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SUSTAINABILITY IN MUSEUMS OF BUDAPEST – AN EXPLORATORY RESEARCH

The paper summarizes the results of the research executed in 2016 among 15 museums and exhibitions of different size in Budapest. The research involved deep interviews with museum leaders and observation of the institutes' exhibitions and other activities. The aspects of the research were target groups, method of interpretation, interactivity, marketing, involvement of volunteers, etc. Four important factors seem to influence visitor numbers the most, such as location, historic building of the museum itself, general attribute of the topic treated and the level of interactivity. Results were analysed in the frame of new museology, a new paradigm, in relation with museum development and operation which have to be taken into consideration by all leaders in these attractions. Museums have the responsibility of sensitization of the public regarding the importance of different topics and the value of heritage, treated among the walls. If they do not accept the methods of interpretation fitted to new generations or to anyone living in the rushing world of the 21st century, then they won't be able to attract enough visitors for their sustainable operation and for the fulfilment of their goals. Sustainability of museums was evaluated on the basis of environmental, economic and socio-cultural points of view. Mostly all factors, analysed during the research affect one or more of the above-mentioned aspects of sustainability.

Literature review and methodology: New museology

The environment of museums has been changed since the late 20th century, as visitors' demands nowadays are different from those of the previous generations. Museology is the entirety of theoretical and critical thinking within the museum field (Mairesse & Desvallées, 2010). New museology evolved from the perceived failings of the original museology, and was based on the idea that the role of museums in society needed to change (McCall & Gray, 2014). In the 1970s museums in Britain were seen as the symbols of "national decline" (Hewison, 1987). In 1971 it was claimed that museums were isolated from the modern world, they were considered as elitist, obsolete institutions and a waste of public money (Hudson, 1977). The theory of cultural legitimacy (Bourdieu, 1979) strengthens the elitist attribute of museums, as the consumption of culture is said to reveal the individual's intention to affirm his or her social standing. Being elitist meant also that museums were 'cultural authorities' upholding and communicating the truth

(Harrison, 1993), the only truth that could exist. The needs of a narrow social group determined exclusively the role of museums (Hooper-Greenhill, 2000). According to this, the major role of museums was to ‘civilise’ and ‘discipline’ the mass of the population to fit their position within the society (Bennett, 1995), through differentiating between ‘high’ and ‘elitist’ cultural forms which were worthy of preservation and ‘low’ or ‘mass’ ones (Griswold, 2008) which were not. Several sensitive or less important topics were left out of the walls of museums for this reason.

At the end of the 20th century management and curators were forced to change their attitude and standards, as the perception of museums among visitors had become fairly negative. Museums found it difficult to compete with other tourism attractions, their image of being boring and dusty places (Kirshenblatt-Gimblett, 1998) had to be changed. “Dead” displays, static exhibitions had to be revitalized to become “living” ones (Urry, 1990).



Figure 1: Way from Old to New Museology (Source: own compilation)

Focus on people

Museums had to change their focus, according to the interest of visitors, the needs of the contemporary society and therefore focus more on the people themselves, than on artifacts as part of collections (Simpson, 1996). “In a museum display, the object itself is without meaning. Its meaning is conferred by the ‘writer’, that is the curator, the archeologist, the historian, or the visitor who possesses the ‘cultural competence’ to recognize the conferred meaning given by the expert.” (Walsh, 1992) Meaning-making is the key of modern museums, it cannot define important and less important heritage. Interest has to be created by the museum. Therefore interpretation of a given object is getting to be more and more important; it can be even more interesting than the object itself. “The question is not whether an object is of visual interest, but rather how interest of any kind is created” (Smith, 2003). People of the contemporary society are users of objects and sometimes even creators of artifacts within the museums (Simpson, 1996). Visitors play an active role, having controller and curatorial functions regarding exhibitions (Black, 2005, Kreps, 2009). Raising the interest of the audience requires engaging topics, that are worthy to get involved and that inspires creativity. Co-creation is the involvement of visitors in the artistic or creative procedure, resulting something of interest. Important focus is that art, history and other topics should not be interpreted only in

one way, there should be more discussion, more involvement of visitors, who would not be any more simply observers, but active ones. Varied form of representation should be accepted in museums, if not, than we would move towards “a homogenized monopoly of form, which in itself is an attack on democracy” (Walsh, 1992). Vergo (1989) states that new museology promotes “an open institution towards the public that focuses on the active participation of the visitor, which functions as a platform, that generates social changes.” On the other hand, the new role of museum can be questioned, taking into consideration its classic values, and the deep knowledge of its curators. “If a museum puts the perceived needs of people before its collections, then the collections lose their importance and value” (Appleton, 2006). Having had to change their attitude, the roles within the organization of museums have changed as well. As any other service provider that focuses on a complex touristic experience, managerial functions in these institutions came to the foreground. “The role of curators had been ‘downgraded’ [...] and more managerial layers have been placed between them and high-level decision makers” (McCall & Gray, 2014). On the other hand professional, scientific background is very much needed for the accuracy of these institutions, which might get overshadowed as the outcome of the previous changes.

Social context

Social issues are tackled by widening the audience of the museums, by becoming less elitist institutions, whose operation was previously defined by a small group of society. Museums’ role turned out to be the generator of ‘cultural democracy’ (DCMS, 2006). Nowadays there is a greater accessibility, wider public participation in museums (Stam, 1993, Ross, 2004), which have to be “more responsive to their public, they have to diversify and target niche markets as other service providers” (Smith, 2003). People need also a more understandable communication style, which is more interdisciplinary (Vergo, 1989), which links different topics and interests. Museums try to target previously under-represented groups to engage them in the frame of their audience development strategies (Black, 2005). “This requires shift in styles of communication and expression compared to classic collections-centered museums” (Mairesse & Desvallées, 2010).

