

Art museums and Palaces/museum: Analysis strategies

*Museus de arte e palácios/museu:
Estratégias de análise*



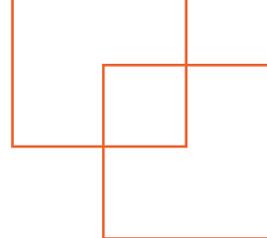
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ABSTRACT

The aim of this paper is to demonstrate the types of methodologies that exist for evaluating museum sites, what their purposes are and the application of the one most suitable for our case of study. Parameters, which are part of the initial User Journey process, linked to Service Design, were measured. The study was applied in seven selected museums in order to diagnose which requirements the museums fulfil and which points to improve. We considered it pertinent to use the qualitative methodology, using the case studies and literature review. The results showed that this type of evaluation applied in the context of museums allows us to understand and have greater control over this universe within Service Design. Besides, it represents the importance of its implementation as well as its impact on the reputation of Museums worldwide.

KEYWORDS

Service Design. Museums. Websites. Cultural Heritage.

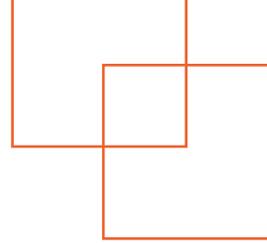
RESUMO

O presente artigo tem como objectivo demonstrar os tipos de metodologias que existem para avaliação de sites de museus, quais os seus propósitos e a aplicação de uma que nos pareceu a mais indicada para o nosso caso. Foram medidos parâmetros, que fazem parte do processo inicial da User Journey, ligados ao Service Design. O estudo foi aplicado em sete museus selecionados com o intuito de diagnosticar quais os requisitos os museus cumprem e quais os pontos a melhorar. Julgamos pertinente recorrer à metodologia qualitativa, utilizando os estudos de caso e revisão de literatura. Os resultados permitiram constatar que este tipo de avaliação aplicada no contexto dos museus nos permite entender e ter um maior controle sobre esse universo dentro do Service Design, bem como a importância da sua implementação e o seu impacto na reputação dos museus a nível mundial.

PALAVRAS-CHAVE

Service Design. Museus. Websites. Herança Cultural.



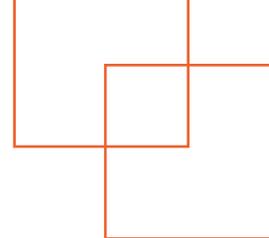


1 INTRODUCTION

The ERR (European Royal Residences) emerged in 1995, as an association responsible for the most prestigious Palaces/Museum in Europe, this network of European Royal Residences, registered as an association since 2001, was the first to write the definition of the palace/museum that hitherto intersected between the Museum of Art and the Museum of History. According to ERR (2001), the palaces/museums are residences that were acquired or built by a sovereign (either ecclesiastical, royal or imperial) who may still be partially in use today, but should be open to the public. The definition leaves no doubt, but how one can communicate and captivate its increasingly distinct and demanding audiences requires reflection. According to Gobbi (2017), the communication system of museums and, in general, of any place with cultural heritage, happens according to two vectors. The first is internal and convergent and brings the so-called communication on-site (Cataldo, Paraventi, 2007). It can be explained as a specific language - metalanguage, created through various forms of communication, from traditional media to new technologies (Vitale, 2010), intending to simplify the decoding of visitors to the exhibitions (Cataldo, Paraventi, 2007). The choice of appropriate communication "tools" is significant to capture the visitor's interest. The second vector is external - it leaves the site and requires the use of media and publicity activities, which must be accessible to the public before and after the visit. Therefore, this is a vector that can work in both cases if the (potential) visitor is inspired by a primary interest that leads him/her to consult the social media linked to cultural activities (ibid.). The reputation of museums may or may not correspond to the image they project externally. Hence, Service Design is one that should be involved in planning the communication system in order to simplify visitor perception with a shared and recognizable language (Vitale, 2010).

It is to understand part of this problem, that a literature review supports this article. It was necessary to understand what a User Journey is and, supported by the literature review, to do an investigation on the decision making we started with the websites, "before visiting" the museum.

The literature review showed us which methods are more suitable for our project (Kabassi, 2017). After the the immersion in the websites of the selected museums, we could cross the data and made considerations.



2 Objectives, research and evaluation methods

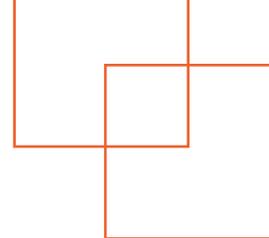
Information and communication technologies (ICT) and the Internet have changed the way users interact with exhibitions and museums themselves, offering alternative interactions and many advantages. Studies have shown an increase in online museum visitors; however, for a website to attract more visitors to the museum, it should be evaluated as useful and functional (Kabassi,2017). In this context, state of the art was surveyed concerning the evaluation experiences of museum websites, focusing specifically on the methods used. Those were classified according to the experiences performed and found in the literature review until 2019 (Kabassi, 2019). Tools are used to implement an evaluation experiment in museum websites, with emphasis on the evaluation of particular aspects of ICT use in museums, ranging from portable devices to virtual reality visits. We intend to present the most common criteria used for the evaluation of museum websites by experts and by real users. Which, according to Kabassi (2017), fall into two methods: the(1) inspection method and the (2) empirical method (or a combination of the two).

