



EUROVISION – MUSEUMS EXHIBITING EUROPE (EMEE)

SOCIAL WEB AND INTERACTION

SOCIAL MEDIA TECHNOLOGIES
FOR EUROPEAN NATIONAL AND
REGIONAL MUSEUMS

A MANUAL BY

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GREETING			
THE EMEE PROJECT			
INTRODUCTION/ INTENTION	17		
INTERACTION WITH WEB-BASED SOCIAL MEDIA TECHNOLOGIES	21		
— SOCIAL WEB	21		
– General Analyses of the Social Media Landscape, 2014	21		
– Website	25		
– Wikipedia and Wikimedia Commons	29		
– Blogs	30		
— SOCIAL NETWORKS	31		
– facebook	32		
– Google+	36		
– Twitter	39		
– LinkedIn	46		
– Foursquare	47		
— SOCIAL SHARING	49		
– YouTube	50		
– Vimeo	52		
– Vine	53		
– flickr, Picasa, Instagram	55		
– Issuu	59		
– Slideshare	61		
— SOCIAL CURATING	62		
– Pinterest	63		
– Tumblr	65		
— TOOLS FOR SOCIAL MEDIA MANAGEMENT	66		
– Tools for monitoring and measuring social media	66		
– Storify	68		
– Eventifier	68		
— GENERAL RECOMMENDATIONS	69		
— OPEN DATA AND COMMUNITY OUTREACH	74		
– Open Data	75		
– Crowdsourcing	77		
– Museum Collections in Public Spaces	79		
INTERACTION WITH THE VISITOR IN THE MUSEUM THROUGH INTERACTIVE INFORMATION AND SOCIAL MEDIA TECHNOLOGIES	81		
— DIGITAL INFORMATION AND COMMUNICATION SYSTEMS IN MUSEUMS	83		
– Klosk	83		
– Exhibition-based Mobile Apps	85		
– Identification technology	87		
— USER-GENERATED CONTENT IN THE MUSEUM	94		
– Images	95		
– Illustrations	96		
– Video	97		
– Text	98		
– Audio	99		
CONCLUSION		101	
BEST PRACTICE EXAMPLES		103	
LIST OF REFERENCES			
IMPRINT			

The International Council of Museums' (ICOM) definition of 'museum', which is held throughout the world, obliges museums to act in the service of society. Besides its mandate to preserve the material and immaterial cultural heritage, this, above all, includes the historical and cultural mediacy of the past.

In contrast to other educational institutions, museums are uniquely characterized by processing and promoting information, knowledge as well as insight through historical, cultural and natural-history objects and collections. Especially since the objects, in addition to their material value, become sign bearers through interpretation and presentation, they have potential for far-reaching meaning. They are supposed to help stimulate discussion, allow the evaluation of historical and societal developments and reflect important topics of the past on a higher level of abstraction. Ultimately, the museums and therewith also cultural policy want to achieve the strengthening of identities in this way and improve the people's understanding of the present so as to be able to shape the future.

Museums today want to work inclusively in order to reach a broad audience; they want to be a forum for societal dialogues so as to meet different experiences and perspectives; they want to be places of enlightenment and reconciliation. Their work is supposed to have sustainable effects and thereby embed societal values among the population.

However, do museums manage to reach people in a technologically and socially rapidly changing world? Are the exhibition topics,

THE EMEE PROJECT

exhibition designs and ways of mediacy on offer already everywhere developed in a way which brings about the desired success?

Museums and their staff seek the dialogue among each other – in our increasingly globalised world also internationally; they need support, suggestions, and exchange.

Thankfully, the European Union provides programmes for the international dialogue of museums and universities so that applications can be developed that are meant to help the cultural institutions to be able to carry out their societal task.

The project 'EuroVision – Museums Exhibiting Europe' is a milestone in this development; the Toolkits are of valuable assistance on the way to meet the challenges of educational policy in the 21st century.

