

# Sustaining Cultural Heritage by Means of Museums in an Ever-Changing World

## Değişen Dünyada Kültürel Mirası Müzelerin Yardımıyla Sürdürmek

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### Abstract

The main objective of this comparative study is to understand and analyse the sustainability perspectives of museums in France, Canada, Sweden, Turkey and Greece. By adopting a qualitative research approach, data were gathered from eleven museum officials in five different countries. As an interesting result of the study, an advanced use of technology was seen at the oldest museum of the research sample. Overall, the comparative analysis revealed that general sustainability efforts, use of technology in presenting cultural heritage and active participation of visitors to the museum activities need to be improved and paid more attention at some of the museums. The increase in the number of museum activities contributes to the understanding of how cultural heritage can be sustained. The study sheds a light on the inside of changing museology and offers suggestions to the researchers in this field.

**Keywords:** Museum Management, Change, Sustainability, Culture, Heritage.

### Öz

Çalışmanın temel amacı, Yunanistan, Türkiye, İsveç, Kanada ve Fransa'daki müzelerin sürdürülebilirlik kavramına bakış açılarını anlamak ve analiz etmektir. Niteliksel araştırma yöntemleri kullanılmış, 5 farklı ülkede 11 müze yetkilisi ile derinlemesine görüşmeler yapılarak veriler toplanmıştır. Çalışmanın ilginç bir sonucu olarak, araştırma örneklemindeki en eski müzede, ileri teknoloji kullanımı görülmüştür. Karşılaştırmalı analizlerin ortaya çıkardığı sonuçlara göre; müze faaliyetlerine ziyaretçilerin aktif katılımının, kültürel mirası sunarken teknoloji kullanımının ve genel sürdürülebilirlik çabalarının geliştirilmesi ve bazı müzelerde daha dikkatle ele alınması gerekmektedir. Müze etkinliklerinin sayısındaki artışın, kültürel mirasın nasıl sürdürüleceğinin anlaşılmasına katkısı olmaktadır. Çalışmada, değişen müzeciliğin içyüzüne ışık tutulmaya çalışılmakta, alandaki araştırmacılara önerilerde bulunmaktadır.

**Anahtar Kelimeler:** Müze yönetimi, değişim, sürdürülebilirlik, kültür, miras

### Introduction

Today, along with the influence of globalization, advances in information technology (Joo et al., 2009), changes in expectations in the societies and organizations, our perception of cultural heritage is altering through the lens of an interactive era (Bowers, 2016). Our perception must now be redefined in the changing global cultural commons. To understand what is happening, many people are looking toward the sites where culture and history come together - that is, toward cultural heritage. The sustainability of cultural heritage is also in the process, flowing with the tide and it presents itself in several ways.

Heritage sites and museums have had to come across with the challenge of being open to entrepreneurial perspectives while meeting their heritage preservation and education activities (Silberberg, 1994). There is currently a huge debate on the scope and practice of museums in the 21<sup>st</sup> century (Alcaraz et al., 2009). Museums play an essential role in comprehending the sustainability of cultural heritage, preserving the heritage and presenting it to the next generations (Del Barrio et al., 2009). What they bring to the community, how they sustain their development and operate their practices is a worthwhile topic to discuss today.

The huge amount of present cultural heritage material, which surpasses the available space in museums, and the rising attention in making collections accessible to the public have motivated cultural heritage organizations to adjust mobile information and web-based

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applications for exhibiting their collections. Most organizations are developing web sites so as to achieve a low-cost web existence and providing mobile guides to aid visitors on site (Ardissono et al., 2012). In fact, these types of technological developments brought various perspectives to the museums in terms of sustaining the cultural heritage.

Despite all the efforts, the matter of the cultural heritage has deteriorated during recent years as a consequence of industrialization, fast urbanization, rise in environmental pollution, several climatic changes and mass tourism. Additionally, several instances of the non-physical heritage are becoming extinct due to the paralysation of economic structures and fast alterations in life-styles (Jokilehto, 2005; UNESCO, 1989). However, a concentrated effort to protect cultural heritage is crucial to community's culture, educational activities, perception of heritage values and sustainable development.

