

# Digitization for the visibility of collections

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## Abstract

**Purpose** – This study aims to provide an overview of the usage of stored collections in museums located worldwide. To achieve this purpose, some results gathered across five continents through a survey conducted between December 2020 and January 2021 are set out.

**Design/methodology/approach** – Museums hold collections so that people can benefit from them. Items need to be preserved as well. To achieve this purpose, a considerable portion of museum collections is kept in storage. Consequently, museums that can show a significant part of their whole collections are few and far between. This scenario implies collections, the “very heart” of museums, are not accessible to the general public. In addition, the lack of space and the poor documentation exacerbate the scenario in terms of accessibility. This study aims to provide an overview of the usage of stored collections in museums located worldwide. In order to achieve this purpose, some results gathered across five continents through a survey conducted between December 2020 and January 2021 are set out. The research figures show that only 5% of museum stored collections are accessible to the general public. To enhance the accessibility of stored collections, museums have been adopting some strategies. Amongst them, some museums have opened up visible storage, lent or exchanged their items. Despite their contribution to overcoming the burning issue related to the accessibility of stored collections, these strategies imply a physical presence of visitors so as to enjoy collections. Digitization of collections is one alternative strategy adopted by a plethora of museums to increase the accessibility of collections. This solution boasts many advantages inasmuch as it overcomes many of the typical disadvantages of the other strategies, such as geographical constraints. Moreover, people can enjoy collections, and museums can ensure the adequate preservation of them. Thus, the digitization of items is the epitome of accessibility since, potentially, all collections can be made accessible, and museums can take care of them simultaneously. The study highlights the benefits of digital access and compares it with physical access. In addition, the research sheds light on how documentation supports collection management and increases accessibility.

**Findings** – The research figures show that only 5% of museum stored collections are accessible to the general public. To enhance the accessibility of stored collections, museums have been adopting some strategies. Amongst them, some museums have opened up visible storage, lent or exchanged their items. Despite their contribution to overcoming the burning issue related to the accessibility of stored collections, these strategies imply a physical presence of visitors so to enjoy collections.

**Research limitations/implications** – The findings of this study are based on quantitative analysis. Therefore, this study might be integrated with interviews’ with visitors. It would be interesting to shed light on people’s opinions concerning what museums are doing in the digital realm, such as the digital content in terms of the number of items, quality of images and ease of searching.

**Practical implications** – This study might provide practical implications for museums and people. One important contribution is the awareness of how the appropriateness of collections management plays a crucial role in preserving collections and making them accessible to the public. Another possible implication is that museums can enlarge their visibility through digital content, both because they have not digitized and due to the dimension of their digital content. This goal might be achieved by sharing the staff with specific expertise with other institutions or recruiting volunteers and involving local communities in common tasks (so that professionals could dedicate themselves to more skilled undertakings). An alternative might be to network with local universities so as to benefit from practitioners in the digital field. Last but not least, these findings could raise the awareness that museums are facing the problem of making stored collections accessible, thereby increasing the trust in museums from the general public.

**Social implications** – Digitization of collections is one alternative strategy adopted by a plethora of museums so to increase the accessibility of collections. This solution boasts many advantages inasmuch as it overcomes many of the typical disadvantages of the other strategies, such as geographical constraints. Moreover, people can enjoy collections and museums can ensure the adequate preservation of them. Thus, the digitization of items is the epitome of accessibility since, potentially, all collections can be made accessible, and museums can take care of them simultaneously.

**Originality/value** – The study highlights the benefits of digital access and compares it with physical access. In addition, the research sheds light on how documentation supports collection management and increases accessibility.

**Keywords** Digital collection, Digitization, Collection’s accessibility, Museum accessibility, Museum storage, Stored collection

**Paper type** Research paper

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## Introduction

Museums were born as a modern concept of the public museum so that anyone could enjoy collections during the eighteenth century in Europe [1]. Museums displayed all collections they owned in the spaces they had.

Over time, museums lacked space due to some reasons. To begin with, curators collected items just because they had the availability of premises. As a result, museum premises were overwhelmed by items over the course of the years [2]. There is plenty of literature reporting museums with so many extensive amassed collections that museums have appeared like messy storages since the 18th century [3].