As museums take into consideration a wider social group as audience, they might overcome their previous intention of focusing on ‘soft’ history, and not tackling controversial or conflicting topics (Swarbrooke, 2000), so that they might initiate discussions about discrimination and inequality within society (Sandell, 2007) as well. Dialogue is greatly important for contemporary society, which is the outcome of the multicultural environment (Vergo, 1989), featuring the 21st century. On the other hand emotions are just as important, considering, that during a museum visit,

engagement of the visitor might be reached only if she/he is not only an observer, but also the exhibition raises some kind of feelings. As the previously mentioned under-represented groups get to be the target of museums, and as more possibility is given to visitors to shape their own point of view in a more liberal museum environment, the trend of cultural empowerment (Harrison, 1993) becomes even more a central point. “Museums should be effectively ‘peoples’ universities’, they potentially have a positive, democratic social force” (Merriman, 1991).

Functions

Researchers have proved, that leisure and entertainment are strong motivations to visit museums (Moore, 1997, Packer & Ballantyne, 2002), after these, learning, as a motivation turned out to be secondary (Tomiuc, 2014). The focus of museums in general, therefore their main function, had to be changed towards being a recreational institution centered on the audience and its needs (Vergo, 1989). “The museum nowadays is influenced by the consumption society and the entertainment era, aiming to transform art and culture in a spectacular performance” (Vergo, 1989).

International Council of Museums (ICOM) in 2007 defined “A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment”. Edutainment is in central focus, as a successful method of information transmission. ICOM has completed its statement with the following: “The definition of a museum has evolved, in line with developments in society”.

Museums have the responsibility of facilitating the interpretation of objects, and artifacts by visitors. It has to be able to show connections between pieces never found in the same place at the same time together, based on the knowledge of curators it might reveal relationships that would never be realized without their help. The way of presenting a collection is therefore crucial (Kirschenblatt-Gimlett, 1998).

Interactivity in museums

Bodnár (2015) summarizes trends leading to virtualization regarding heritage attractions, such as museums. Several factors impact museum environment and visitors’ needs, such as spread of Info Communication Technology (ICT), dynamic

devices used in museums, visitors' arisen level of stimulus threshold, their need for multiple interpretation and quick filtering of information in exhibitions.

ICT such as multimedia installations, mobile applications provide special attraction to the experience-focused tourism demand. ICT is a driving force for innovation in tourism fields, which is very much needed in the revitalizing of museums. The question regarding museum development is not whether to use these devices, but how we can strengthen the most their impact, resulting a deeper, richer, and more immersive visitor experience (Tomiuc, 2014).

In museums, visitors can meet several dynamic devices (e.g. audio-visual and hands-on instruments, interactive maps), which have completed or substituted classical static instruments (scale-models, photos, descriptions) in the last decades. For museums it means a serious challenge to attract the potential 21st century's technophile visitors.

A certain level of stimulus threshold is set by the every-day life of visitors, who are interconnected 24 hours a day. They are surrounded by audio-visual devices, that provide media content, which pushes the limits continuously.

In general, museum management (sales and promotion) face the hurdles of the same kind, namely tourism demand seems to be weaker towards the classical cultural values, on the other hand sensibility towards technological innovations, cultural differences and extremities are much stronger. Different dynamic devices and multiple interpretation opportunities based on several instruments and methods will likely be basic requirements to attract visitors efficiently. For each target group a different amount and quality of information is needed; they interpret the information in different ways. To deliver the message of an exhibition varied methods should be used based on the attributes and needs of these groups.

At the same time visitors' concentration capacity decreases; they are able to focus on the same content and on the whole attraction for a shorter period of time. Visitors scan museum signs or content of devices quickly and filter them effectively for information. Effective information transmission, supported by different interpretation methods is crucial in terms of museums' educational function.

Methodology

In the present article the results of a research will be analysed, which focused mainly on touristic aspects regarding museums' operation in Budapest, Hungary. Between February and May, 2016 third year tourism students from Corvinus University of Budapest conducted a survey among 15 museums in Budapest, with the supervision of Dr. Melinda Jászberényi and Dorottya Bodnár, PhD student. Students worked in groups of 4–5 people. Results of primary research were analysed

together with secondary data (visitor numbers and their components regarding the institutes).

An additional primary research was done during the evaluation period: analysis of ranking of involved museums on TripAdvisor.

The main primary research, conducted by university students was divided into two parts, observation and deep-interview. First part of the research was observation and evaluation of each museum on the basis of the following factors:

- target groups of the museum – whether they overlap or not with each other, when analysed from different point of views (communication; applied devices; language of museum communication; topic),
- use of modern and interactive devices in the museum (touchable objects, devices; films; audio devices, sounds; mobile application; games for individuals or groups; dressing up in costumes; touch screens; audio/visual guides; others),
- and visitor friendly signs regarding language and content.

Second part of the research included deep-interviews with managers of the museums. In the frame of the interview, questions focused on the following areas: exhibition (type, frequency of change, target groups, interactive devices used in the exhibitions, visitors' feedback), opening times, components of visitor numbers, museum pedagogy, guided tours, cultural programs, income generating activities, marketing, voluntarism.

Main research questions were the following:

- How does economical, environmental and socio-cultural sustainability appear in museums?
- How do these factors affect each other?

In the frame of the research convenience sampling methodology was used, museums were chosen on the basis of availability. Regarding location sample is focused on Budapest, chosen museums and exhibitions are different from several points of view, such as size, location, visitor number, topic. The methodology allows to conduct an exploratory research of the topic.