This study first reviews the concept of cultural heritage and then the relationship between sustainability of cultural heritage and changing museology. The third section on methodology describes the research question, purpose of the study, sample and methods. Next, findings of the study are discussed in terms of interview results related to the establishment dates, primary purpose and visitor numbers, preservation and sustainability efforts and active participation of visitors. The study concludes with the limitations of study and recommendations for future research subsequent to the conclusion and implications section.

### **Cultural Heritage Concept**

The term 'cultural heritage' includes various principal categories of heritage and heritage is presented by UNESCO (2016) as cultural heritage, natural heritage and heritage related with military. *Cultural heritage*: Tangible cultural heritage (paintings, sculptures, coins; immovable such as archaeological sites, monuments and underwater such as shipwrecks, underwater remnants) and Intangible cultural heritage (oral traditions, rituals, performing arts). *Natural heritage*: Natural areas with cultural aspects such as cultural landscapes, physical, biological formations. *Heritage related with military*.

Cultural heritage is any aspect of a society's past and present that it holds to be significant and aspires to pass on to future generations. It is many times described as objects, places or practices which have been a time-honoured tradition or which have a connection to history. It isn't always about previous matters. New or recently changed, objects, areas and practices can hold cultural value for current generations and have the potential to become constituents of cultural heritage (Rio Tinto, 2011). With reference to UNESCO (1989), cultural heritage is described as the total corpus of material signs - symbolic or artistic - passed on by the past to every culture and thus, to the whole of humankind. As a component of the affirmation and enrichment of cultural identities as a legacy belonging to humanity, the cultural heritage provides each specific place its distinguishable features and is a valuable resource of human experience. The protection and exhibition of cultural heritage is thus a foundation of any cultural policy. Moreover, as Endresen (1999), Del Barrio et al. (2009) and Mortara et al. (2014) emphasized that there are various reasons for public and private sector inclusion in management of cultural heritage, containing; the confirmation that heritage resources can play an essential role in community continuity, regeneration and progress, the rising quality of life associated with heritage resources, the heritage resources in creating and preserving personal and community identity, the worth of heritage resources in the education of kids through historical videogames and virtual museum activities and the part that heritage resources can play in assuring for recreation/pleasure occasions.

Along with the management of cultural heritage, custodians play a pivotal role in sustaining the heritage places and rather than short-term views, make long-term connections with the sites. Chirikure and Pwiti (2008, p. 480) stated that cultural heritage is formed and

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owned by the human beings, however one should realize the protectors related with historical sites. *Traditional keepers*: Having a straight linkage with the site, whose traditional rules have all times preserved heritage sites. *Local keepers*: Not having direct connection with the place but staying close to it. *Professional keepers*: Organizations empowered by authorities to manage heritage sites.

By this way, these traditional, local and professional custodians might help improve sustainable perspectives of the organizations and authorities. Considering changing museums in the new era together with the usage of these connections, Gilmore and Rentschler (2002) emphasized that comprehending the keeper's role and the requirement to allure more visitors is crucial. Concordantly, cultural heritage may keep alive and allure more visitors by implementation of a sustainable tourism development policy (Forga & Valiente, 2015) as well as a balanced and controlled change in the management perspectives of those organisations that represent culture such as museums.

### **Sustainability of Cultural Heritage and Changing Museums**

The Brundtland Report which is the outcome of the work done in 1987 by the World Commission on Environment and Development, presented the concept of sustainability including economic, social and environmental perspectives. The report's sustainability definition is '*Sustainable development is the development that provides the needs of the present without compromising the capability of future generations to meet their own needs.*' (Brundtland Report, 1987; WTO, 1998; PricewaterhouseCoopers, 2012).