In addition, a new display criterion has developed since the beginning of the 19th century to overcome the unpleasant untidiness used to display all collections [4]. According to that exhibition standard, items have been selected to catch people's eye. Hence, not all items have been exhibited. The pieces considered as not eligible to be displayed have been kept in depots. If on the one hand, collections are likely to be preserved inside adequate depots. On the other hand, they are hidden from the general public.

## State of the art

Some previous studies show that a significant part of museum collections are housed in storage, hence, not available to people. In 1989, it was found that most museums had a considerable amount of their collections, namely, 80%, not open to the public [5]. In 2011, a survey conducted by ICCROM (International Centre for the Study of the Preservation and Restoration of Cultural Property) and UNESCO (United Nations, Educational, Scientific and Cultural Organisation) highlighted that 90% of museum collections were kept in storage due to several reasons, such as the lack of space, lack of management and poor documentation (inexistence of registers for object movements and accession – and their update – and location codes for storage units) [6]. In 2016, a study focused on some masterpieces showed that only 5% of collections are displayed in museums [7]. The latter research was conducted in 20 prestigious museums. Some notorious paintings made by Paul Cézanne, Claude Monet, Frida Kahlo and Egon Schiele were displayed in museums, whereas many of them were housed in storage. Accordingly, only a small part of collections is accessible to the public. The collection is the “very heart” of a museum. Therefore, it is supposed to be made accessible to the general public. To fulfil this purpose, museums need to find adequate solutions. One of them is represented by the digitization of items that many authors have extensively studied. Despite its great potential as a powerful tool providing online users with remote access to museum collections, it was found that museums display only a small part of their collections online [8]. Some studies shed light on the fact that digitization encourages cultural consumption when an online visit is considered complementary to a physical visit and when the online visit is independent of a previous or coming physical visit [9].

In addition, a recent study has emphasized how digital content can reach more people [10]. Not only does digitization allow to preserve collections, but it is likely to enlarge the size of collection users. Consequently, museums are supposed to

increase their digital offer to make their collection enjoyable for anyone, including stored collections.

## Goals, hypotheses and methodology

### Goals

This study aims to find out if museums are trying to increase the accessibility of their stored collections. This study focuses on the digitization of items as a strategy to increase the accessibility of the stored collections.

### Hypotheses

To fulfil the achievement of this study, some hypotheses were outlined:

- Museums neglect this problem and, hence, are not experimenting with any solution. If so, why are museums not facing the stored collection issue?
- Museums are trying to find some solutions to make their collections accessible. If so, is the digitization of items a strategy to overcome the stored collection issue? Yet, how much does this latter solution make the stored collections accessible to the public?

### Methodology

To achieve an answer to the key question of the study, a survey was conducted across the world. The questionnaire aimed to improve the understanding of the practices adopted by museums to increase the accessibility of the stored collections.

The survey was sent to 48 offices of ICOM – International Council of Museums – located worldwide. In addition, to reach more cultural institutions, an invitation to take part in the research was directly sent via email to 2,558 museums located in 25 countries. Furthermore, 100 museums were directly invited through a phone call. The museums directly contacted were selected to analyse a wide range of museums regarding the type of collections, legal status, size (number of pieces), country and continent.

Museums were asked to participate in the survey from the 14th of December 2020 to the end of January 2021. The survey refers to 2019.

## Results

### The Participants

The museums participating in the survey, established at the beginning of the 19th century on average, come from 31 countries located worldwide:

- Africa: Chad, Ivory Coast and Morocco;
- Americas: Argentina, Canada, Chile, Ecuador, Guatemala, Mexico and USA;
- Asia: India, Japan, the Philippines and Saudi Arabia;
- Europe: Croatia, Czech Republic, Denmark, Estonia, Finland, France, Italy, the Netherlands, Poland, Russia, Spain, Turkey and the UK;
- Oceania: Australia and New Zealand.

The respondents have the following legal status:

- part of the state, central or federal government;
- part of the regional government;
- part of municipal or provincial government;
- a trust (public enterprise), public foundation;

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- a non-profit private body;
- private, commercial enterprise;
- a church or a religious institution;
- part/department of another institution; and
- other: university, volunteer-based organization.