In the first part of the research structured personal observation was applied in a natural environment. The aim was the analysis of a touristic environment from different points of view. Aspects of observations were clearly defined. Observers' intention was known by the museums, however no personal interactions (e.g. participation on guided tour) were analysed, but every-day operation of the institute could have been traced by the observers (e.g. operation of IT devices).

Individual deep-interview as a method was chosen to explore several aspects of museums' work in a personal conversation. Half-structured interviews were done, as

questions, topics were defined, but they were partly open-ended questions, which could be discussed in a way, depending on the interviewer. Objective data about the certain museum were collected, but at the same time opinion of a specific person was explored in the frame of the interview. Advantages of the research method are that, the interviewee is not affected by the other group members, as in a group interview, more aspects of the topics can be discovered, than in for example a questionnaire and there is a possibility of gaining a wide knowledge about a certain topic. Disadvantages are possibility of misunderstanding, time taking process and that, the questioner may influence the interviewee (University of Pécs, 2011).

Limitations of the research

Museums collect data with different methodology. Visitor numbers, and their components can be compared only on the basis of official cultural statistics, which are obviously restricted on some factors. Although cultural statistics might be as well misleading, as under the umbrella of one museum, more exhibition place can be listed, which are in some cases separated, in others they are presented in total.

A research, conducted by students has restrictions, mainly those having open questions, qualitative research elements. A quantitative, questionnaire-based research would have given more exact results, however fewer topics could have been analysed and no space would have been given to museum managers to express opinion regarding the topics.

Research done on the site of TripAdvisor have restrictions as well, as not all museums are listed and some appear in the lists more than once under slightly different names.

Results of the research – Observation

In the following section results of observation were analysed and in some cases they were completed with the results of the deep-interviews about the same topic.

Visitor number, location, historic building, topic, interactivity

From a touristic point of view, visitor number and number of full price tickets are the most important indicators showing the success of an institute or an exhibition. Among the observed museums, there are internationally well-known museums, such as the Hungarian National Gallery, which had the highest number of visitors, 332,572 people and also smaller museums, such as Museum of Óbuda with local significance. As it can be seen in *Table 1*, there are two groups of museums, based

on the number of visitors. Group 1. consists of nine institutes, that reach more than fifty thousand visitors a year, Group 2. consists of six institutes, that reach less than fifty thousand visitors a year. The visitor numbers collected by the Ministry of Human Resources are used throughout the study. These data – shown in the table – do not include the number of participants on cultural programs, organized in the museums, which can be even 20% of the visitor number or more.

Table 1: Number of visitors
(Source: Cultural Statistics, Ministry of Human Resources)

	Name of Museum	Number of visitors, 2015							
		In total	Full price ticket	Discounted ticket	Free of charge	Ratio of Free of charge (%)	Students	Foreign visitors	Ratio of Foreign visitors (%)
Group 1.	Hungarian National Gallery	332,572	113,583	133,978	85,011	26	44,696	99,772	30
	Hungarian Jewish Museum and Archives*	205,000	100,000	75,000	30,000	15	50,000	100,000	30
	Hungarian National Museum	202,714	107,715	7705	87,294	43	30,542	50,000	25
	Hungarian Natural History Museum	162,220	29,837	84,717	47,666	29	48,323	8000	5
	Ludwig Museum of Contemporary Art	111,707	21,034	47,784	42,889	38	11,470	19,000	17
	Budapest History Museum	99,220	25,714	26,862	46,644	47	15,988	60,000	60
	Museum and Library of Hungarian Agriculture	91,130	45,000	37,119	9011	10	17,521	6500	7

	Museum of Applied Arts	82,484	30,665	30,593	21,226	26	10,928	51,140	62
	Petofi Literary Museum	77,092	8216	28,359	40,517	53	39,008	5890	8
Group 2.	Semmelweis Medical History Museum, Library and Archives	33,998	6731	7992	19,275	57	0	6000	18
	Museum of Óbuda and Goldberger Collection of Textile Industry	13,936	3266	939	9731	70	4243	45	0
	Hungarian Museum of Trade and Tourism	10,971	2292	4084	4595	42	1946	438	4
	Hungarian Museum of Theatre History, Gizi Bajor Actor Museum	7029	865	3810	2354	33	2785	50	1
	Budapest Gallery**	6000							
	Béla Bartók Memorial House**	3000							

Some of the institutes have a high ratio of visitors, entering free of charge, in some cases 60–70%; this makes it harder to reach sustainable operation. Retired people based on law enter for free in high volume, mainly during weekdays. Most all museums have 25–45% of free visitors; the lowest ratio is in the Agricultural Museum (10%). Regarding foreign visitors there are only four big museums, that perform over 25%. This might be simply the result of a good cooperation with tourism service providers (such as travel agencies) or can be based on other factors, as analysed later. Ratio of foreign visitors can also be compared with museums’

position on Tripadvisor, the world's biggest travel site, with user-generated content. Two searching categories were analysed, such as "100 Museums of Budapest" and "Things to do", as shown in *Table 2*. The four best-ranked institutes have the highest ratio of foreign visitors, but they are not the most visited ones overall. Some of them are seated in historic buildings, which are frequently visited only from outside, that could result also a good review on the page.