Cultural heritage includes all contemporary demonstrations when intangible and past proofs in the case of tangible artefacts of human creative effort that are handed down from past generations and taken into consideration by communities and thus preserved in the present and passed on to the future generations. Cultural heritage is essential as a resource of memory and inspiration while it conduces to local and national community identity which is essential for sense of place and social cohesion (Communities & Local Government, 2009). That is why sustainability of cultural heritage is essential to the survival of that identity, memory, social and inspirational factors. Accordingly, museums have a major role in understanding the sustainability of cultural heritage, preserving and presenting it to future generations. There is a current discussion on the scope and practice of museums in the 21<sup>st</sup> century (Alcaraz, 2009). It is essential for the museums to be sustainable organizations because they are considered to be a part of creating and preserving a sustainable community on the local and international arena (WGMSC, 2007). It is partly through their protection of collections and also through the provision of resources to the community that museums be a 'powerful means of achieving cultural, environmental, financial and social sustainability' (Birtley, 2006). Additionally, according to Silberberg (1994), museums and heritage sites have had to come across with the challenge of being open to entrepreneurial activities while continuing to preserve their heritage and meet educational activities for the visitors.

Traditionally, the main function of the museums has been to collect, maintain and study objects and pieces. The director was seen as the keeper of them who mainly performed the custodial role for the cultural capital of the organization: its creative works. Today, managing museums entails comprehending both the custodial part and the necessity to attract more visitors (Gilmore & Rentschler, 2002). Their above mentioned function seems to be changing as their range, reason for being, content and their target audience differentiates due to the fact that local and global trends are changing. Nowadays, museums look more people oriented, act more towards education and leisure and encourage visitors to participate in museum processes and functions (Pirnar & Sari, 2013).

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According to Visser (2014), in the first decades of the 21<sup>st</sup> century, the organizations that survived the 20<sup>th</sup> century are facing new obstacles. Technological changes combined with the social changes that go along with them - altering education needs, career paths, social forms - menace the presence of those organizations that are very conservative. Organizations that equalise both stability and change can achieve a 'sustainable' precedence toward other organizations which could not be able to manage this process successfully (Burchell & Kolb, 2006). Museums and other organizations that represent culture, heritage and art are not excluded from this movement. They are actually at the very heart of it. From this point of view, we may say that museums need to manage a certain degree of change in order to sustain cultural heritage and to pass it on to the next generations. Most of the time, change refers to technological improvement but obviously that's not all. In his study, Visser (2014) claimed that there are some challenges that museums can come across in a close future as following: Technology, broader concept of value, active participating communities and social institutions.

**Technology:** Technological changes combined with social changes threaten the presence of the organizations that are very conservative. Use of technology, understanding social media and adaptation (Fu et al., 2015, p. 286) is critical.

**Broader concept of value:** Many organizations - containing museums - have a narrow concept of value like money or profit. Museums and other organizations hardly do anything about it. Value has many features such as financial, political, social, emotional, creative, and educational. Realizing these values will help museums add to society.

**Active participating communities:** Engagement, digitally or otherwise, is essential in the improvement of a relation between people and organizations. If museums don't activate their audience or potential visitors once every while, they will lose them to rivals who provide the opportunity to participate.

**Social institutions:** A social institution structurally engages its stakeholder to create value. Museums will become social institutions as the years go by or they will become extinct. However, as Sandell (2003) stated that museums in some regions are improving their societal aim and establishing associations with welfare, health and other entities and looking for delivering social outcomes.

When the subject is change, it will be useful to mention about Lewin's three phase model of organizational change through which they'll pass unfreezing, changing and refreezing phases (Vasile, 2014). However, the use of this approach was criticized for popularising the complexity of organizational change (Sandell, 2003; Kanter et al., 1992). It is mentioned by management theorists to support perspectives to change. This model provides a basis for comprehending the processes involved in repositioning the museum industry (Sandell, 2003). The unfreezing process includes creating a foundation and willingness to welcome change. Nadler (1993) emphasizes that the primary phase is to define and reveal displeasure with the present situation. By this way, resistance to change can be decreased by identifying insufficiencies of working practices. It is probable to describe the components of this phase within the museum industry currently. Livvarçin and Kurt (2012, p. 277) states that this can be done through informing human resources and showing conflicts, by this way an intentness to change can be fostered. A study, defining the potential for museums to behave as an intermediary of social inclusiveness (GLLAM, 2000) can work as a comparison against which museums can measure their performance and evaluate their museum practices. The second phase is changing which is inclining towards a new behaviour pattern and within organizational theory, includes long-term perspectives that will assist to take an organization away from its present place to its preferred position by adapting change (Livvarçin & Kurt, 2012, p. 278). This basis of managing organizational change, when practiced in the museum industry, recommends the need for a