Experts mainly conduct (1) inspection methods (Kabassi, 2017); there are researchers who advocate expert assessments, arguing that it is more comfortable and more economical when compared to empirical methods. Moreover, with the correct choice of expert(s), reliable and valid results are obtained in less time. The most common type of evaluation within this method is that of usability evaluations.

ISO 9241-11¹ defines usability and explains how to identify the information that is required to be taken into account when specifying or evaluating the usability of a visual display terminal, both in terms of performance measurement and user satisfaction (Vatankhah, Wei & Letchmunan, 2014).

On the other hand, (2) empirical methods (Kabassi, 2017), are implemented with the participation of different and potential users of the museum's site to be evaluated. For the implementation of these methods, there are several modes of evaluation which can be, according to Katerina Kabassi (2017), the following: direct observation; online/offline questionnaires and interviews.

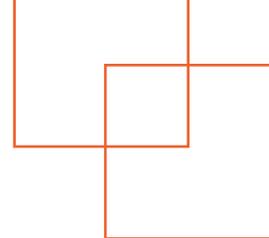
¹ This is the code used for the standard that defines what Usability is. ISO 9241-11 guides the process of identifying or evaluating the usability of a digital platform through performance and user satisfaction. The standard focuses on three fundamental points such as: Effectiveness, Efficiency and Satisfaction.



The mentioned techniques can be used to extract as much information as possible from reactions and comments from users. Second, in the case of museums, Kabassi (2017) affirms that it is quite common to use visitor observation in exhibition areas. Questionnaires are often conducted online and offline to capture the interests and opinions of visitors. However, according to the author, this method also has some disadvantages, mainly because sometimes users do not want to participate in such experiences, or their answers may not reflect reality. The interview, on the other hand, is done in person and can better capture the user's opinions, as the evaluators can also ascertain their reactions and not only their answers in real-time.

Nelson and Cohn (2015) present a review of evaluations of museum programmes and exhibitions up to 2013 and reveal that 79% of experiments conducted resort to interviewing, 60% to direct observation and 55% resort to research for data collection. Kabassi (2017) states that Cuncliffe et al. (2001) provides an analysis of the advantages and disadvantages of each category of method and concluded that a combination of methods would be more effective. In this panorama, the author Marco Maiocchi (2000) developed a method combining the two universes. The experience of the specialists by designing a grid that defines which parameters are ideal according to the visitor's needs when browsing the museum websites. In terms of measuring the contents usefulness and user experience satisfaction, this methodology was selected once it seemed the most appropriate.

It is also interesting to note that within the evaluation methods mentioned there are some researchers, such as Maiocchi (2000), who have created their evaluation system of museum sites even if only framed within one of the methods. As an example we can take Fotakis and Economides' (2008), who presents us with a structure of quality evaluation called MuseumQual that fits in the method of inspection. The experience is conducted by experts who use 35 specific criteria for museum sites that are classified into six categories: Content, Presentation, Usability, Interactivity & Feedback, E-Services and Technical. Similar to MuseumQual is MUSEF (Museum's Sites Evaluation Framework). It has a specific framework that uses the same criteria as MuseumQual but is used to evaluate museum sites from Pallas and Economides users (2008). Another inspection method, but quite different from the last two presented, is proposed by Di Blas et al. (2002) who developed the MiLE (Milano Lugano Evaluation Method). The main characteristic of this particular method is that the authors use a model to weight attributes in the evaluation of usability. However, they



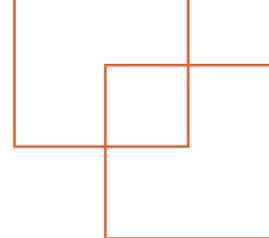
did not use a specific decision-making model, but only weighted between pairs of attributes. Another approach is the field of cultural heritage for the evaluation of “museum” websites is the Fuzzy theory, also used in the Fuzzy Quality Tree for Web Inspection (FQT4Web) methodology (Corradini, 2005). It is supported by a hierarchical tree, adapted from the ISO/IEC 9126-1 software quality model. According to this approach, the use of language terms has the advantage of providing experts with the ability to express better what they think.