Table 2: Rating of museums on Tripadvisor (Source: own compilation)

Name of Museum	Ratio of Foreign visitors (%)	Tripadvisor	
		100 Museums of Budapest	Things to do
Hungarian National Gallery	30	8	46
Hungarian National Museum	25	7	45
Hungarian Natural History Museum	5	34	181
Ludwig Museum of Contemporary Art	17	22	123
Budapest History Museum	60	13	91
Museum and Library of Hungarian Agriculture	7	17	100
Museum of Applied Arts	62	11	78
Petőfi Literary Museum	8	58	
Semmelweis Medical History Museum, Library and Archives	18	28	
Museum of Óbuda and Goldberger Collection of Textile Industry	0		
Hungarian Museum of Trade and Tourism	4	41	
Hungarian Museum of Theatre History, Gizi Bajor Actor Museum	1		
Hungarian Jewish Museum and Archives*		16	
Budapest Gallery**			
Béla Bartók Memorial House**			

During the analysis of primary and secondary data, it seems that there are four factors which explain number of visitors: central location, the historic building, the generality of the topic, or the level of interactivity in the exhibition. These four factors are analysed regarding the museums involved in the research. Evaluation of interactivity is part of the primary research; the other three factors are secondary data.

Location can be traced on the map of *Figure 2*. Museums of less than 50,000 visitors are signed with grey spots, whereas those of more visitors with black spots. Circles show the most popular touristic areas of the city centre.

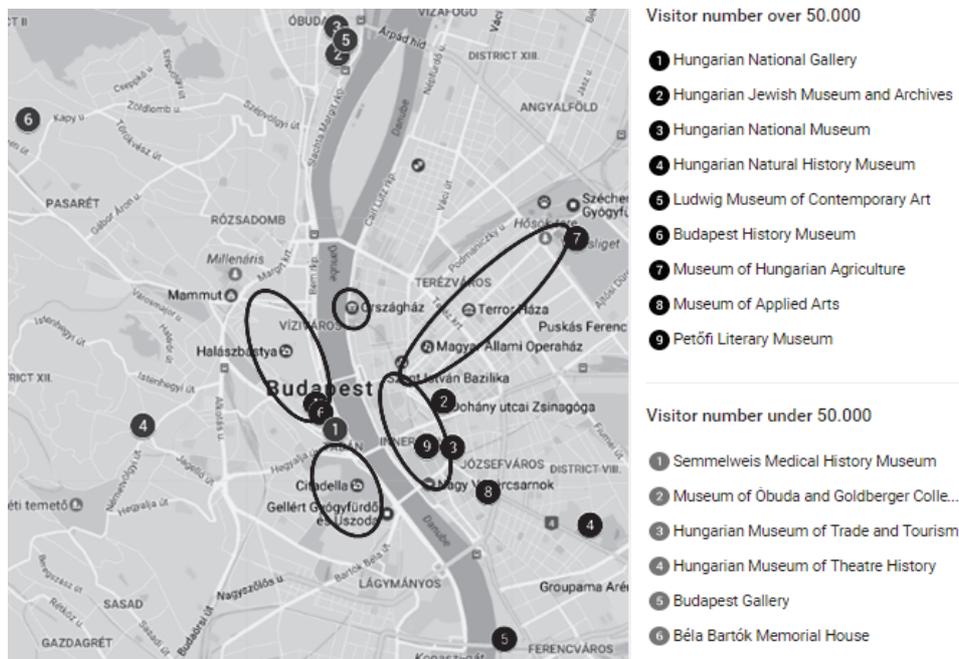


Figure 2: Location of museums in Budapest (Source: own compilation)

It is clear that the most visited museums are right in the centre; some of them are actually part of popular guided tour routes, taken by each bus tour or foreign groups.

Some of the museums are hosted by historic buildings, which are attractive on their own. The image of museums are strengthened by this factor, important monuments, situated in the centre of the city are stops of walking guided tours or bus tours, however only some of them can attract visitor groups or travel agencies to enter them, and spend some time inside as well, not only taking some pictures outside. Interesting example is the Museum of Hungarian Agriculture, which is situated in Vajdahunyad Castle, in the city park, in the neighbourhood of Heroes' Square, one of the most visited open-air attractions of the city. The courtyard of the castle can be visited free of charge, therefore the museum itself could not really profit from the millions of tourist wandering around it each year, before they opened two towers of the castle for visitors. In 2015 91,130 people visited the museum, and approx. forty-five thousand more people climbed up to the tower. Yet, this activity

is short enough to fit in the tight timetable of guided tours as well. One exception is important regarding this factor, as Ludwig Museum of Contemporary Art with its 111,000 visitors is based in a modern, scenic building on the side of the Danube River. Its exhibition is partly interactive, its collection is significant, treating a general topic, but situated outside of the centre. The building is shared with the Palace of Arts, a great concert hall, together which they have a cooperation: guest of concerts can visit the museum free of charge at last on the day of the show (approx. three thousand visitors a year).

Generality of the topic, treated by the museum and the volume of its collection of art pieces (in some cases more than 100,000 works) is determining as well. In Group 1. there is only one institute (Petőfi Literary Museum) which focuses on a narrower topic, as its permanent exhibition is about Sándor Petőfi, the most well-known Hungarian poet. Its temporary exhibitions though treat different aspects and artists of Hungarian literature. On the other hand medical history, theatre history or trade and tourism seem to be too narrow topic even if some of them are presented in an interactive, modern way.

Evaluation of interactivity, as a factor is based on the results of the primary research. Petőfi Literary Museum is located in the centre, as is one of the most interactive and visitor-friendly institutes among the observed units. The Natural History Museum treats a general topic, with an outstanding interactive exhibition, but is located outside of the centre in a partly historic building, which is less significant than those of the centre. Both of the museums have mostly Hungarian visitors, but are in Group 1 because of their high popularity.