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holistic perspective with strategies that can encourage sustainable efforts. The last phase is refreezing which involves stabilizing changes or embracing a new behaviour. If individuals embrace a new behaviour, change will protect its permanency until the next planned change (Kritsonis, 2005). From an industry perspective, established structures to create and preserve standards in museum operations must be reassessed so as to support change, raise awareness of the social role of museums outside and within the industry.

The implementation of Lewin's model of change to the museum industry underlines the foundations which should support trials to build change in the industry and the industry can move towards a frame for designating the mechanisms which are likely to start and sustain the necessary alterations in business applications.

## **Methodology**

### **Research Question and Purpose of the Study**

Having a question like 'What is the perspective of various museums in the world in terms of presenting their activities, sustaining and protecting their cultural heritage?' in our mind, the main purpose of this study was to understand and analyse museums' sustainability perspectives and efforts in different regions of the world. The secondary aim of the study was to reveal the current situation of selected museums in terms of technology use and active participation of guests.

### **Sample**

The research data were basically gathered from 11 randomly selected museums (see Appendix) from 5 different countries as France, Canada, Sweden, Turkey and Greece in 7 months, starting from mid-2015 (from late February to late September). These museums were chosen to give a range of subjects, sizes and various types of activities taking place in recent years. The selected museums including their countries and regions are presented in tables.

### **Method**

Fundamentally, a face to face semi-structured interview method with open-ended questions is preferred in this exploratory research. In order to make in-depth analysis of sustainability perspectives, main purposes and activities by the museum officials, four fundamental questions including three sub-questions were asked to eleven museum officials or responsible managers. Interviews took approximately 50 minutes to get the necessary responses. A total of four questions are asked to 11 museum officials which consist of two Director of Museum Operations, one Interim President and eight Operations Supervisors. All of the 11 respondents requested that their names are kept confidential. The first three questions are related with their establishment date, fundamental purposes, activity areas, number of yearly visitors and visit fees. The last question is about the sustainability of the museums, how they approach to the subject of protecting, presenting and sustaining the cultural heritage and how they approach to the active participation of visitors in the museum.

## **Findings**

As a result of the interviews and observations at eleven museums in five countries, the findings that are obtained are presented thoroughly within the scope of their establishment dates (Table 1), primary purpose and general activities, number of visitors and entrance fees, their way of preserving heritage and sustainability efforts (Table 2) and active participation of visitors in the museum activities (Table 3).

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## Establishment Dates, Primary Purpose

M1 in Canada is established in 1932 (Table1) which is the oldest museum among the researched ones. The second oldest one is the M2 in Sweden with the date of 1953. The newest one is M11 in Canada which is established in 2008. The second newest one is M10 in Turkey which opened its doors in 2002.

**Table 1:** Establishment dates of the museums

Country- Museum	Date of establishment	Country- Museum	Date of establishment
Canada - M1	1932	Turkey - M7	1994
Sweden -M2	1953	Greece - M8	1999
France - M3	1957	Sweden -M9	2001
Greece - M4	1974	Turkey - M10	2002
Greece - M5	1980	Canada - M11	2008
Sweden -M6	1990		