Olsina Santos (1999) used the Quality Assessment Method (QEM) to evaluate and compare the quality characteristics of internationally known museum sites. The specific model focuses mainly on the usability, functionality, reliability and efficiency of the museum sites it addresses. A combination of inspection methods and empirical methods incorporating expert and user results is done within the framework of Systematic Usability Assessment (SUE), which was applied to evaluate museum sites. Four attributes can be used to characterize SUE: heuristic, empirical, systematic and model-based. The inspection is carried out by performing a set of predefined evaluation activities using a specific evaluation model. Users and experts are led to evaluate the learning process within a museum using the M3 evaluation framework (Vavoula, 2009).

The M3 comprises three levels:

- **micro-level:** examines the individual activities of technology users and evaluates the utility and utility;
- **meso-level:** examines the learning experience as a whole, to identify learning breakthroughs and discoveries; it also examines how the learning experience integrates with other related learning experiences;
- **macro-level:** examines the long-term impact of new technology on established educational and learning practice. This is mainly related to the organization of visits to school museums. A framework for site evaluation that focuses on the assessment of user achievement and informal learning was also proposed by Lin et al. (2012). The latter framework assesses mainly three dimensions: Involvement, Positive Affect and Compliance.

Another specialized method for evaluating museum sites with unique features, such as the use of multimedia, VR or work on mobile devices, was developed by Othman et al. (2013) and is called MMGS. The particular method was developed using a complete psychometric procedure. The MMGS first finds and analyzes testimonies about the reaction of users found in the literature. This method uses a questionnaire as a means of



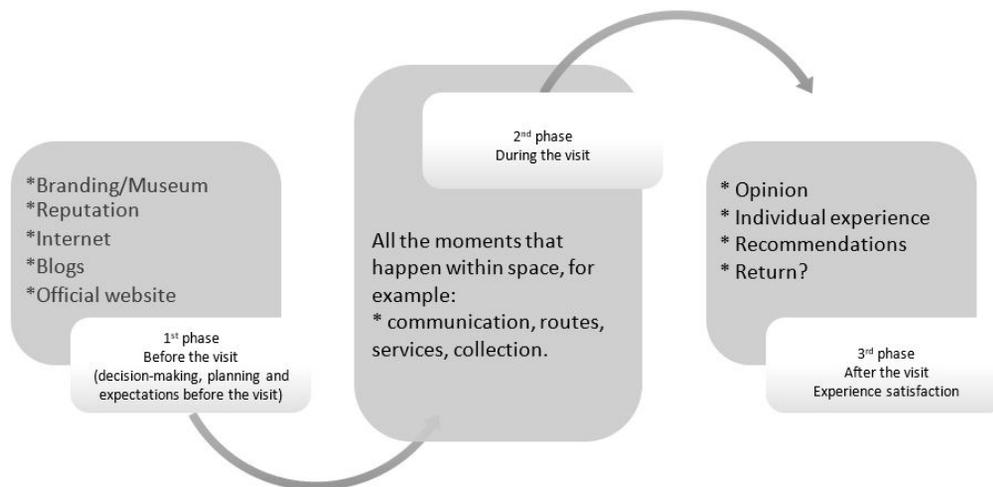
interaction with users. Finally, log analysis can be used for web statistics analysis. This method is standard for the evaluation of museum websites (Kabassi, 2017). An entirely different type of analysis is conducted by Geursen and Rentschler (2003). They used WebNP attract, a web tool to evaluate some specific features such as museum architecture, programs, accessibility and communication. However, Kabassi (2017) stresses that “a web tool cannot replace the opinion of an expert or real user and cannot provide qualitative results”. (Kabassi, 2017, p. 189).

With this background, at this stage of the research, we proceed to the analysis several museums and concentrating on the first part of the User Journey - before the visit - (image 01). We think it makes sense to use the combination of the two methods, given the need to obtain accurate and quick data on what is available for the user to start their experience. In order to compare the seven museums selected² for our research, of which our object of study is parting - the Palácio da Pena -, we used the model studied and published by Marco Maiocchi (2000) based on the evaluation table created by Ilaria Gobbi (2017) to evaluate corporate museums, which we adjust according to our types of museums (art and palaces/museums). We produced a grid that provides the same five attributes: 01. Identity; 02.Divulgation; 03.Presence in social networks; 04.Interactivity, and 05.Transparency.

A detailed categorization of the methods implemented for the evaluation of museum sites is presented in the next section.

² The Museums were selected, based on the typology, since the palace/museum, as already mentioned, is in the interception of the Art Museum and the History Museum. We considered pertinent the choice of 3 Art Museums, 3 Palaces/museums and our object of study the National Palace of Pena, which was fundamental for fieldwork. We used annual reports of the speciality that report the number of visitors per year, such as the TEA (Themed Entertainment Association 2018) and the social networks as a trip advisor, Instagram and Twitter.

Image 1: User Journey - Total User Experience is the aggregate result of these 3 components.



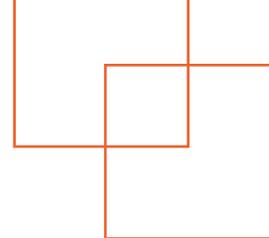
Source: Authors.