Another aspect of visitor number is the well-chosen temporary exhibitions, such as Robert Capa exhibition in 2014 in the Hungarian National Museum, which generated 42,000 visitors in five months. Temporary exhibitions usually change every 2–6 months, depending on its popularity, volume or cost. Permanent ones change every 5–10 years, some managers even said 40 years, or never, because of the lack of financial sources, however refreshment of permanent exhibitions would also be really important to attract visitors' interest again.

Visitor numbers changed in a different direction in every museum; trends cannot be traced in general. In some institutes there were huge changes in comparison with visitor numbers of the year 2013, which can be explained by some external factors. In Semmelweis Medical History Museum visitor number raised from 18,000 to 33,000 people, as Várkert Bazár, a significant development project of the neighbouring historic building was conducted. Trade and Tourism Museum had to move in the last 10 years, two times (in 2006 and 2011), the last time from the centre, to the outskirt of the centre. Visitor number (43.000 people in 2013) set back to 10,900 (2015).

Audio-visual and interactive devices

Managers said in many interviews, nowadays an exhibition cannot really be successful without interactive devices. Many of the museums possess some kind of interactive objects, but they still get outdated after a few years, even if they are not electronic ones. IT development is so fast, that those devices need to be replaced after 5–10 years, at the latest. Broken devices are said to be worse, than no devices at all from the visitors' point of view. Therefore during development of an exhibition, curators have to pay attention on the balance of IT based- and traditional, hands-on objects, when aiming interactivity. Without resources once modern exhibitions could easily get outdated and out of interest; after a while refreshment is necessary. Non-IT based devices (such as interactive scale-model or mechanic machineries) last longer, but still need to be renewed from time to time. Touchable (art) pieces can also be very attractive to visitors, as they can take in their hands and feel history, and if chosen carefully, these pieces can last forever. Results of observation shows nine out of 15 museums use touchable objects. These are partly (art) pieces, others can be replicas or something else. Visitor experience can be better as all five senses are used, not only seeing and hearing, as usual, but also smelling, touching and tasting. The interpretation method can also become boring after using the same for many times also in different institutes, therefore creativity is an overall important factor, yet only a few unique devices were mentioned in the 15 museums.

According to the results touchable objects and audio devices (sound, music, speech...) are applied the most in the observed museums. It is important though to make a difference between real interactive devices and automated ones. A film or an audio can be interactive as the visitor has some kind intervention opportunity in the process, or just simple audio-visual devices, if they can only be watched/heard or not.

Research shows that for development of modern electronic devices institutes usually do not have financial sources, therefore they mainly use modern IT only in temporary exhibitions, as they believe in permanent ones they cannot follow IT development quickly enough. Although permanent exhibitions should be the most attractive ones, providing a stable, high-quality basis. Museums finance temporary exhibitions mainly from different tenders, and financial supports, development of permanent ones would cost much more, and the work would also last much longer. Another solution by many institutes is to use interactive devices, games only during museum pedagogy programs. It's a bad way of thinking though to lock up interactivity in a separate room, instead of interpreting the whole exhibition on time with the suitable devices. Among the observed museums less used interactive devices or methods are mobile applications and dressing-up opportunities (two out

of 15 museums use them). Six out of 15 museums use the following more popular devices, such as films, touch screens, audio/visual guides, games (individual/team).

Table 3 shows a categorization of museums on the basis of the previously analysed four important factors: whether it's seated in a significant historic building; it has central location; it treats a general topic, having huge and significant collection; level of interactivity in the exhibition.

Table 3: Number of visitors and four important factors
(Source: own compilation based on Cultural Statistics)

	Name of Museum	Number of visitors	Ratio of foreign visitors (%)	Building	Location	General topic, collection	Interactivity
Group 1.	Hungarian National Gallery	332,572	30	√	√	√	x
	Hungarian Jewish Museum and Archives*	205,000	30	√	√	x	x
	Hungarian National Museum	202,714	25	√	√	√	√
	Hungarian Natural History Museum	162,220	5	x	x	√	√
	Ludwig Museum of Contemporary Art	111,707	17	√	x	√	x
	Budapest History Museum	99,220	60	√	√	√	√
	Museum and Library of Hungarian Agriculture	91,130	7	√	√	√	√
	Museum of Applied Arts	82,484	62	√	x	√	x
	Petofi Literary Museum	77,092	8	x	√	x	√
Group 2.	Semmelweis Medical History Museum, Library and Archives	33,998	18	x	√	x	x
	Museum of Óbuda and Goldberger Collection of Textile Industry	13,936	0	x	x	x	√
	Hungarian Museum of Trade and Tourism	10,971	4	x	x	x	√
	Hungarian Museum of Theatre History, Gizi Bajor Actor Museum	7,029	1	x	x	x	x
	Budapest Gallery**	6000		x	x	x	x
	Béla Bartók Memorial House**	3000		x	x	x	x

Table 3 shows, that those museums can reach higher visitor number, which correspond at least two out of the four factors. To conclude historic building and central location are important factors, but any of these factors can be supplemented by interactivity or general topic/huge collection, as in the case of Natural History Museum, Ludwig Museum, Museum of Applied Arts or Petőfi Literary Museum. Natural History Museum for instance has more than 162,000 visitors yearly, out of which only 5% is foreign tourist. It's located outside of the centre, seated in a partly historic building, treating one of the most interactive exhibitions in Budapest in a wide, general topic that makes it really popular among Hungarian families with young children.

Visitors' feedback regarding interactive devices is usually that they like them very much, they raise visitor experience, and they get deeper knowledge with their help. Experiences of operators are that not all visitors have good attitude towards devices, they often get broken, and they need continuous supervision and maintenance, as "broken device is worse than a non-existing one."