The researched museums have various purposes and activities. M1 offers a living history of man and his environment. With programs such as museum sleepovers and day camps, the aim is to educate kids with the history of man in that region and power of nature demonstrated by the science museum. 178 events took place in the last year and the museum facilitated 85.000 students to learn about human and natural history of the region, astronomy and science through at least 70 programs. M11's aim is to create a national and international destination of learning where Canadians and international people can engage in discussion and commit to taking action against hate and racism crimes. Maintaining and promoting heritage at home and overseas, investing in collective memory and identity of Canadians, inspiring learning, research and entertainment are key in their purpose and activities. M3-France aims to be a cultural, historical and touristic major leader, at a local and regional level. M8-Greece presents the island's prehistoric settlements, sculptures, inscriptions, coins, pottery collection and sanctuaries. M4 in Greece aims to be a place of knowledge, to open up the public to the folklore heritage of the island. M5's objective in Greece is the conservation of buildings while respecting its character as well as its transformation into a museum. M2's purpose in Sweden is to explain the history of dance with audio-visuals, costumes, books, largest selection of dance DVDs. M9 in Sweden tells stories of world- renowned 'Prizes' and famous people with supporting events, visuals, etc. Purpose of M6 in Sweden is to preserve the survival of the 98 % protected ship by watering wooden parts regularly for not letting it rotten and presenting it worldwide. There are activities like film auditorium, a model of the ship for visually impaired visitors, guided tours, etc. M7 in Turkey is dedicated to research, collection, protection, and exhibition of documents, objects related with industries and engineering from several countries and eras. Purpose is to spread museum visits in Turkey and support continuous research for the industrial history. M10 in Turkey also offers a sophisticated museological taste with its affluent permanent collection, comprehensive exhibitions that it hosts its conservation units, education programs and concerts.

There are various entrance fees between 1€-14€ range except the free entrances. Among the eleven museums, M6 in Sweden pulled much more visitors which are 1.2 million in 2014. The second is M1 (Canada) which had 374.961 visitors.

## Preservation and Sustainability Efforts

In protecting and sustaining cultural heritage (Table 2), museums play a significant role. In M1, cultural preservation has been taken underway by teams that have taken at least 700 oral interviews. The museum's Oral History Collection is a rich resource that contains voices of locals since the 1970s. M11 protecting and sustaining cultural heritage through creating awareness of human rights issues, understanding past struggles of the ancestors of Canadians. M3-France tries to preserve cultural heritage sustainably, exhibit, welcome, communicate,

renovate and develop cultural activities. The interviewees in M8-Greece mentioned that they protect and sustain cultural heritage through security guards, cameras and police officers. The approach in M4 is that Greek culture and history (language, literature, folklore, art) as a whole considered as cultural heritage and it is not possible for the Greek state to find ways to protect it all. For preserving and sustaining heritage, government employs many people. In M5-Greece, the aim is to conserve the building while respecting its character as a monument as well as its transformation into a museum. In M2-Sweden, the purpose is to explain the history of dance. The museum has the world's 2<sup>nd</sup> largest collection of costumes from the legendary Ballets Russes of Paris between the years 1909 and 1929. In M9-Sweden, there are various activities and donations to help museum sustain the heritage. For M7-Turkey, education (primary school, kinder garden education projects, science and technology workshops, weekend workshops for technical schools and museum bus for underprivileged children) is critical for its sustainability. Similarly, in M10-Turkey, educational activities, get-acquainted tours, workshops, guided tours of exhibitions, adult workshops and others (activities for children, adults, students, yoga classes and social responsibility projects) take place.

**Table 2:** Protecting and sustaining cultural heritage

Name of the museum	Protecting and sustaining cultural heritage
Canada - M1	Cultural preservation has been taken underway by teams that have taken 700 interviews. The museum's Oral History Collection is a rich resource that contains voices of Manitobans since the 1970s.
Sweden - M2	To explain the history of dance. It has the world's 2 <sup>nd</sup> largest collection of costumes from the Russian Ballet in Paris for 20 years (1909-1929).
France - M3	To preserve sustainably, to exhibit, welcome, communicate, renovate, develop cultural activities (visits, activities for youngsters).
Greece - M4	Greek culture and history (language, literature, folklore, art) as a whole considered as cultural heritage, Many people are employed to preserve exhibits in Greece.
Greece - M5	To conserve the building while respecting its character as a monument as well as its transformation into a museum.
Sweden - M6	Preservation of a war ship by using several techniques such as watering wooden parts and fixing regularly for not letting it rotten.
Turkey - M7	Museum education (primary school, kinder garden projects, science, technology workshops, weekend workshops for technical schools, museum bus for underprivileged children).
Greece - M8	Security guards, cameras, close circuit camera, police officers, like banks, press the button and police arrives in 2 minutes.
Sweden - M9	Activities, donations help sustain the heritage.
Turkey - M10	Educational activities, get-acquainted & school exhibition tours, workshops, guided tours of exhibitions, adult workshops, others (activities for children, adults, students, yoga classes, social responsibility projects).
Canada - M11	Through awareness of human's rights issues, Canadians can be more cognitive towards past struggles of their ancestors across the world. Focus is the Holocaust exhibit that educates & gives respect to victims of war crime.