3 Evaluation of the websites of the selected reference cases³

3.1 Identity

The first parameter, **Identity**, is used primarily to verify that web-based communication is strategically built around the analyzed museum. The term identity, proposed here, means the perception of the image that the museum has of itself (Gobbi, 2017), that is, its self-recognition of existing concerning a geographical, social, historical and cultural context. We can confirm that the parameter of identity is not sharply demarcated in any of the museums when it is verified that only the MET (NY). The Schönbrunn Palace comprises a presence of three point five (3.5) points out of the six (6) possible sub-indicators, followed by the Museums of Louvre and National Gallery, which obtain an average score with three (3) points out of the six sub-indicators. Then comes the Palace of Versailles, which obtain only two point five (2.5) of the six (6) sub-indicators. Finally come the Palacio de Caserta and the Palácio Nacional da Pena that do not reach the standards, achieving one point five (1.5) points of the total of six (6) sub-indicators.

³ The analysis of the websites occurred at 6-01-2019, some websites may have changed in some of the parameters, such as the case of Palácio da Pena which already has an online store. We must also inform the fact that museums do not meet all the requirements does not mean that they do not exist or are not foreseen by the institutions. In this case, we want to show whether or not it is visible so that the visitor can benefit from this information, even being on the other side of the world and still if this answer is easy to find.



We have observed the general evaluation for the parameter in question, but it is also interesting to verify the values revealed by the sub-indicators. We can highlight the fact that most museums, six (6) out of seven (7), have a dedicated and independent web page for the museum's communication. The Palácio Nacional da Pena is the only one that does not sufficiently meet this requirement. They do not have a URL (Uniform Resource Locator) independent from the institutional website of the company Parques de Sintra - Monte da Lua S.A.

Curiously, MET and Louvre are the only two examples to fully satisfy the parameter regarding the existence of the museum's mission statement, one of the primary documents, according to ICOM⁴. It is particularly interesting to characterize the identity of the MET's website, where there is a specific mention of "a missão" (the mission). We must also mention that the Sintra Parks website (Parques de Sintra - Monte da Lua S.A), is an aggregator of all the infrastructures managed by the company, and presents a text on the Mission. However, since it focuses on the company and not on the Palácio Nacional da Pena, it was not considered for this evaluation.

By defining the main image, the museum perennially assumes its own identity and thus the way it projects itself before visitors from all over the world. Jim Richardson (2019) of Museum Next makes us reflect with the following questions: What makes the brand identity of the museum(s) stand out in the crowd and somehow become instantly well-known? How can a great brand identity give an advantage to each museum when potential visitors are deciding how to use their free time?

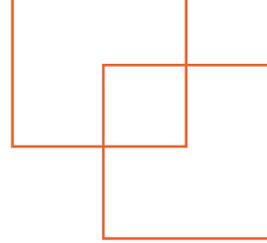
Branding⁵ works as a coordinated sensory device (Oliveira, 2015; Raposo, 2019; Wheeller, 2017). the brand represented by the Logo is an identification point. This indicator was, therefore, highlighted in the measured parameter. The presence of the Logo is covered by all the museums that get the highest score.

4 "The board of directors should ensure that each museum has a written and published constitution chart, statute, or other public documents in accordance with national laws, which clearly state the museum's legal status, mission, permanence and non-profit nature." (from ICOM Code of Ethics for Museums, 2017, p3).

5 Branding are all design elements that the museum uses to present itself to the public, including the logo, color palette, fonts and other visual elements. Simply put, it is what will attract each of us, potential visitors and the public on a global scale. Nevertheless, we reinforce that it is different from the brand of museums.

The people's perception about the institution is shaped in part by the identity of the brand, but also by all the other interactions that they have in the museum (or museums), from the experience of visiting to the facility using the website.

The brand identity is a tool to communicate what the institution represents, and that is where we enter service design.



The sub-indicators related to the storytelling visit narrative, to the presence of a virtual gallery, are useful parameters to understand the level of sharing of both collections and online heritage. Only the Schönbrunn Palace fulfils such parameter, reaching one (1) point, followed by Caserta Palace with half a point (0.5). As for the existence of a virtual gallery, it is only available by National Gallery (UK) rating one (1) point, followed by The MET (NY), Versailles Palace and Schönbrunn Palace with half a point (0.5) each which reveal some Master peaces. None of these two sub-indicators can be found in either the Louvre Museum or the Palácio Nacional da Pena.

In the vision segment, that is, the expression of the objectives narrated with people representing each museum, such as the stakeholders, director, curators, none of the museums pass on that message. There is no “idea” of future vision utilizing messages in any type of media, such as in the video, for example, as proposed by Gobbi (2017).