Participants' principal areas of the collection cover the following ones:

- art;
- archaeology;
- ethnography and anthropology;
- history;
- natural history and natural science; and
- science and technology.

### Collections in storage

Museums were asked to answer the question:

*Q1.* What share of the collection was kept in storage in 2019?

The average stored collection is 74% of the whole collection. As a consequence, people can admire the remaining 26%. The data provided by museums through the survey highlights a deeper analysis whose results are shown in [Table 1](#).

The table shows different classes of the number of collections kept in storage and the percentage of museums. According to these data, many respondents house approximately 90% of their collections inside the depot. What is more, museums boasting the capability to store just a small portion of the whole collections are only a few participants; precisely 3% of respondents stated they stored up to 5% of their entire collections. Few museums reported they did not know the share of stored collections: this information indicates that some participants have dissociation problems. Considering all respondents' answers, the average portion of stored collections is 74%. As a result, a significant part of the collections is not on display to be enjoyed by the public.

Why do museums keep so much stuff inside their storage? It might be argued that most objects need to be preserved due to their poor conditions. This assumption is supported by the survey findings, as indicated in [Tables 2–5](#).

Most museums conducted collection assessments ([Table 2](#)). Despite the extensive usage of the practice, approximately one museum out of five did not carry out any collections assessment

**Table 1** Share of collection in storage

Class of (%) of collections kept in storage	(%) of museums
90 or more	41
Up to 90	11
Up to 80	15
Up to 70	8
Up to 60	9
Up to 50	4
Up to 30	4
Up to 20	2
Up to 10	1
Up to 5	3
Unknown	2
<b>Total</b>	<b>100</b>

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**Table 2** Collection assessment

Collection assessment	(%) of museums
No, partially	17
Long ago	13
Last five years	63
Now	2
Continuous	5

or did it partially. Although some of them did it, their review dated back more than five years earlier. Consequently, the information museums are supposed to use for their decision-making process is not updated.

The findings of the collection assessment are shown in [Table 3](#). According to the continents, the results indicate where the answers were collected. They highlight that museums do not put on display many items for different reasons:

- They have items that are deemed attractive just for scholarly purposes.
- Some items are displayed in the main rooms as a sample of others with similar characteristics and, hence, considered repetitive items.
- Several pieces cannot be exhibited because they are light-sensitive items.
- Many objects are damaged.
- Numerous articles can be under the treatment of preservation and cleaning.

In addition, lots of items are reported as fragile. See [Table 4](#).

Museums with elements of the collections belonging to one or more of the entries of [Table 3](#) have to make decisions on the on hand, by giving priority to the preservation mission, and on the other hand, by maintaining accessibility, if museums adopt traditional usage solutions. Furthermore, looking at the data shown in [Table 4](#) museums reported that only a small part of collections has a low degree of fragility. Moreover, more than half of the entire collections present moderate and high fragility. The conditions of collections affect the capability of museums to display their assets: the more fragile are the items, the more museums encounter difficulties in making them available to the public.

The survey shed light on the connection between sad conditions of collections and poor collections management. Collections management embraces many museums activities that need to be carried out with accuracy so to balance preservation and accessibility of items. Nevertheless, figures show how not all museums take the opportunity provided but it. Hardly can poor documentation improve the situation. Only two museums out of 10 have a collection policy. It means that museums are likely to manage collections in an inadequate manner. Not only could they lean toward thoughtless acquisitions, but they could also not do any required disposal so to serve the museum mission. In addition, three out of 10 museums do not have a conservation plan and apply risk management. Accordingly, museums are not focused on preserving those items they held in trust for people. They are not prepared to face potential risks. Moreover, several museums do not pay attention on setting specific rules about the accessibility and usage of collections. See [Table 5](#).

Table 3 Collection conditions

Continent	Scholar interest items (%)	(% of museums that reported to have			
		Repetitive items (%)	Light-sensitive items (%)	Damaged items (%)	Fragile items (%)
Africa	3	3	4	3	2
Americas	13	10	17	13	15
Asia	8	7	7	8	10
Europe	35	44	40	46	45
Oceania	5	7	7	8	8

Table 4 Collections and fragility

Degree of fragility	(%) of collections
Low fragility	20
Moderate fragility	40
High fragility	20

Table 5 Museums and collection management

Documentation	(%) Museums
Collection policy	22
Conservation plan	29
Risk management	35
Accessibility plan	44

### Some strategies for improving accessibility

Museums are supposed to preserve collections for today and future generations. Nevertheless, collections are held in the trust of people. Therefore, museums should ensure accessibility. How can museums provide it?