## Active Participation of Visitors

In M1, visitors have hands on interpretive experience with artefacts learning and engaging with history and science (Table 3). Families are encouraged to come there for a quality family experience. M11 as part of the content development process did a cross-country tour from May 2009 to February 2010, where they talked to thousands of people about their human rights experiences and what they would like to see in the museum. Visitors are given an interactive presentation and multimedia technology is used along with a world-class design. Not very detailed information about active participation of visitors is given by M3 of France and M8 of Greece. However, M4 in Greece emphasized that active participation of visitors is encouraged and their goal is to further their knowledge of the history and culture of a civilization. M5 has four sections and every section is supported with commentary and printed material of general and specialized content, all exhibits have bilingual legends. Visitors can move within the exhibition following a path and wander freely. The exhibition plays an educational role, by presenting the island's rich history, stimulating the visitor to delve into thematic unities of exhibition. The Mosque and exhibition co-exist harmonically and complement each other.

In M2-Sweden (Table 3), dance performances, workshops, dancing activities for children and grown-ups take place. You can watch both dance and art and even dance yourself. There are tours for visually impaired, play rooms for kids and touchable tablets. In M9-Sweden, guests participate in activities such as guided tours, seminars and school activities for children. The ones who won the international 'Prize' usually donate at least one artefact to museum's collectives and contribute with their signatures. Interactive screens, films on ground, headphones and several languages are available. In M6-Sweden, part of real deck was imitated and there are waxed people with costumes to make you feel that you are inside the ship and there are computers loading and sailing a 17<sup>th</sup> century ship. M7-Turkey offers activities for the teachers and students, rentals such as corporate events, birthdays, professional shootings (wedding photography catalogues). At M10-Turkey there is an educational part for children and adults. Youngsters get to know the artists, learn how to observe, interpret their works, deeply think of works and intensify what they have learned in the atelier.

**Table 3:** The situation of visitors' active participation

Name of the museum	Active participation of visitors
Canada - M1	Having hands on interpretive experience with artefacts, learning & engaging with history & science. Families encouraged coming for a quality family experience.
Sweden - M2	Performing dance performances, workshops, dancing activities for children & grown-ups, non-stop screenings, you can watch both dance and art even dance yourself. Tours for visually impaired, play rooms for kids, you pull the drawer, music comes out, touchable tablets.
France - M3	Cultural activities for youngsters.
Greece - M4	Active participation of visitors is encouraged to further their knowledge of the history and culture of a civilization.
Greece - M5	Sections are supported with commentary, printed material of general content. The exhibition plays an educational role, by presenting island's history, stimulating the visitor to delve into thematic unities of exhibition.

Sweden - M6	Part of real deck was imitated to make you feel that you are inside the ship, waxed people with costumes, loading & sailing a 17 <sup>th</sup> century ship by computer.
Turkey - M7	Stated above (activities for teachers, students), rentals such as corporate events, birthdays, professional shootings (wedding photography, catalogues, commercial).
Greece - M8	For students and elderly people 1 or 2 times a year.
Sweden - M9	Guided tours, seminars, school activities. The ones who won the 'N' prize usually donate at least one artefact to museum's collectives, contribute with their signatures. Interactive screens, films played on ground, headphones, several languages available.
Turkey - M10	Stated above (educational part for children, students, adults). Youngsters get to know artists, learn how to observe & interpret their works, think about them, intensify what they have learned in the studio.
Canada - M11	As part of the content development process, M11 did a cross-country tour between 2009-2010, talked to thousands of people about their human rights experiences & what they want to see in the museum.