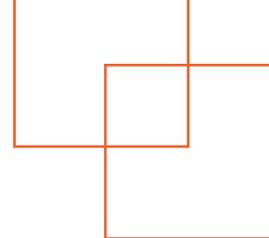
Table 1: Identity table

	Louvre	Met	National Gallery	Palácio de Versailles	Palácio de Schönbrunn	Palácio da Caserta	Palácio da Pena
Dedicated Website	1	1	1	1	1	1	0,5
Museum mission	1	1	0	0	0	0	0
Museum Brand	1	1	1	1	1	1	1
Storytelling visit	0	0	0	0	1	0,5	0
Virtual gallery	0	0,5	1	0,5	0,5	0	0
Vision	0	0	0	0	0	0	0
Total	3	3,5	3	2,5	3,5	1,5	1,5

Source: Authors.

3.2 Disclosure

The **Disclosure** indicator contains the operations necessary to increase public involvement, and implement the level of interest of



users, reinforcing the transmission of values of each institution. Whether or not these strategies are implemented influences the reputation of museums. The difference between the museums analyzed becomes more evident. For example, National Gallery touches almost the edges of the evaluation scale with five and a half (5.5) points. The MET and Louvre Museum do not respond positively to all items, but achieve a partial score of four and a half (4.5) and four (4), respectively. The Schönbrunn Palace still manages to occupy a slightly above average position, with three point five (3.5) points. In comparison, the other samples are below the Versailles Palace with two and a half (2.5 points), Palacio Caserta and Palácio da Pena reach only two (2) of the six (6) sub-indicators. Curiously, the Palácio da Pena is one of the few that fulfils the question of the existence of the awards disclosure.

In general, we can see that one of the less punctuated questions are transversal in the absence of a press release⁶. However, as we know, this is a communication vehicle that obeys specific journalistic rules, directed at a target audience that sees its life made difficult by the search for information that is increasingly dispersed and sometimes less complete. The fact that the Louvre Museum is the only one covering this sub-indicator may also point out that museums feel that there is no need to communicate in this way and may be a factor to be verified.

⁶ press release in Portuguese Language Infopedia Dictionary [online]. Porto: Porto Editora, 2003-2020. [Accessed at 2020-08-03 17:43:26]. [https://www.infopedia.pt/dicionarios/lingua-portuguesa/press release](https://www.infopedia.pt/dicionarios/lingua-portuguesa/press%20release)

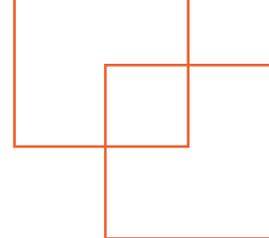


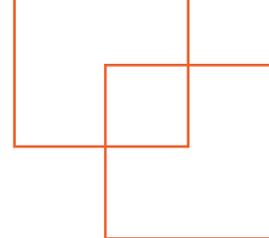
Table 2: Disclosure table

	Louvre	Met	National Gallery	Palácio de Versailles	Palácio de Schönbrunn	Palácio da Caserta	Palácio da Pena
Events							
Calendar	1	1	1	0	1	0,5	0,5
News							
Actualization	1	1	1	0	1	1	0
Awards							
	0	0,5	0,5	0	0	0	0,5
Laboratories, guided Tours, Workshops							
	1	1	1	1	1	0	0,5
Press Release							
	1	0	1	0	0	0	0
Collaboration with Institutes, museums, artists							
	0	1	1	0,5	1	0,5	0,5
Total	4	4,5	5,5	2,5	3,5	2	2

Source: Authors.

3.3 Presence on Social Networks

The parameter involving the **social networks** (see table 03) is only intended to signal the presence or absence of museum institutions in the main social networks used for cultural communication. In the last decade, users are no longer passive, but producers and consumers of content. This means that public relations (PR) and advertising content can flow quickly and directly in both directions. Companies approach their customers directly and benefit from the almost immediate return of unfiltered information. International platforms such as Facebook and Weibo (the largest social network used in China) play a particularly important role here, as companies that include those in the cultural sector can quickly get in direct contact with their target group. According to a Nielsen study (2018), 70% of Internet users rely on other clients' evaluations and ratings on these same platforms. However, it is precisely the global nature of the networks used by billions of people that drives them to obtain globally valid measures and strategies for social media marketing. Cultural peculiarities are rarely taken into account - neglect of country-specific characteristics



that ideally should increasingly enter the focus of marketing departments. Because what works well on Facebook in the US, may not reach users on Weibo in China and vice versa. This applies to all areas of content production - from text, images and videos to interactive elements such as competitions and general considerations about the mix of informational and entertainment aspects (Cordoan, 2018).

Table 3: Presence on Social Networks table

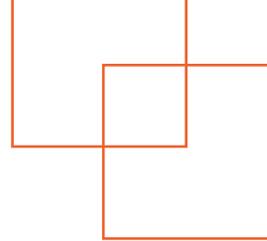
	Louvre	Met	National Gallery	Palácio de Versailles	Palácio de Schönbrunn	Caserta	Palácio da Pena
Facebook	1	1	1	1	1	1	0,5
Twitter	1	1	1	1	1	1	0,5
Instagram	1	1	1	1	1	1	0,5
Pinterest	0	1	0	0	1	1	0
Youtube (channel)	1	1	1	1	0	1	0,5
Hashtag-location-pages in the unofficial	1	1	1	0	1	0,5	0
Total	5	6	5	4	5	5,5	2

Source: Authors.