Prof. Dr. Hans-Martin Hinz, Berlin
President of the International Council of Museums (ICOM)

This manual was developed in the scope of the internationally oriented project EuroVision – Museums Exhibiting Europe (EMEE). The project, which runs for four years and is funded by the Culture Programme of the European Union, was initiated by the Chair of History Didactics of Augsburg University. It is implemented by eight interdisciplinary project partners from seven European countries.¹ The aim of the project is to advance the modernization of museums by re-interpreting museum objects and topics from a trans-regional European perspective as well as by innovative mediating approaches. Thereby, especially national and regional museums shall be encouraged to try out new ideas and concepts through which a timely orientation of the institution 'museum' in today's intercultural, heterogeneous society can be furthered.

1. Project members: Augsburg University, Germany (Coordinator); ATELIER BRÜCKNER, Germany; National Museum of History, Bulgaria; University Paris-Est Créteil, France; Roma Tre University, Italy; National Museum of Archaeology, Portugal; National Museum of Contemporary History, Slovenia; Kunstverein monochrom, Austria.

THE CONCEPT OF CHANGE OF PERSPECTIVE

The basic concept of the EMEE project exists of three aspired Changes of Perspectives: the first Change of Perspective refers to the new interpretation of museum objects from a trans-regional European perspective. Objects shall no longer be presented in one-dimensional contexts of meaning, but perceived in a differentiated way through multi-perspectively conveying several levels of meaning that are demonstrated in a parallel way. The second Change of Perspective refers to a change in the relation between museum experts and

visitors. In reflecting on the museum's traditional role as scientifically interpreting authority and in inviting visitors to participate by means of different approaches old patterns of thought can be overcome and new, contemporary forms of museum work can be developed. From a trans-regional European perspective this can, for instance, mean that visitors with a migration background can contribute their view on objects. By expanding the scope of interpretation the objects can at the same time become more interesting to a wider circle of visitors. The suggested activities in line with the 'bridging-the-gap' approach (bridge cultural and social divides) can thus also contribute to audience development. The third Change of Perspective aspires the broadening of the view by internationalization: only in an internationally comparative perspective new, changed interpretations of objects become possible. Moreover, establishing international networks facilitates cooperation between museums of different countries.

THE FIVE EMEE TOOLKITS

So as to process the concept Change of Perspective for practical implementation, especially the first and the second Change of Perspective, five so-called EMEE Toolkits were developed in the scope of the project. These application-oriented manuals aim at mediating between theory and practice and offer all interested museums instructions for innovative and creative concepts by which the modernization and internationalization of museum work can be advanced. The five manuals thereby thematically focus on different topics as the following overview shows:

TOOLKIT 1: MAKING EUROPE VISIBLE

- The Toolkit deals with the re-interpretation of objects showing ways to re-interpret collections with a trans-regional and multi-perspective approach.

TOOLKIT 2: INTEGRATING MULTICULTURAL EUROPE (SOCIAL ARENA)

- The Toolkit provides an idea of the museum as a public, non-commercial space that offers possibilities for people to meet, to discuss and to get in touch with the cultural heritage.
- It shows how these enhanced functions of museums can be used for presenting and discussing trans-regional and European topics especially regarding current issues and present-day problems. In that way, it contributes to integrating multicultural Europe.

TOOLKIT 3: BRIDGING-THE-GAP (ACTIVATION, PARTICIPATION AND ROLE MODIFICATION)

- The Toolkit deals with the development of different levels of the participation and activation of the visitor (for example hands-on, minds-on, user-generated exhibitions, guided tours conceptualized in the form of a dialogue, participation of different focus groups in the museum work, etc.).
- It develops programmes to encourage non-visitor groups to get to know the museum's world.
- It provides best practice examples with a focus on trans-regional/ European topics.

TOOLKIT 4: SYNAESTHETIC TRANSLATION OF PERSPECTIVES. SCENOGRAPHY – A SKETCHBOOK

- The Toolkit is about scenography and its potential for a synaesthetic translation of perspectives.
- The first part introduces the basic parameters and tools of Scenography as well as some strategies of staging museum objects.
- The second part is more practical in nature. It presents scenographic design concepts for staging trans-regional museum objects in a European context. They are visualized by sketches and show how to apply the parameters, tools and strategies to generate a Change of Perspective.

