 2020f). Additionally, people were invited to send photos of their visual poems with personal thoughts and information via e-mail or to share them on Facebook or Instagram with the hashtag #amthcalligram (Council of Europe, 2020f). Over two hundred individuals, from 5+ to 80+ years old and from seven countries besides Greece, shared their calligrams, that were posted daily on the museum's social media and website, as part of the digital exhibition "Poetry in the shape of things" (Council of Europe, 2021, p. 58). The calligrams were divided into six sections, depending on the depicted object: (i) antiquities of the AMTh, (ii) antiquities, (iii) human, (iv) nature, (v) shapes, and vi) objects and space"; the particular initiative enriched the museum's interaction with the public and increased the online attendance and participation (Council of Europe, 2020f). This digital action introduced the "meaningful power of poetry and literature as carriers of human hopes and anxieties" and "the dynamics of monuments to mobilize emotions and imagination … monuments could be not just 'untouchable' exhibits, but also heritage that can touch our deeper self", on condition that they are considered "out of the (museum) box" (Council of Europe, 2020f).

The second online action, which was related to the Strategy 21 Social component (S) "S2—make heritage more accessible" (Council of Europe, 2020c), was entitled "Everything changes in time and all remain the same" (Council of Europe, 2020f). The action was also organized on the occasion of the "International Museum Day" and lasted from May 18, 2020, to May 31, 2021; it was characterized as a temporary and digital action and exhibition (Council of Europe, 2020d). The initiative was motivated by the museum's willingness to keep in contact with its visitors and friends by offering people who had to "stay at home" the opportunity to enjoy the most representative artifacts of its collection and interact with them (Council of Europe, 2020d). Thus, the museum gave its audience the opportunity to open a direct dialogue with cultural heritage "in relation to the past and to the present" and to realize that "some objects may have changed in time regarding their name, material, shape or use, but they still somehow remain the same" or that "nothing has changed and nothing is as it used to be" (Council of Europe, 2020d). The online audience had to search their homes for objects that looked like the ancient ones, to photograph them and send their photos via e-mail or upload them on the museum's social media with the hashtag #amtholataidiamenoun. The collected material was presented in a digital/online exhibition, contrasting "ancient artefacts with look-alike modern-day objects and, therefore, antiquity to modern everyday life" (Council of Europe, 2020d). This digital action was an opportunity not only for building relations and working in the public interest, but also for better familiarization with new technologies and social media. Thus, it enhanced and improved the museum's "digital channel of communication" with online visitors, which adapted quickly and effectively to the new conditions imposed by the pandemic and secured daily attendance via online getaways "while its doors remained hermetically closed" (Council of Europe, 2020d).

The third online action, which was related to the Strategy 21 Knowledge and Education component (K) "K11—explore heritage as a source of knowledge, inspiration and creativity" (Council of Europe, 2020a), was entitled "Let's stay at home and make a paper 'Plangon' toy doll" (Council of Europe, 2020e). The action was also organized on the occasion of the "International Museum Day" and lasted from May 18, 2020, to May 17, 2021. It was designed for and addressed to young visitors and was inspired by the toy doll "Plangon" of ancient Greece that was ceramic and had movable arms and legs (Council of Europe, 2020e). The "Plangon" initiative—#amthdiaskedazoume—was designed as an online educational workshop that aimed to inspire young children to creatively interact with an ancient toy doll by constructing paper dolls and dressing them with material easily found at home (paper, coloring materials, textiles, many other household objects) while at home during the coronavirus pandemic (Council of Europe, 2020e). This initiative was giving to the audience the opportunity to interact with an archaeological object and connect with culture, while it engaged the entire family in a playful, creative, inspired, and amusing learning way (Council of Europe, 2020e). When the project came to an end, children's artistic creations (the "Plangon" artworks) were displayed in a virtual exhibition that was held on the official museum website, establishing a dialogue between the present and the past (Council of Europe, 2020e). This online initiative was also an effort of the museum to readapt its strategy and enhance its digital activities and communication with the public amid the COVID-19 pandemic, while it indicated that "cultural engagement can be both feasible and fertile even without physical presence" (Council of Europe, 2020e).

During the two periods of lockdown, the online presence of the Archaeological Museum of Thessaloniki focused on digital exhibitions of the artworks made by virtual visitors of the museum's social media; the amateur artists were invited to draw inspiration from archaeological objects and to create their own. Several artistic activities took place through online channels: "We stay safe and we design an origami bird", "I color the antiquity", "We make a paper wreath from oak leaves", "I make my own mask and disguise myself", "I make a dough figurine", "Seascapes" made as a collage, creative writing ("The museum has a story to tell. Yours!"), online seminars ("In ancient Thessaloniki during the pandemic", an educational action structured as a role-playing game), expository narratives ("For a burning flame. Antiquities and Memory, Thessaloniki-Macedonia [1821–2021]"), and an online "Reading Club".