Target groups

Apart from some exceptions, museums can identify correctly their target groups, and it's consistent from different point of views. In the frame of the primary research observation focused on target groups, regarding communication, devices used in the exhibition, topic and context/language of museum signs/communication. Museums with outdated exhibitions, less interactive elements, or with a topic, which attracts elder visitors, see clearly that seniors, or more professional visitors could be defined as their target groups. Almost all institutes expressed their intention to attract more youngsters through social media; they usually gave students as project task either mapping of demand with e.g. questionnaires or evaluation of their communication and suggestion of new channels towards youngsters. Though it's important to face that without a fitting supply of the museum itself (devices, interpretation of topic, language), this target group could not be served successfully.

Trends regarding target groups can be concluded from the research, that group of students or retired people are usual visitors during weekdays, on the weekends though individual visitors are more plentiful. Attention of students under 14 years can be raised, they are frequent visitors, participating on museum pedagogy classes, on the other hand "secondary school students are mostly ignorant, cannot be attracted by anything" – said one of the managers. Then during university they are becoming more and more open again, young adults (between 20–30 years) are also interested. "Young adults' lifestyle is determining, if they are intellectual, interested in cultural programs, keen on going out and entertainment means more than clubbing" – she said. Seniors over 60 visit the museum and its programs the most.

Ludwig Museum of Contemporary Art has for e.g. a well defined target group that stands out from others, Ludwig visitor is typically 28 year old woman with higher education (Fehér, 2014, Bodnár et. al., 2015).

50% of managers said, that museums should be able to interpret its content to everyone, therefore they do not specify target groups. A progressive director said “museums in Hungary do not think of target groups yet, we cannot afford yet to build an exhibition to a specified group”. Some curators seem to “create the exhibitions for themselves” without taking into consideration visitors’ needs, as exhibitions are also the basis of professional recognition, which is obviously an important factor to the institutes as well.

Visitor friendly signs

Based on the observation, signs are visitor-friendly in almost 60% of the museums. Bad examples are too object-focused signs, without any stories and memories; too long descriptions full of professional terms; no signs at all. Good practises were catchy facts; more signs but shorter descriptions; just enough information; easily understandable. Museums treating interactive exhibition tend to use visitor friendly signs as well, comparison of data shows. Those museums which already pay attention to visitor-friendly services and supply tend to do it on many aspects of operation.

Results of the research – In-depth interviews

During the research, in-depth interviews were conducted as well, based on which the following topics can be analysed.

Museum pedagogy

In high season, school groups take museum pedagogy classes every day. Even in smaller museums, such as the Medical History Museum it turned out, that there is a class every day. Other small museums though allude to their lack of relationships with schools, because of their low number of students among visitors. In bigger museums, such as Natural History or Agricultural Museum 6–10,000 students participate each year in these programs. Popular programs are e.g. from cellar to mansard in historic buildings, possibilities for dressing-up in costumes, group games, handcrafting classes.

Institutes create several museum pedagogy programs to each temporary and permanent exhibition, focusing on different age groups, starting even from nursery

school children. This seems to be already an evident part of an exhibition. There are often programs created to groups of visitors with some kind of disabilities (e.g. for the blind). In many cases managers said, that instead of having interactive devices, games or dressing-up opportunities in the exhibitions, they offer them during museum pedagogy. In this case though the exhibition itself may not result the same experience, as if the group would participate in the classes. Important question is, whether individual visitors, such as families are able to reach the same level of experience, without those interactive devices. Exhibitions should not have interactive and non-interactive sections; it should cover the exhibition as a whole. Curators have to get aware of that not only children need interactivity, games and entertainment in an exhibition but also adults. If an institute would like to widen its audience, than they have to offer something suitable to those people, who would not go in museums only with learning motivation.

Cultural programs

Visitor numbers collected by the Ministry of Human Resources do not include the number of participants on cultural programs organized in the museums, which can be 20% of the visitor number or more. Events and cultural programs can boost visitor numbers, according to the interviews, in some cases incomes can cover the costs of the organization, but it's rare, usually they are even free of charge.

Institutes organize wide-range of cultural programs to different target groups. They introduce them during opening times, such as family days, and in the evening, such as KulTea in Trade and Tourism Museum, in the frame of which jazz concerts, wine-tasting and other popular events are organized. Approx. 50% of the museums ask for additional entrance fee for the programs, which are in most of the cases valid to some of the exhibitions as well. Many institutes organize events mostly free of charge, financed by different tenders, supported by the state or international funds. Typical programs are other types of art, such as visual or performing art, open universities, thematic programs connecting to special days, etc. Volume of events range from 30–40 people to one or more days long festivals, in case of which visitor number can reach 1,000 people a day (such as Arts Fair of Museum of Applied Art or Summer/Autumn Literary Festival of Petőfi Literary Museum).

As events seem to boost visiting successfully, therefore smaller institutes, such as Béla Bartók Memorial House organize almost as many programs (30–40 every half year), as the biggest ones, such as Hungarian National Museum (4–10/month).

Mostly every museum, involved in the research participates in important national programs, like Night of Museums, Museums' Festival of May, Cultural Heritage Days, or cultural programs of its district/city, e.g. Spring/Autumn Festival of Budapest.

Guided tours

It is an important question during the development of a museum or an exhibition, whether it can be visited individually, or by guided tour or both. Out of 15 institutes there are only a few, which provide every day one or more guided tours, such as Museum of Theatre History, where 80% of visitors ask for a tour guide, Jewish Museum and Hungarian National Gallery as well. Some museums, mainly the interactive ones state that their exhibition space is not suitable for guides; visitors should discover the museum themselves. Several institutes offer tour guide only connected to festive period or celebrations, or just once a week in a previously declared topic and time. Feedbacks from visitors are mainly good, especially in case of special guided tours, such as when the guide is dressed-up in a costume, or a detective game is played at the same time, or a thematic walking tour is organized in the area of the museum.