TOOLKIT 5: SOCIAL WEB AND INTERACTION

- The Toolkit shows that the social web can be used not only for public relations but also for interaction (museum with visitors, museum with non-visitors, visitors among themselves, museum with other institutions).
- With this Toolkit, visitors and other interested persons will be given a possibility to get in-

— volved with the museum's topics, to discuss, to exchange ideas, to reflect on exhibitions, etc.

- It offers ideas how to integrate the possibilities of web 2.0 in exhibitions in order to promote more visitor participation.

The EMEE Toolkits also present best practice examples for the various topics and therefore partially refer to the preceding Mapping Process, which was carried out in the first phase of the project.² In future project steps the ideas and concepts of the EMEE Toolkits will be tested by practical implementation in various formats such as workshops and practice modules which will be accompanied by an evaluation process. Moreover, so-called Exemplary Units, which will be published on the EMEE website in the further course of the project, provide additional suggestions for the implementation of the contents of the five EMEE Toolkits.

The EMEE Team

2. EMEE – Museums Exhibiting Europe. Mapping Process, <http://www.museums-exhibiting-europe.de/mappingprocess/>, Accessed 20 December 2015.

This document offers guidance in understanding and applying interactive information and social media technologies for European national and regional museums. The goal of using these tools is to spread knowledge and to start a communication process around the museum's topics with visitors and non-visitors on different media channels and to arouse a permanent relationship of the visitor and the museum. Web 2.0 technologies like Facebook, Twitter, and Google+ are not a simply 'nice to have' anymore; instead, it is almost obliged to make use of media channels like these. These channels represent not only another way to promote news or facts, but a way to develop a sphere of communication, participation and emotion that creates added value for all involved parties.

1. ICOM. Museum Definition, <http://icom.museum/the-vision/museum-definition/>, Accessed 20 December 2015.

»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. «¹

The *International Council of Museums* (ICOM) defines the museum as an institution open to the public. This includes not only the spatial conditions for exhibiting objects, but also every aspect of representation in a digital/ virtual environment. Thus it is important for museums and related institutions to act and think in the digital domain as well as in the physical domain.

Since establishment of the world wide web 25 years ago and the rise of smartphones, visitors have learned a different kind of behaviour to access information, developing from specific time and location based sources – like schools, libraries, and museums – to the possibility of ‘anytime’ and ‘anywhere.’ The use of new technologies has changed our everyday behaviour and how content is perceived and evaluated. People are accustomed to finding information on their own and creating and sharing news and stories with their community. The influence also goes the other way around: digital communities influence and change real-world interests, ideas and opinions.

With the move from web 1.0 to web 2.0 technologies, the internet itself experienced a shift from a mostly unidirectional information resource

to a vivid platform to exchange information multi-directionally. Web-based technologies provide tools to share and discuss content and deliver knowledge to everyone who can access the internet. Museums and cultural institutions which provide content and knowledge have to adapt to stay visible and relevant for the digital natives.

A museum's cultural assets are not only its collections but also the know-how of its experts. Museums and cultural institutions often are reluctant to open their doors to the public beyond the traditional methods of paid visitor entry, but new ways of providing knowledge and guidance are necessary to make the cultural heritage relevant for younger generations. Online projects like *Europeana* give museums the opportunity to integrate their national and regional artifacts into a digital accessible European cultural heritage.

Many museums and cultural institutions already maintain social media departments or digital marketing divisions to embrace the digital community and broaden their coverage to achieve their goals: to be more relevant, to connect with the visitors and their communities and to attract more visitors to the museum. Online engagement of

museums and visitors can be diverse. From the use of social media channels for distributing targeted information to visitor generated contents reflected in the museum.