To answer this crucial question, museums were asked to indicate how they used their stored collections. The gathered data show that museums employ their stored collections in the following ways:

- temporary exhibition within their museum;
- loan with charge;
- exchange to other institutions without charge;
- visible storage for museum visitors;
- preservation and cleaning by their staff;
- research by their team;
- no usage; and
- digitization.

Each entry of the list above offers advantages and disadvantages. It is a sort of win-win for museums and people. The digitization solution, which the present study is focused on, is a remarkable strategy since it can combine preservation and accessibility at the same time. Potentially, all collections can be accessible in a digital format, including those items that, as seen, are stored due to their preservation conditions and other reasons, like the lack of space. Therefore, digitization contributes to preserving collections, even if indirectly. It also allows people to admire collections, overcoming many constraints, such as those due to the COVID-19 virus outbreak [11].

### The data on digitization

The digital content can ensure accessibility to museum collections through different channels.

Table 6 shows how museums make their collections accessible. A massive number of participants have decided to increase the accessibility of their collections through social media, such as Instagram, Facebook, LinkedIn, Pinterest, Twitter, Snapchat and YouTube. In addition, museums use other channels like Wikipedia and Wikimedia, Europeana and Google Art Project, to spur virtual users to access their collections. Using different channels means reaching a wide range of targets of online users. Moreover, the internet ensures broad access to anyone, regardless of the age, gender, education, job or social and economic background. A computer and Wi-Fi are all that are required to have access.

For this reason, digitization contributes to democratising access. Therefore, this strategy represents a powerful tool for disseminating culture and knowledge. The survey findings have shown that there are some main channels through which people can access digital collections. The most used by museums are represented by social media, which mainly include Facebook, Instagram, Pinterest and Snapchat. Immediately after them, museums have chosen to use their institutional websites to increase the accessibility of their collections worldwide. Not only are museums employing their own personal digital references, but they are also trying to keep their online presence through other shared channels. Indeed, cultural institutions are using regional sites, portals and aggregators. In addition, even if in a smaller size, the usage of Wikimedia, Wikipedia and Google Art project are helping museums to make their collections available in regional sites, portals and aggregators with people [12].

The digitizing of collections might represent a professional practice that enables museums to make their collections accessible worldwide. Have museums taken this opportunity, or have they let it fall away?

### Level of digitization

An answer to this crucial question is provided by data indicated in Table 7. It indicates the percentage of museums that are trying to increase their digital content. According to the table, not only a significant part of them – 60% – carried out a

Table 6 Digital access

Access channel	(%) of museums
Social media	70
Institutional website	64
Regional sites, portals, aggregators	41
Wikipedia, Wikimedia	23
Google Art Project	20

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**Table 7** Digitalization process in museums

Digital content process	(%) of museums
In 2019	14
In 2019, planned (next five years)	46
Planned (next five years)	11
Not planned	29
<b>Total</b>	<b>100</b>

digitalization practice, but most of them – 80% – have decided to continue the process in the next future (five years). Besides that, a meaningful part of the participants – almost one in three museums – are not going to create digital content.

To find out if museums are increasing the accessibility of the items held in the depot, it is important to know the proportion of them that is digitized. The more the collections are digitized, the more is made accessible to the public. Although museums located worldwide face the problem of increasing accessibility of their collections, there are significant differences amongst continents: approximately one in 10 museums reported adopting the digitizing process, except for Europe. In this continent, around six in 10 participants (53%) create digital content. See [Table 8](#).

Because of the difference in the level of digitization between European museums and museums located outside Europe, it is interesting to show that there are significant differences amongst European countries. See [Table 9](#). The high percentage of European museums that digitized their collections is affected by the high rate of museums mainly situated in the Netherlands and Portugal. On the contrary, some European countries have performed a lower level of this practice (Croatia, Estonia, Poland and Turkey). Likewise, there is a significant difference within Oceania where the number of museums adopting the digitizing process is seven times in New Zealand if compared to Australia. Surprisingly, museums embracing the procedure in the Americas are not in the USA, but in Argentina (7% of museums in Argentina vs 1% in the USA). South African museums digitized the most within the African continent, even if without a significant difference in comparison to other African countries. In Asia, Japan and India have more museums that are digitizing collections.