3.4 Interactivity

Interactivity is the union of all operations to favor the exchange of information between two systems, museum and visitor; perception and preceptor (Bottoli, Bretagna, 2013). The parameter of Interactivity is not satisfactory among the sample: only two (2) of the seven (7) museums scored above average, (the highest score of four and a half - 4.5 - is achieved by Schönbrunn's Palace, followed by The National Gallery with four points - 4), Louvre Museum and Versailles Palace got three (3) points each, followed by The MET and Caserta's Palace, with only two (2) queries, and, finally, The National Palace with only one and a half (1.5) points.

In general, we can mention that only three (3) museums provide material to which visitors can have free access through download, which



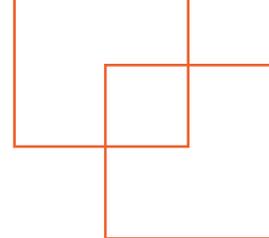
allows the preparation of the visit, but without any playful purposes. In a temporal reality where a famous museum like MoMA (New York) allows us to download for free the catalogues of all exhibitions from 1929 until now, it seems almost outdated that other museums do not allow the download of materials such as period references, paintings, stories about the museums or memories with the mark in the past. Thus, interactive communication can open a big gap between art museums and museum palaces, where the museum with the most significant cultural heritage remains closer to the logic of the traditional museum, not in line with the real progress of contemporary museology.

We must also mention the total absence in the interactive sub-indicator regarding the presence of online games, video games and quizzes, there is this interactive gap in all museums, and it could be an aspect to be improved to captivate new audiences, especially in the phase we are going through of social distancing.

Table 4: Interactivity table

	Louvre	Met	National Gallery	Palácio de Versailles	Palácio de Schönbrunn	Caserta	Palácio da Pena
Audiovisual material available	1	0,5	1	1	1	1	0,5
Virtual Tour	1	0	1	1	0,5	0	0
Online games, video games, quizzes	0	0	0	0	0	0	0
Customized tours	1	0,5	0	0	1	1	0,5
Free download of material	0	0	1	0	1	0	0,5
Online Shop	1	1	1	1	1	0	0
Total	3	2	4	3	4,5	2	1,5

Source: Authors.



3.5 Transparency

The last indicator concerns **Transparency** or clarity and accessibility of data, according to the user. It brings together all the information about the museum that is useful to the visitor, such as contacts, opening hours, how to get there, information on public transport (or other), scheduling of guided tours, activities within the museum(s), their organization, and others. It intends to provide an initial orientation that, from the website, should express the nature of the institution with the (potential) visitor who is currently in contact during a not very deep web exploration. It seems appropriate to point out that all museums are above average, with the Louvre Museum and the Schönbrunn Palace, fulfilling all the requirements. The museums with the lowest score reach three and a half (3.5) points in the sub-indicators, being, as we mentioned moderate.

Regarding languages, it was interesting to note that almost all of them mainly satisfy the sub-indicator on linguistic accessibility, thanks to translations, mainly into English, French, Spanish. However, we must mention that both The MET and National Gallery only provide translations of their sites in English.

Two other sub-indicators of accessibility, now related to their physical nature, are those that act in a way to attract visitors with special needs and elucidate the rules of visits and accessibilities. These are essential tools that ensure planning, anticipating the various types of needs of the public. Curiously, three museums do not mention any rules of the exhibition on the website (The MET, National Gallery and Versailles Palace) while the other four (4) comply with distinction. Besides, we can also highlight the fact that only Palacio de Caserta and Palácio Nacional da Pena do not fill out the provision of information to facilitate access for people with disabilities and pregnant women or women with prams. We know that although this typology of visitors is a minority, we think that they need to be safeguarded with special care also during the ride and may open other lines of investigation.

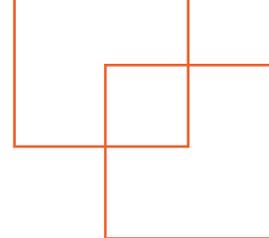


Table 5: Transparency table

	Louvre	Met	National Gallery	Palácio de Versailles	Palácio de Schönbrunn	Caserta	Palácio da Pena
Contacts	1	1	1	1	1	1	0,5
Information and services	1	0,5	0,5	1	1	1	0,5
Maps and mobility	1	1	1	1	1	0,5	0
Website Translation into other languages	1	0	0	1	1	0,5	1
Accessibility for visitors with special needs	1	1	1	1	1	0	0,5
Exposure Rules	1	0	0	0	1	1	1
Total	6	3,5	3,5	5	6	4	3,5

Source: Authors.