The digital actions of the three Greek museums mentioned above were based mainly on a "visitor-oriented" approach, while there are fewer indications of them implementing a particular digital strategy; on the contrary, such a strategy does not seem to constitute a priority in an era that demands quick and easy information access and interaction (Kamariotou et al., 2021, pp. 397–398). Nowadays, the digital component is very important for the museum experience, because it can change visitors' behavior, enhance audience engagement, and transform virtual visitors to "creators and distributors of content", especially via online communities on social media (Kamariotou et al., 2021, pp. 398–399). The use of new technologies in museums can develop and support an interactive relation with online visitors that goes beyond

the irreplaceable physical venue; thus, museums can be transformed into "virtual destinations" by living up to visitors' expectations (Kamariotou et al., 2021, p. 402).

4   Results, Challenges, and Opportunities

The COVID-19 pandemic forced the museum sector to promote culture and reach audiences by focusing on digital technologies and remote engagement. The use of technology had to become a priority for a number or reasons: (a) purposes of marketing, communication and fundraising; (b) development of digital content; and (c) building online communities (Samaroudi et al., 2020, p. 340). In the digital era, museum resilience and sustainability constitute a big challenge that cannot be succeeded simply by boosting online presence, releasing new content or reaching audiences on the web. An internal and external preparedness is a necessary precondition for emergencies such as the outbreak of a global health crisis (American Alliance of Museums, 2020b). Under such circumstances, the development of the appropriate digital strategy can redefine museums' social role, prioritize digitization and access, build immersive and meaningful online experiences, and balance the real with the digital.

The digital challenge encourages museums to embrace the virtual dimension and create the heritage of the future. The substantial rise in the number of online visitors of the websites and social networks of renowned European museums (Louvre Museum, The British Museum, etc.) during the lockdown period clearly showed that they implemented a preexisting digital policy. The specific policy is based on certain presuppositions: "(i) the digitization of collections, which itself relies on; (ii) a sufficiently up-to-date inventory of collections; (iii) a minimum IT infrastructure (phototaking, scanning, computers); (iv) sufficiently stable Internet access; and (v) dedicated staff with the minimum skills to carry out these various operations" (UNESCO, 2020, p. 15). Many European museums need additional support with digital technologies and transition practices, while the construction of a digital strategy has become a sine qua non for the museum sector, emphasizing investment in digital infrastructure, tools, programs, and professionals to manage the increased online presence, communication, and digital activity both during the pandemic and afterward (NEMO, 2021, pp. 4–5). Furthermore, the improvement of the digital policy will require a "comprehensive evaluation strategy" and appropriate management of the "increased demand for online engagement" (NEMO, 2021, pp. 7, 15).

An additional challenge for museums is the evaluation of their online presence and attractiveness. A proper assessment can facilitate benchmarking, decision-making, and resource allocation. Currently, the museum research focuses primarily on exhibitions and educational programs in situ, on physical visitor engagement and museum management, and less on digital cultural heritage, digital skills, and digital strategy, which can transform museums into agile cultural institutions in the "online environment" (NEMO, 2020, pp. 3–5). The assessment of their digital services, the "digital visitor research", the definition and "tracking metrics of digital success" (NEMO,

2021, p. 17), and strong awareness are essential for the future of museums, if they aspire to be sustainable, in the service of humanity and flexible in offering creative, immersive, and emotional cultural experiences online (NEMO, 2020, p. 4).

Moreover, the success of museum practices in the era of globalization depends on networking and mutual learning that constitute an essential key in international cooperation and intercultural dialogue (NEMO, 2020, p. 4). These practices can help museums to confront one of their biggest future challenges, not only to attract visitors to their premises and restore their income to the pre-COVID-19 levels, but also to be capable of increasing them, while at the same time ensuring quality levels similar to those of the pre-pandemic era (NEMO, 2021, p. 6).

The economic impact of COVID-19 on the museum sector is enormous and the dramatic loss of income led museums to seek innovative funding sources not necessarily connected to state funding (NEMO, 2021, p. 5). Museums are compelled to confront a completely different reality: postponed international exhibitions and less tourists-visitors due to closed borders; loss of ticket sales; budget cuts; reduced costs related to museum staff and volunteer programs that demand "national coronavirus emergency funding schemes" or alternative funding, such as "online programs for a fee or with paid advertisement" (NEMO, 2021, p. 12), "developing projects, private funding, crowdfunding or donations, webshop, vouchers or renting out the space for private events" (NEMO, 2020, pp. 7–11). To accommodate these operations and be better prepared for future emergencies, skills in digital literacy, marketing, and fundraising are also needed (NEMO, 2021, p. 5).