To grasp whether the size of the museum impacts the adoption of the museum practice discussed in this paper, museums are classified in small (up to 100,000 items), medium (from 100,001–1,000,000 items) and large museums (from 1,000,001 items), according to the number of items they own (including those on loan, or exchange). With regards to this parameter, the results show how small museums (75% of

**Table 8** Digitization in continents

Continent	(%) of museums
Africa	6
Americas	24
Asia	10
Europe	53
Oceania	8
<b>Total</b>	<b>100</b>

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**Table 9** Digitization in countries for continent

Continent	(%) of museums
Africa	6
Chad	1
Cote d'Ivoire	1
Morocco	1
South Africa	3
Americas	24
Argentina	7
Canada	4
Chile	4
Ecuador	3
Guatemala	1
Mexico	5
USA	1
Asia	10
India	4
Japan	4
Philippines	1
Saudi Arabia	1
Europe	53
Croatia	1
Czech Republic	2
Denmark	8
Estonia	1
Finland	5
France	6
Italy	5
Netherlands	10
New Zealand	1
Poland	1
Portugal	9
Russia	2
Spain	1
Turkey	1
UK	2
Oceania	8
Australia	1
New Zealand	7
<b>Grand total</b>	<b>100</b>

museums) are considerably implementing their visibility through digitization. In addition, Europe has more small museums currently digitizing collections. See [Table 10](#).

It might be argued that this information does not comprehensively explain the level of digitization of participants. Although many museums in some countries created digital content in 2019, it might be that they digitized only a few pieces of their collections; vice versa, although some countries reported only a few museums that carried out a digitalization process, it might be that they were able to create a massive digital content. For instance, although only 10% of Asian museums are digitizing their collections, they have already digitized a significant part of their collections (46%). The findings of this study suggest that the continent leading the world in the digitalising process is Asia. Indeed, the effort of Asian museums to enhance the visibility of collections is remarkable, considering that they digitize more stored items

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**Table 10** Digitization in continent for size of the museum

Continent	Large (%)	Medium (%)	Small (%)	Total (%)
Africa	0	1	5	6
Americas	1	2	21	24
Asia	1	1	8	10
Europe	6	12	36	53
Oceania	0	2	6	8
<b>Total</b>	<b>8</b>	<b>17</b>	<b>75</b>	<b>100</b>

than the average in the world (41% of stored collections). See [Table 11](#). In addition, within Asia, India and Japan are the countries that digitize more items from their depots. See [Table 12](#).

With regards to the size of collections, the findings confirm how small museums try to make collections accessible for people. Not only are there more small museums (75% of museums) that are digitizing, but they also digitize more items from the storage (46% of stored collections). These findings suggest that the more the collection grows, the more museums struggle with their visibility. See [Table 13](#).

Regarding the type of collections, the gathered data shows that the museums with a more extensive capability to digitize more items of the stored collections are art museums. Besides them, science and technology follow, as well as history museums. By contrast, the museums with a lesser capability are those with archaeology collections, natural history and natural

**Table 11** Stored items in continents

Continent	(%) Stored collections
Africa	33
Americas	41
Asia	46
Europe	42
Oceania	38
Average	41

**Table 12** Stored items in Asian countries

Asian country	(%) Stored collections
India	60
Japan	58
Saudi Arabia	28
The Philippines	38
Grand total	46

**Table 13** Stored items and size of collection

Continent	Large (%)	Medium (%)	Small (%)	Total (%)
Africa		30	33	33
Americas	15	15	44	41
Asia	15	48	60	46
Europe	23	28	50	42
Oceania		38	38	38
<b>Grand total</b>	<b>21</b>	<b>30</b>	<b>46</b>	<b>41</b>

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science, and ethnography and anthropology collections. See [Table 14](#).

Another aspect that was studied was how governance impacts the digitization of collections. The survey results show that museums with a partnership (State and Trust) have digitized more items than museums with a different type of governance. See [Table 15](#).