### Overall Picture of the Findings

In terms of evaluation of the findings, the establishment date of museums varies. The oldest one is M1 established in 1932. In considering their primary aim and general activities, each museum has a unique approach in sustaining heritage and shows various sustainability efforts and wide range of interests for their survival. Each museum has a unique history and background, is willing to host as many visitors as it can by informing the community due to various activities. Yearly number of visitors is available in only seven museums where the other four museums lack the statistical information. The entrance fees vary depending on occupation, age, student or citizen, disabled, military personnel etc.

Furthermore, in preserving and sustaining culture, each museum has its own way of looking at sustainability and protection of cultural heritage, depending on their purposes and activities. The use of technology has more impact in museums in Sweden than those of others. A variety of preservation methods take place in the researched museums such as; renovations, security guards, donations, government support, developing cultural activities, oral records, photography and social responsibility projects.

In active participation of the visitors, several activities are offered by the museums such as; educational activities for different ages, corporate events, interactive presentations, play rooms for kids, support of technology, live performances, guided tours, seminars, playing in the imitated deck, photo shootings and events for disabled visitors.

### Conclusion and Implications

As a result of the comparative analysis of eleven museums in five different countries, Table 4 is generated. It basically represents the analysis and evaluations on the basis of technology use, general sustainability efforts, protecting and sustaining cultural heritage and level of active participation of visitors.

**Table 4:** Comparisons between researched museums

Country- Museum- Date	Technology Use		
	In need of improvement	Progressing	Advanced
Canada - M1 - 1932			√
Sweden - M2 - 1953		√	

France - M3 - 1957		√	
Greece - M4 - 1974	√		
Greece - M5 - 1980	√		
Sweden - M6 - 1990			√
Turkey - M7 - 1994		√	
Greece - M8 - 1999	√		
Sweden - M9 - 2001			√
Turkey - M10-2002		√	
Canada - M11-2008			√
<b>Country- Museum- Date</b>	<b>General Sustainability Efforts</b>		
	<b>In need of improvement</b>	<b>Progressing</b>	<b>Advanced</b>
Canada - M1 - 1932			√
Sweden - M2 - 1953		√	
France - M3 - 1957		√	
Greece - M4 - 1974		√	
Greece - M5 - 1980		√	
Sweden - M6 - 1990			√
Turkey - M7 - 1994			√
Greece - M8 - 1999	√		
Sweden - M9 - 2001			√
Turkey - M10-2002			√
Canada - M11- 2008			√
<b>Country- Museum- Date</b>	<b>Protecting &amp; Sustaining Heritage</b>		
	<b>In need of improvement</b>	<b>Progressing</b>	<b>Advanced</b>
Canada - M1 - 1932			√
Sweden - M2 - 1953		√	
France - M3 - 1957			√
Greece - M4 - 1974		√	
Greece - M5 - 1980		√	
Sweden - M6 - 1990			√
Turkey - M7 - 1994			√
Greece - M8 - 1999		√	
Sweden - M9 - 2001			√
Turkey - M10-2002			√
Canada - M11- 2008			√
<b>Country- Museum- Date</b>	<b>Active Participation Of Visitors</b>		
	<b>In need of improvement</b>	<b>Progressing</b>	<b>Advanced</b>
Canada - M1 - 1932		√	
Sweden - M2 - 1953			√
France - M3 - 1957	√		
Greece - M4 - 1974		√	
Greece - M5 - 1980		√	
Sweden - M6 - 1990			√
Turkey - M7 - 1994			√
Greece - M8 - 1999	√		
Sweden - M9 - 2001			√
Turkey - M10-2002			√
Canada - M11- 2008			√

Overall, comparative analysis revealed that general sustainability efforts, use of technology in presenting cultural heritage and active participation of visitors in museum activities need to be improved and paid careful attention at some of the museums (M3, M4, M5 and M8). However, we see an advanced usage of technology at the oldest museum (M1-Canada) which managed a certain degree of change in its 84 years of experience and existence. In

preserving and sustaining cultural heritage, each museum has its own approach and they are in the scale of 'progressing' and 'advanced'. In addition, the increased various number of museum activities stimulate the sustainability perspectives of the researched museums. The heritage resources play an essential role in the education of children in most of the museums which provide pleasure/recreation opportunities. Specifically, the level of technology and its use in the researched museums in Sweden and Canada is advanced as compared to others.