Profit generating activities

Profit generating activities of museums are for example renting venues for events, which is obviously available in almost all institutes. Many institutes organize private/family events, such as birthdays, between their walls. Apart from these activities usually souvenir shops and cafés are operated. Shops are in many cases operating in the ticket office, not having an own room, to cooperate in a cost-effective way with the cashier in the reception. Only two of the museums have no souvenir shopping opportunities at all. There are five institutes, in which an independent partner operates the café, but in the same amount of places there are no cafés at all. In two cases the café, operated by a partner results conflict, as it does not fit to the demand and the target groups of the museum.

Marketing

Museums' marketing activity was also an important topic during the deep-interviews. Unfortunately it is clear that apart from one (Ludwig Museum) none of the institutes has significant yearly marketing budget, to plan with. All institutes declared that they have "minimal", "nothing" or less than 10,000 Euros for marketing costs. Some of them develop new temporary exhibitions or organize events with the financial support of tenders, and in the frame of these budgets, relating marketing costs can be calculated. In case of Ludwig Museum a budget of 100,000 Euros can be spent on marketing. Museums usually use website, newsletter, free promotional opportunities such as articles in local media, free banners on

cultural websites, and social media, above all Facebook and YouTube. Social media sites are not harmonized with each other in many cases and are not always well-managed. In the frame of the research, groups of students had a project task with museums, who mostly asked them to conduct a short questionnaire-based research (regarding visitors' needs) or to suggest marketing opportunities targeting youngsters. Museums themselves regularly survey visitors' needs in different ways, 33% of them have questionnaires at the reception or at the exit; 33% survey them during events or temporary exhibitions, rest of them do not conduct any kind of research.

Voluntarism

In almost every museum appears some kind of voluntary work. It may mean eight people a day, such as in National Museum, or just a few volunteers in general. There are three popular forms of the activity, retired people, who once worked in the museum, university students, who look for certain practice, or civil service of youngsters, which have been introduced in Hungary in 2016. Institutes can use older volunteers for more professional job as well, such as working with the collections or in the office. Younger people can be used more in public relations, information desk or caretaker in exhibitions. Some museums have special projects for youngsters, such as the Humans of Óbuda, which is an audio-visual project, in the frame of which volunteers take interviews and records of every-day figures of the district creating a contemporary artwork as a result. The institutes usually appreciate work of volunteers, however see its restrictions. Without continuous communication, training and appearance though, once large voluntary group can disappear after a few years. Some others though pay attention on the regular management of volunteers, which may result a stable supplement in workforce, and an important contribution to economic and socio-cultural sustainability.

Aspects of sustainability in museums

Why is all that important, such as visitor number, visitor-friendly services, and effective and interesting interpretation methods? Would it not be enough if museums would focus only on those visitors, who appreciate their traditional collection and information on their own, without any effort to make it more visitor-friendly, to create an experience with interactive devices, etc.? Apart from economic aspects, which can be bridged by state financial support, there are other interdisciplinary reasons for attracting visitors' interest by any means, and to raise visitor number by the help of it. *Figure 3* shows that, visiting heritage attractions, such as museums, as

part of cultural tourism has long-term gains, which can be a common goal by museum and tourism professionals as well.

Visitor-friendly, interactive exhibition results in a good visitor experience, which will remain as a long-term good memory in people's mind. As good experience connects to a heritage attraction, such as a museum treating a collection on a specific field, visitors will concern the collection, the heritage itself valuable. In any case, if a visitor would become the decision-maker, that certain heritage/collection would also be something valuable to protect, which principle would be transmitted to future generations as well. This continuity guarantees that people would feel themselves responsible for heritage, through which its own sustainability would be secured.

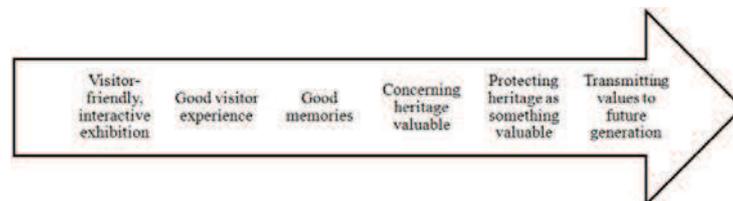


Figure 3: Long-term gains of interactive exhibitions (Source: own compilation)

Font & Harris (2004) refer as Triple Bottom Line (TBL) to the principle, that sustainability can be fulfilled only if it is reached in three fields, such as environmental, socio-cultural and economical. During the research, touristic aspects were mainly analysed regarding museums, as cultural attractions. Factors influencing sustainability from a different point of view can be seen on *Figure 4*; some of the factors affect even two or more aspects.