Online visits exceed the physical presence [13]. This data is affected by the fact that some visitors can enhance their knowledge of the collection through the digital content before or later their museum visit. However, there are people whose visit will never be followed by a physical experience in museums. Figures gathered during this study confirm a predominance of online visits on onsite museum visits. The average gap between physical and onsite visits that occurred through digital access is average twice.

### The findings on museums no digitizing

The findings of this study shed light on crucial information on museums which are not embracing the digital realm. See [Table 16](#).

With regards to the size of museums, the results confirm that large museums digitize less than small ones. See [Table 17](#).

**Table 14** Stored items and type of collection

Type of collection	Average (%)
Archaeology	21
Art	56
Ethnography and anthropology	26
History	42
Natural history and natural sciences	25
Other	41
Science and technology	45
<b>Total</b>	<b>41</b>

**Table 15** Stored collection and legal status

Legal status	(%) of stored items
Trust (public)	41
Public, part of the state, central, federal or municipal government	40
Private, non-profit body	41
Private, commercial enterprise	50
Partnership (state and a trust)	80

**Table 16** Museums that do not digitize for continent

Continent	(%) of museums
Africa	89
Americas	7
Asia	2
Europe	1
Oceania	1
<b>Total</b>	<b>100</b>

**Table 17** Museums that do not digitize for size

Size of collection	(%) of museums
Large	89
Medium	7
Small	4
Grand total	100

Another data involves museums that are not digitizing and the type of collection they own. It confirms that archaeological collections are those with more difficulties, whereas art museums have the lowest degree of no-digitization. See [Table 18](#).

Regarding the governance, [Table 19](#) shows that most museums (63%) which do not digitize have a public legal status (public, part of the state, central federal or municipal government). To sum up, museums not digitizing collections are mainly public institutions with archaeological, large collections, chiefly located in Africa and are 70 years old on average.

## Conclusion

The survey results highlight museums have had a prominent part of their collections in storage, and they are trying to make their stored collections more accessible. Bad conditions of collections and poor documentation lead museums not to use them as they are supposed to serve. As a result, stored collections tend to grow. The digitization of items represents one of the solutions adopted by museums to reach this purpose. This strategy of item digitization was adopted worldwide. A massive part of museums has already been involved in a digitization process, whereas a small part is planning to start it. Museums that digitize more items is an art museum with a small collection (up

**Table 18** Museums that do not digitize for type of collection

Type of collection	(%) of museums
Archaeology	42
Art	4
Ethnography and anthropology	15
History	8
Natural history and natural sciences	13
Other	11
Science and technology	7
Grand total	100

**Table 19** Museums that do not digitize for governance

Legal status	(%) of museums
Partnership (state and a trust)	4
Private, commercial enterprise	7
Private, non-profit body	19
Public, part of the state, central, federal or municipal government	63
Trust (public)	7
Grand total	100

to 100,000 items), has a partnership (State and a Trust) as a legal status and is between 150 and 200 years old on average.

To sum up, the key questions of the study are fulfilled in favour of the digitization of stored collections as a powerful tool because it truly increases the accessibility of collections without any boundaries, meaning geographical or opening hours or items sensitivity. Not only does it ensure items to be preserved, but it also allows people to enjoy the collections. In conclusion, the digitalization of museum items might encourage the cultural consumption of the whole collections, encompassing those kept in storage for several reasons.

This study might provide practical implications for museums and people. One important contribution is the awareness of how the appropriateness of collections management plays a crucial role in preserving collections and making them accessible to the public. Another possible implication is that museums can enlarge their visibility through digital content, both because they have not digitized and due to the dimension of their digital content. This goal might be achieved by sharing the staff with specific expertise with other institutions or recruiting volunteers and involving local communities in common tasks (so that professionals could dedicate themselves to more skilled undertakings). An alternative might be to network with local universities so as to benefit from practitioners in the digital field. Last but not least, these findings could raise the awareness that museums are facing the problem of making stored collections accessible, thereby increasing the trust in museums from the general public.

This research could pave the way for further research. For instance, it could be helpful to analyse visitors' appreciations on what museums are doing in the digital realm, *inter alia* of the digital content in terms of number of items, quality of images and ease of searching.