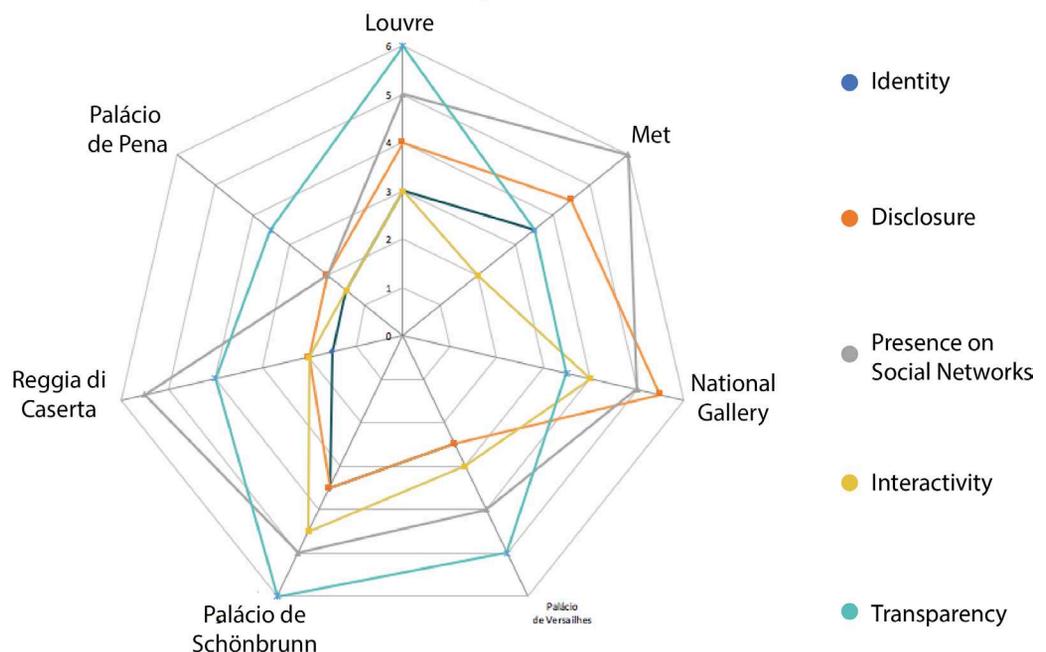
To conclude, according to an overview, resumed with the diagram⁷ (Lima, 2015), some interesting considerations to be highlighted. The characterization of identity seems to be the weakest dimension concerning the capacity of museums to communicate online and to coordinate in an integrated vision. There is undoubtedly a need to improve this aspect of identity, which is not very demarcated in the museums studied. Often, companies, thinking of museums as exhibition sites, do not understand that they are participating in the creation of real permanent institutions dedicated to culture, intending to preserve and improve testimonies, thus helping to contribute to ensuring that cultural heritage is not decontextualized. It is interesting to highlight the almost total absence in the analyzed samples of “no reference” to the “mission”, as previously mentioned in our opinion demonstrates expression of the lack of involvement of specialists and professionals necessary for the creation of an adequate museum, such as museologist, museumgrapher, design historian, communication specialist, visual designer, linguist, a specialist in museum educational services, a specialist in social marketing, researchers in the background justifies the importance of Service design in the area of Museology.

⁷ The use of the Radial diagram allows us to visualize the information complexity in a simple way and easily decode the strengths and weaknesses, compare and understand their impact as a whole.

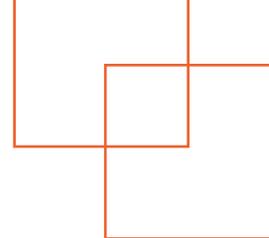
In short, we think that there seems to be no museum policy involving service design as part of a uniform strategy that must take into account the right communication strategy. It seems to us that without this synergy it will not be possible to attract them autonomously to the public, not even in situations where the brand has an influential appeal.

It was possible to demonstrate that another weakness of the sample museums is the indicator related to the interaction dimension. The almost total absence of scores related to this area is, in fact, a clear reflection of the lack of investment in new communication strategies and technologies, to increase the involvement of the target audience; not only at a quantitative level but above all in qualitative terms: the need for the survival of cultural institutions. The lack of capital invested in the interactive sector may be one of the factors that amplify this gap, concerning other museums that are more innovative in experimenting with new interactive strategies, both internal and external and try to reach the most significant number of visitors. However, we think it is possible that service design can help in this task, especially by captivating hard-to-reach audiences, such as teenagers (Cataldo, Paraventi, 2007).

Image 2: Results of the measured parameters, previously presented visually in a Radial diagram



Source: Authors.