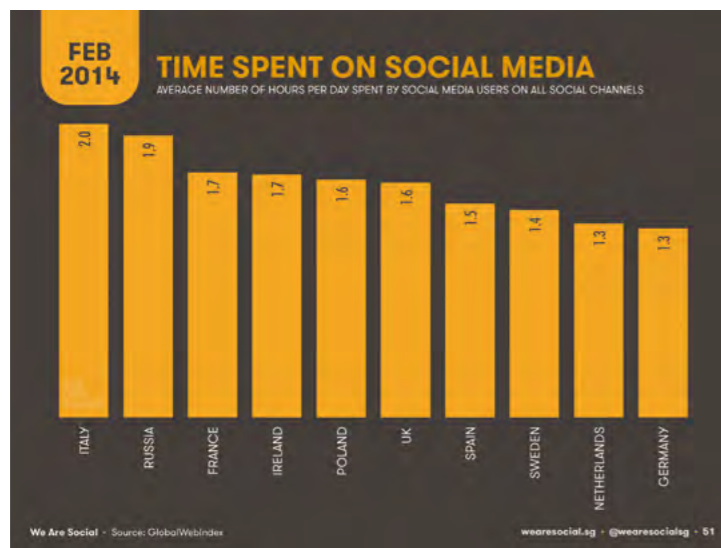
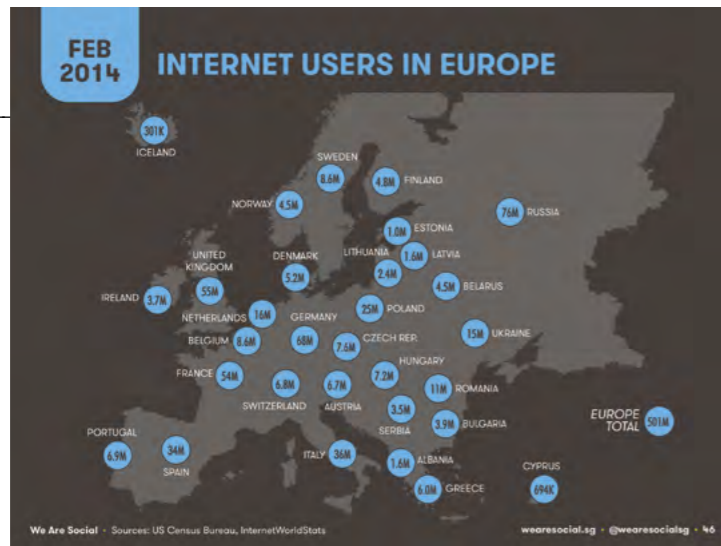
Projects like the Twitter based #museumWeek help to raise general public awareness and strengthen the positive visitor experience. Museums can benefit from the willingness of people to participate in a museum's activities – i.e. by acquiring new visitors, collecting user-generated content, or offering the visitor a casual informative experience.

Using web-based technologies offers enormous potentials – there are many stories of success. The process is not completed by simply activating these tools, however. Handling and directing them well is even more challenging. The dangers are ambiguities, misdirected efforts, misinterpretation or wrong expectations. The usage of social media technologies may also demand unexpected or underestimated resources such as time, money, employees and equipment.

The following gives an overview of contemporary tools and their possibilities, tracks the on-going technological and social development, and points out best practice examples. We hope it provides guidance for museums to choose and form their individual strategies.