However, the influence of technology use, visual and technological advances on cultural heritage (Styliani et al., 2009; Mortara et al., 2014) is profound and pervasive. From the change-oriented perspective of today, museums are reliant on updated technology to manage their collections. They collect digital as well as material objects. New media is embedded within their exhibition spaces (Parry, 2013; Fu et al., 2015). Along with the use of technology, value additions to the museums, participative communities and specifically recognition of trends to the society's advantage, the way forward is to become more social institutions (Visser, 2014; ICOM, 2012) and also to create more engaged and satisfied visitors (Trinh & Ryan, 2013, p. 242).

From the museum industry stand point, the established structures to create and preserve the main standards in museum operations must be re-evaluated so as to support change (Forga & Valiente, 2015, p. 4) and all these efforts will serve to raise great awareness of the social role and contribution of museums in the industry. In this sense, according to Domic and Boukas (2015, p. 17) what is essential is that policies should be initiated that would incorporate the perspectives of the audiences as a pivotal part of the museum's progress. Regarding the application of Lewin's model of change to the museum industry, the approach underlines the principles which should support attempts to create industry-wide change. Along with this way, the industry can move towards a frame for identifying the mechanisms which are likely to start and sustain the necessary alterations in working practices.

In developed countries, perspectives for tourism development planning have moved from a traditional, narrow consideration of supply, demand and physical necessities to more integrated, comprehensive and environmentally conscious views for sustainable tourism development (Tosun, 2000; Bowers, 2016), through the communication of sustainable practices (Wickham & Lehman, 2015). This sensitivity and level of awareness about sustainability is actually seen in various dimensions in the researched museums. Sustainability is becoming a larger part of business life and leaders, policy makers, investors and other stakeholders are paying attention to sustainability efforts. Correspondingly, this qualitative study shows that some museums are searching for various ways to keep up with the changing trends, improve their physical, technological and operational structure and sustain their cultural heritage in a meticulous way. Additionally, the research gives museum authorities a clue on how to protect and sustain cultural heritage and notify them of sustainable practices by showing the perspectives of various museums from various regions of the world.

### **Limitations and Future Research**

The research has some limitations. First of all, it is an exploratory analysis trying to analyse the sustainability efforts of museums in several countries. Within the bounds of possibility, only eleven museums could be selected from five different countries. As another limitation, the collection of data was difficult during the office hours of museum officials. For future research, within a specific region, city or country, museum perspectives can be gathered and made comparisons. A survey can be made to see what the organizations think crucial for their sustainability, what they consider noteworthy to measure in understanding sustainability. The survey, in review of existing government policies and regulations, can be useful for re-

evaluating the current indicators, and also it can be used as a tool for consensus on sustainability matters between the museums.

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### Appendix

Identification of the research museums in alphabetical order according to country name

Country (Alphabetical Order) And Name Of The Museum	Establishment date	Public status
Canada - Museum of Man and Nature, Manitoba	1932	Non-profit organization incorporated by an act of the Manitoba Legislature
Canada- Canadian Human Rights Museum, Winnipeg	2008	Government
France - National Navy Museum, Brest	1957	Government
Greece - Archeological Museum of Chios	1999	Government
Greece - Argentis Museum of Chios	1974	Government
Greece - Byzantine Museum of Chios	1980	Government
Sweden - Dance Museum Stockholm	1953	Private
Sweden - Nobel Museum Stockholm	2001	The Alfred Nobel Memorial Foundation
Sweden - Vasa Museum Stockholm	1990	Government
Turkey - Rahmi M. Koç Museum Istanbul	1994	Rahmi M. Koç Museology and Culture Foundation
Turkey - Sakıp Sabancı Museum Istanbul	2002	Sabancı University