## Notes

- 1 Only one century later museums developed in Northern America. Eileen Hooper Greenhill, *Museums and the Shaping of Knowledge, Museums and the Shaping of Knowledge* (London, New York: Routledge, 1992).
- 2 Opening up collections for the public was considered a significant gesture of the *grandesse* of the national empire. That phenomenon involved France and its Louvre Museum which opened on the 10th of August of 1793. Yet, the British Museum that was founded in 1759 offered people the opportunity to admire collections. Royal collections were opened in other countries as well, such as Italy and Germany. Fiske Kimball, "The Modern Museum of Art", in *The Architectural Record*, LXVI. December 6 (1929), pp. 559–580.
- 3 For the British Museum, see Ian Jenkins, *Archaeologists and Aesthetes in the Sculpture Galleries of the British Museum 1800–1939* (London: British Museum Press, 1992), p. 132. For the Louvre Museum, see Andrew McClellan, *Inventing the Louvre: Art, Politics, and the Origins of the Modern Museum in Eighteenth-Century Paris* (London: University of California Press, Ltd., London, England, 1999). For Italy, see Massimo Ferretti, 'La Forma Del Museo', in *I Musei – Capire l'Italia* (Milan: Touring Club Italiano, 1980), p. 55.

- 4 A significant contribution for the selection of items was provided by the German art historian Wilhelm von Bode who created the “dual division” of pieces. Most appealing items have been selected to be exhibited. By contrast, those considered of lesser quality or just for scholar interests have been stored.
- 5 80% of the involved museums reported 80% of their collections into depots. Barry Lord and Gail Dexter Lord, *The Manual of Museum Management* (London: The Stationary Office, 1997).
- 6 The survey had 1490 responses from museums situated in 136 countries. See: ICCROM-UNESCO. 2011. International Storage Survey 2011 Summary of results. Rome and Paris. [www.iccrom.org/wp-content/uploads/RE-ORG-StorageSurveyResults\\_English.pdf](http://www.iccrom.org/wp-content/uploads/RE-ORG-StorageSurveyResults_English.pdf) (accessed 10 March 2021). And ICCROM, XXX Session of General Assembly 2017. ICCROM Programme of Work and Budget for the Biennium 2018-2019. Rome. UNESCO-ICCROM, “International Storage Survey (Summary of Results)”, 2011, [www.iccrom.org/wp-content/uploads/RE-ORG-StorageSurveyResults\\_English.pdf](http://www.iccrom.org/wp-content/uploads/RE-ORG-StorageSurveyResults_English.pdf) [accessed 13 April 2022].
- 7 Christopher Groskopf, “Museums Are Keeping a Ton of the World’s Most Famous Art Locked Away in Storage”, in *Quartz*, January 2016, <https://qz.com/583354/why-is-so-much-of-the-worlds-great-art-in-storage/>[accessed 16 April 2022].
- 8 The average collection online displayed is approximately 10%. Gerhard Jan Nauta, Wietske Van den Heuvel, and Stephanie Teunisse, *Europeana DSI 2 – Access to Digital Resources of European Heritage. D4.4. Report on ENUMERATE Core Survey 4* (The Hague, 2017).
- 9 Victoria Ateca-Amestoy and Concetta Castiglione, “Live and Digital Engagement with the Visual Arts”, Paper Presented at 18th International Conference on Cultural Economics (Université du Québec, 2014), pp. 24–27.
- 10 The study is focused on digital content spread through Wikipedia. Trilce Navarrete and Elena Villaespesa, “Digital Heritage Consumption: The Case of the Metropolitan Museum of Art”, *Magazén*, 1.2 (2020), pp. 223–248.
- 11 Museums offered new digital contents during the pandemic. A significant case is represented by the Louvre Museum in Paris. Lara Corona, “Museums and Communication: The Case of the Louvre Museum at the Covid-19 Age”, *Humanities and Social Science Research*, 4.1 (2021), pp. 15–26.
- 12 These access modalities to digital contents have revealed impressive tools of communication for museums. Lara Corona, “Museology and Communication within the Virtual Museum”, *Ulakbilge Dergisi*, 8.44 (2020), pp. 26–31.

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