INTERACTION WITH WEB-BASED SOCIAL MEDIA TECHNOLOGIES

SOCIAL WEB



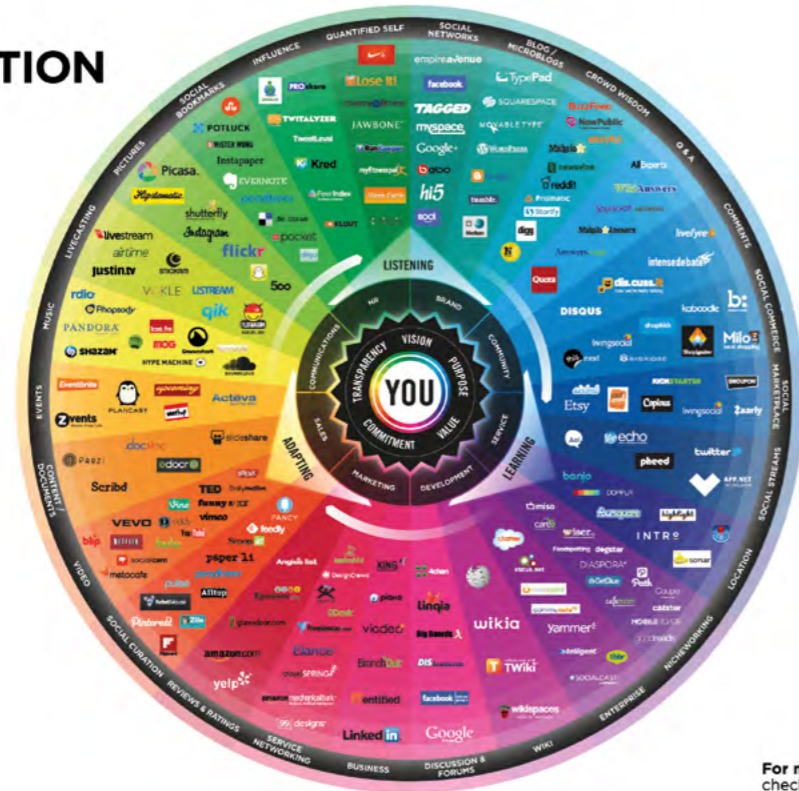
The terms social media, social web, web 2.0 are used for the same technical developments around the web. These terms sum up web-sites which have gone from static to interactive and collaborative. Social media is a way for people to communicate and interact online. Publishing content was never more easy than it is now. In particular, the use of social networks, wikis and blogs have established themselves more and more over time. Popular sites and applications from almost ten years ago like myspace and Second Life lost their importance or changed their main user group. But our desire for social interaction on the internet stayed. At the moment Facebook has over 1.3 billion, Twitter, YouTube and Google+ have hundreds of millions of registered users and they are still gaining.

Fig. 1: The European users and their use of online time
Source: We Are Social Deutschland GmbH, <http://wearesocial.net/blog/2014/02/social-digitalmobile-europe-2014/>, Accessed 20 December 2015.

Fig. 2: Time spent on Social Media: People in Italy and Russia are spending more than 40% of their online time on social media.
Source: We Are Social Deutschland GmbH, <http://wearesocial.net/blog/2014/02/social-digitalmobile-europe-2014/>, Accessed 20 December 2015.

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GENERAL ANALYSES OF THE SOCIAL MEDIA LANDSCAPE, 2014

The following points in this document are describing and advising on the most important and relevant online and social media tools in 2014. Their relevance is determined by their applicability to European museums. Therefore, not every contemporary tool or site is discussed here. As the landscape of tools and sites changes extremely rapidly, it should be noted that this document has an expiration date of one to two years. First, here is a general overview and advice on recent trends in the social media sphere at the moment.

In the following subchapters social media channels are described and recommended as possible avenues for European museums to connect to visitors and reach non-visitors. Not each outlet is equally useful. So each description is accompanied by an analysis of the outlet's:

- Target Group (Categories of people)
- Time
- Money
- Resources (Labor and upkeep requirements)

Using this information, museums should be able to make an informed decision about which social media tools to develop immediately (or continue operating), and which to postpone (or deprecate).

Fig. 3: This 'color wheel' identifies a huge range of social media companies, tools, services, etc.
Source: The Conversation Prism (Brian Solis + Jess3), <https://conversationprism.com>, Accessed 20 December 2015.



EUROVISION – MUSEUM EXHIBITING EUROPE (EMEE): One Object – Many Visions – EuroVisions

The ambitious aim of the EMEE-project is to make museums more accessible in many ways: with an innovative and interdisciplinary approach developed by history didactics the project wants to re-interpret museum objects and put them into a broader context of national and transnational history. Visitors shall face objects not only on a regionally and nationally determined level of meaning, but discover transnational and European perspectives using new means of presentation, performances and possibilities for participation. At the same time the project develops creative concepts for audience development. Particularly by involving and activating the visitor, the project tries to attract the rather large number of “non-visitors” to the museums. With around 2 million euros the Culture Programme of the European Union supports a museum project to be implemented between November 2012 and October 2016, coordinated by the University of Augsburg, department of history didactics, headed by Prof. Dr. Susanne Popp. Project partners are the Université Paris-Est Créteil (France), Università degli Studi Roma Tre (Italy), the Bulgarian National History Museum in Sofia, the Museu Nacional de Arqueologia in Lisbon (Portugal), the National Museum of Contemporary History in Ljubljana (Slovenia), the art association monochrom in Vienna (Austria) as well as the Atelier Brückner in Stuttgart (Germany).