In December 2020, the European Parliament and EU Member States came to a political agreement on the new Creative Europe program (2021–2027). It allocates €2.4 billion to the cultural and creative sector in order to better equip and support the use of new technologies, amplify further digitalization, strengthen their competiveness during unexpected situations, such as the COVID-19 pandemic, and reinforce media pluralism across the European Union (EU) (European Commission, 2020). Greece has to capitalize on this essential tool in order to promote its cultural heritage and creativity at international level and reach wider audiences. The particular program was designed to support the cultural and creative sector (CCS) specifically,[1] where museums are included. The key trends that are likely to affect the CCS in the EU until 2030 are the following: "diversity, fragmentation and concentration; changing funding environment and business models; workforce and skills; new technologies; audience and cultural participation; European CCS in an international environment; environmental challenges; policy framework" (KEA & PPMI, 2019, pp. 7–8). There are eight drivers, which seem really important for the CCS: "accessibility of public funding; innovation; flexibility, cooperation and networking; adoption of new technologies; development of new skills in the CCS organizations; business

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[1] Culture and creative sectors (CCS) are: "Heritage, Education, Performing art, Music, Visual Art, Film & video, Design, Architecture, Books and press, Television and radio, Tourism, Video Games, Industrial design, Fashion design, Crafts, User-generated content, Software, Luxury brands, Advertising, Consumer electronics, Other" (KEA & PPMI, 2019, p. 92).

and organizational models and forms of work; accessibility of private funding; equal representation of different cultures and genders" (KEA & PPMI, 2019, pp. 93–94).

Following the trends mentioned above, Greek museums must explore new business models and tackle their financing gap through private financial sources and key European programs and mechanisms (KEA & PPMI, 2019, pp. 7, 10).[2] Furthermore, although it generates increasing concerns over the privacy of consumers, the embracement of "the trend towards a data-driven technology industry" is recommended for the museums, because it contributes to new and tailored content with the help of technological innovations, like Virtual Reality (VR), Augmented Reality (AR), and Artificial Intelligence (AI). In this way, museums break the limits of the "digital cultural participation" and (re-)attract audiences across the world (KEA & PPMI, 2019, p. 7). Besides, the adoption of digital technologies and skills offers alternatives to online mobility and better circulation of creative activities and works in an international environment; thus, it provides new means for museum operations, audience engagement, and modern opportunities for edutainment (KEA & PPMI, 2019, pp. 7, 69).

Moreover, in November 2021, the European Union recommended a "common European data space for cultural heritage" (European Commission, 2021) and envisaged the cultural sector powered by digital technologies. This approach should be implemented by the Greek museum sector in combination with the Digital Transformation "bible" of Greece (2020–2025) (Greek News Agenda, 2020). The latter places emphasis on "the development of digital models of cultural production and distribution" and on "innovative digital services" with the use of virtual reality technologies and various horizontal actions for "the enrichment of digital content" (Hellenic Government, 2020).

As regards Greek museums, they should prioritize the development of effective international cultural relations that can strengthen a "shared European Space", and focus on policy tools, mobility, and creativity, which enable cultural exchanges and intercultural dialogue and contribute to the objectives of the international and diplomatic relations, such as stability, security, and peace. Thus, museums can be involved in cultural relations and become agents of cultural diplomacy, increasing the awareness of the cultural production, the artistic mobility, and the trade of cultural services and goods in Europe (KEA & PPMI, 2019, p. 72).

5   Conclusion

This paper gave an insight of the digital resilience of three emblematic Greek museums as part of the framework of the digital activities promoted by museums worldwide during the COVID-19 crisis. The digital activities provided by the

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[2] Indicative examples are: Creative Europe program, European Institute of Innovation and Technology's Knowledge and Innovation Community, EU strategy for culture in external relations, future Horizon Europe program, preparatory action supporting CCS social innovation projects.

museums to their audiences operated as cultural getaways addressing societal and emotional needs. The contribution of the paper's investigation is that it provides detailed information concerning the response of the museum sector in Greece to the consequences of the global health crisis. In particular, the three museums adapted their digital presence in order to remain open and attract existing audiences or online visitors. Many of their digital activities were available before the pandemic lockdowns, whereas others were created especially for/during the pandemic. However, the investigation designated the great potential for investment in communication, interaction, and cultural engagement in the digital environment. Each country and each museum were required to make its own assessment and adapt to societal changes (UNESCO, 2020, p. 18). It is very important for museums to perceive the necessity of proactive planning and of creative adaptation amid a disruption, such as the COVID-19 pandemic, as means to ensure their sustainability, to offer their communities opportunities for education, immersion, and leisure (Cuseum, 2020), and to enhance online and onsite visitor engagement (Stein, 2012).

The COVID-19 pandemic is a global health emergency with a significant socioeconomic impact; nevertheless, it will eventually come to an end. Dealing with uncertainty during the pandemic crisis, it is essential for museums—whether open or closed—to remain reliable places of knowledge, inspiration, and change. By considering a suitable strategic plan, museums have the power to go beyond their physical walls, embrace their digital transformation, and move toward both in situ and virtual visitor engagement. Thus, they will ensure their increased visibility and attractiveness and enhance their organizational sustainability. Finally, by developing museum networks and collaboration strategies, they can facilitate the cross-sectoral partnerships, the exchange of best practices, cooperation, and solidarity that support the resilience of the museum sector and preserve its social mission for current and future generations.

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