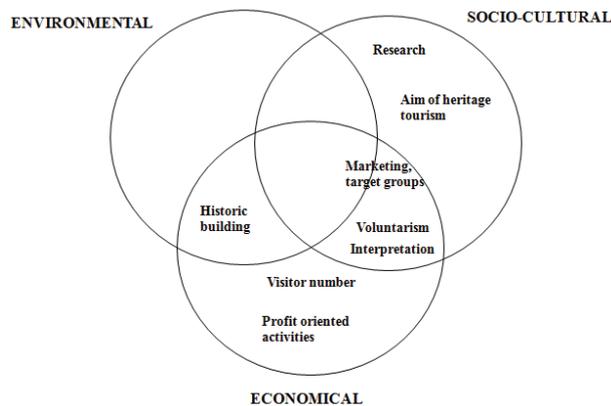


Figure 4: Factors of sustainability in museums (Source: own compilation)

Museum visits may affect environmental sustainability from many points of view (such as selected waste collection in museums or environmentally responsible image, that could be communicated through marketing tools), but focusing on the factors arisen during the current research historic building itself can be mentioned. If an institute is seated in a historic building, then because of the limitations by heritage protection, its maintenance, restoration or development can hardly consider the most environmentally-friendly solutions. That affects economic point of view as well, regarding utilities and cost-effectiveness. Operating a museum is a non-profit activity, apart from some exceptions, however museum managers mentioned usually café, souvenir shop and other profit-generating activities, such as event space rental or event organization (e.g. birthdays), that could contribute to economic sustainability.

Economic and socio-cultural points of view connect through many aspects, such as marketing and target groups, interpretation methods or voluntarism. Marketing has a crucial role in raising visitor numbers, by reaching the well-defined target groups through well-chosen communication channels and transmitting the right messages. If a museum's supply suits visitors' needs, than obviously it has to be communicated as wide as possible. On the other hand socio-cultural sustainability is tackled as well, while as a result of changes in New Museology, wider audience is welcomed in museums in comparison with earlier times. Museums became less elitist institutions, whose operation was previously defined by a small group of society and now their role turned out to be the generator of 'cultural democracy' (DCMS, 2006). Cultural democracy enlarged targeted groups as well. Marketing has further social responsibility, as it has to strengthen long-term gains of interactive exhibitions, as described previously, by communicating values of heritage directly towards visitors as well.

Well-chosen interpretation methods help to reach the above-mentioned long-term socio-cultural gains by resulting good visitor experience in interactive exhibitions, which focus on the needs of different target groups. Although as discussed in the evaluation of the research, managers underline the risk of IT devices, as being vulnerable. For cost-effective reasons museums usually use interactive IT devices in temporary exhibitions and more traditional, mechanic devices in permanent ones, as financial resources are not provided usually to follow IT modernization. Therefore visitor experience can get damaged if economic factors are taken more into consideration.

Voluntary workers can support economic sustainability, as workforce can be supported or in some cases substituted by it. It has a positive economic impact only if a well-organized system is set-up, with database, training, coordination and non-financial remuneration if possible. Voluntarism on the other hand has important role

in community-building, taking social responsibility and providing an aim or opportunity, for those in need.

Socio-cultural sustainability is affected by the tasks of museums in general, from which research was mentioned in one interview, saying that international success on the professional field can substitute a high number of visitors. Although in this case, long-term gains described above cannot be reached by the same institute.

Summary

Analysis was conducted with regards to the principles of New Museology, a new paradigm in museum studies. Functions of these institutes have been changed (nowadays they are more like social space), just as the treated topics. Social context has become a focus point, social issues have been tackled, and as a result, wider audience could have been targeted. Exhibitions' focus has also been replaced, from objects to people.

Analysis of the research resulted that targeted groups mostly overlap with the supply of the museums; in many cases this means seniors or professionals. Though almost every institute wish to open towards youngsters, however most of them without possessing a suitable supply for this target group. Number of visitors is determined by four factors: location, historic building, general topic/large collection, level of interactivity. Authors assume, that corresponding two out of the previous four factors result large visitor numbers (over 50,000 people a year). Location and historic building seem to be the most important factors, but any of them can be replaced by a general topic/large collection or level of interactivity.

Most of the museums recognize the need of modern devices, but cannot afford the development. Some of them use creative solutions to attract visitors; some others though cannot overcome traditional museum operation, however it does not always depend on financial possibilities. Museums along with heritage attractions have an important role in education, which cannot be realized currently without applying the principle of edutainment and well-chosen interpretation methods. Major part of the visitors are school groups and seniors, secondary school students are the most difficult to attract, managers said. Several museum pedagogy programs are offered in almost all museums, however it is important to realize that it is not enough if interactivity is restricted only to these classes. Interactivity should embrace the whole exhibition and additional museum pedagogy programs should be offered. Wider audience should also be targeted by these programs, not only school groups, but also individual visitors, such as families and also adults.

Museums tend to use interactive devices more in temporary exhibition, as financial sources, mainly tenders makes it possible. These resources cover also some

marketing costs, whereas yearly budget usually does not include it. Museums with interactive permanent exhibition tend to use visitor friendly signs as well.

Museums organize various cultural programs, which boost visitor numbers a lot. Approx. 50% of the programs can be visited free of charge, some others can cover their own costs as well. Among profit-generating activities renting venues is available in almost every cases; souvenirs can be bought almost everywhere, however not in large number, or in a separate shop, therefore cannot really contribute to economic sustainability. Cafés – where available – are usually operated by independent partner organizations.

Research showed that all three aspects of TBL regarding sustainability appear in museums. Mostly all analysed factors (visitor number, interactivity, historic building, voluntarism, etc.) influence one or more of the above-mentioned aspects. Reaching socio-cultural sustainability is the common goal of museum and tourism professionals. An interactive exhibition fitting visitors' needs has long-term gains. Through good experience large number of visitors and also the next generations will appreciate heritage and collection of the museum and would judge them as something worthy for protection.

Future research opportunities have also been specified. During the analysis of primary and secondary data it seems that there are four factors which explain number of visitors: central location, historic building, generality of the topic, or level of interactivity in the exhibition. A future research would analyse in depth the four significant factors, after evaluating them on the basis of a well-defined system, and explore the impact of each on visitor number.

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