4 CONCLUSIONS

This analysis revealed some interesting considerations. The first factor concerns the rapid need to improve communication via the website with visitors and occasional visitors. For this to be possible, almost all museums need to concentrate their efforts and rely on service design and especially on the user's journey of the various possible audiences to encourage the feeling of belonging and involving those who visit even if virtually and that visit is superior to the experience that the visitor was expecting. The reputation of museums is crucial in decision making, so the second reflection is in broader use of social networks in order to create a more active visitor, almost as a co-author of the values that are intended to be transmitted with the museum. The use of social networks allows the museum to refuse its presence on the web, using a colloquial language, less formal but based on scientific information, in order to try to involve users of social networks. If they are satisfied and curious, they can indeed turn their virtual experience into a real visit (Cataldo, 2014). As the analysis points out, creating social communities on Facebook or Twitter should be the right method to actively involve the public in the cultural process through different channels (Bonacini, 2012).

BIBLIOGRAPHICAL REFERENCES

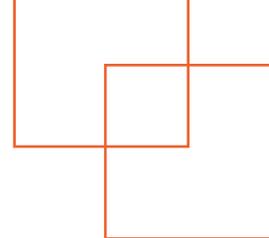
Bonacini, E. (2012). Il museo partecipativo sul web: forme di partecipazione dell'utente alla produzione culturale e alla creazione di valore culturale/The participatory museum on the Web: forms of user participation in cultural production and the creation of cultural value. Il capitale culturale. **Studies on the Value of Cultural Heritage**, (5), 93-125

Cataldo, L., & Paraventi, M. (2007). Il museo oggi. **Linee guida per una museologia contemporanea**, Milano: Hoepli.

Corduan, A. (2018), Social Media as an Instrument of Customer Communication: Comparative Study of Companies in China, Germany, and the US. **Springer Fachmedien**, Wiesbaden

Corradini, E. (2005). Inspection of museum web application quality-analysis of selected European sites. **In Museum and the web 2004** (pp. non-disponibile). Museum & Web.

Di Blas, N., Guermand, M. P., Orsini, C., & Paolini, P. (2002). Evaluating



the Features of Museum Websites:(**The Bologna Report**).

Fotakis, T., & Economides, A. A. (2008). Art, science/technology and history museums on the web. **International Journal of Digital Culture and Electronic Tourism**, 1(1), 37-63.

Geursen, G., & Rentschler, R. (2003). Unraveling cultural value. **The Journal of Arts Management, Law, and Society**, 33(3), 196-210.

Gobbi, I. (2017). Corporate Museums and design: Web communication strategies. **Tafter Journal**, (97).

Jim Richardson (2019) www.Museumnext.com (Último acesso 29-07-2020)

Kabassi, K. (2017). Evaluating websites of museums: State of the art. **Journal of Cultural Heritage**, 24, 184-196.

Kabassi, K. (2019). Evaluating museum websites using a combination of decision-making theories. **Journal of Heritage Tourism**, 14(5-6), 544-560.

Lin, A. C., Fernandez, W. D., & Gregor, S. (2012). Understanding web enjoyment experiences and informal learning: A study in a museum context. **Decision Support Systems**, 53(4), 846-858.

Maiocchi, M. (2000). Iper testi: progettare con un nuovo strumento di comunicazione. F. Angeli.

Nelson, A., & Cohn, S. (2015). Data collection methods for evaluating museum programs and exhibitions. **Journal of Museum Education**, 40(1), 27-36.

Oliveira, F. (2015). Diagramas & marcas: contributos sobre a utilização de diagramas na conceção e análise do discurso visual. **Tese de Doutoramento** - Lisboa : FA.

Othman, M. K., Petrie, H., & Power, C. D. (2013). Measuring the usability of a smartphone delivered museum guide. **Procedia-Social and Behavioral Sciences**, 629-637.

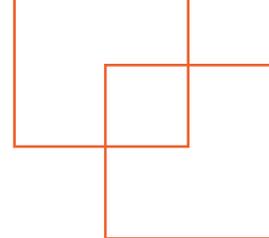
Pallas, J., & Economides, A. A. (2008). Evaluation of art museums' web sites worldwide. *Information Services & Use*, 28(1), 45-57.

Raposo, D. (2018). Communicating Visually: the graphic Design of the Brand. **Cambridge Scholars Publishing**; 1 edition

Santos, L. O. (1999). Web-site Quality Evaluation Method: a Case Study on Museums. In **Proceedings 2nd Workshop on software engineering over the Internet-ICSE**.

Vatankhah, N., Wei, K. T., & Letchmunan, S. (2014). Usability measurement of Malaysian online tourism websites. **International Journal of Software Engineering and Its Applications**, 8(12), 1-18.

Vavoula, G. (2009). Issues and requirements for mobile learning



research. 2009) Researching Mobile Learning. Framework, Tools and Research Designs. **Bern:** Peter Lang AG.

Vitale, G. (2010). Il museo visibile. **Lupetti-Editori di comunicazione.**

Wheeler, A. (2017). Designing brand identity: an essential guide for the whole branding team. John Wiley & Sons

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