WEBSITE

The base of all social media channels must be a well-equipped website. In most cases this is the first place where people will look when they are searching for information. The very basic information must be shown here. The introduction to the museum, the recent exhibitions, the upcoming program, the address and the opening hours.

For a good and useful website three keywords are important: the design, the content and the usability. If one of the three is not well regarded, visitors tend not to stay as long, and the important first impression leaves a bad taste. Jakob Nielsen, a web usability expert, notes that the ‘first 10 seconds of the page visit are critical for users’ decision to stay or leave’².

If the museum team is in the challenging position to work on a new website for the institution they must be sure to regard the three keywords as equal. The website can be seen as extension of the real museum, it should communicate not only information but also positive emotions.

When people search for the museum or a museum-related topic, it is important that the official website is one of the first search results. The search results are determined by a Page Rank which means that every website has an internal Search Engine Ranking that can be improved by Search Engine Optimization (SEO) which consists of three parts:

2. Nielsen, J. (2011) ‘How Long Do Users Stay on Web Pages?’. NN/g Nielsen Norman Group, <https://www.nngroup.com/articles/how-long-do-users-stay-on-web-pages/>, Accessed 20 December 2015.

Fig. 4: Website of the EMEE-project
Source: EMEE – Museums Exhibiting Europe, <http://www.museums-exhibiting-europe.de/>, Accessed 20 December 2015.

ONPAGE OPTIMIZATION describes all possibilities to improve the content of the museum's website. Conformity with standards like HTML are important aspects.

OFFPAGE OPTIMIZATION can be done by developing the network of sites that link to the museum's site. The more links from topic relevant websites the better the search engine ranking results. But search engines do not only count the backlinks from other websites; so called 'social signals' are also measured.

SOCIAL SIGNALS The more a museum is mentioned in social media sites, the higher the search engine ranking gets. When people talk about, like and share content and explicitly name the museum, it counts. To get more 'social signals,' social media activities of the museum should be all linked from the first page of the website. The most common way is to have small icons of every platform next to each other that link the user directly to the profile of the museum, where the user can follow, like, comment or become a fan of the museum.

*According to Business Insider and TastyPlacement, having 'Google+ followers boosts the Google search ranking the most, while a "+1" still does way more for your search ranking than Facebook or Twitter.*³

SOCIAL MEDIA PLUGINS

Social media plugins connect the website with all the external platforms the museum is using, such as the museum's Facebook profile or the museum's Youtube channel. It is possible to get features of the various platforms inbound on the website of the museum. The content of the museum's website can be complemented with these plugins to enable the possibility to like, share, retweet or pin the images to a pinboard and so on. A row of customised buttons are available for the site visitor. With only one click, the user of the website can show his/ her preference to his/ her social community. In this way information can spread very easily and in return the visits on the museum's website will increase, which will have positive effects on search engine rankings.



Webtools like www.sharethis.com can help to get the right code with the right buttons to embed into the website. Pre-made plugins are also widely available on Content Management Systems (CMS) such as WordPress.

There are also tools to display outputs of the social media activities of the museum and the people who post about the museum. The feeds can be separated by social media channel or displayed in one united stream on the museum's website.

- <http://feederninja.com>
- <http://www.tintup.com>
- <http://www.sauna.io>

The website of the *German Network* for the international Museums Day uses a social plugin to display the Facebook posts of the own Facebook page and a stream of the channels Facebook, Twitter, Instagram and Google+ to a certain hashtag #MYCOLLECTION14 (<http://www.museumstag.de/digital>).

3. Lynley, M. (2012) 'Using Google+ Is The Best Way To Boost Your Website's Search Ranking With Social', Business Insider, <http://www.businessinsider.com/surprising-no-one-using-google-is-the-best-way-to-boost-your-websites-search-ranking-2012-4?IR=T>, Accessed 20 December 2015.

Fig. 5: Social Media Icons: Facebook, Twitter, Google+, Vimeo, Youtube, Tumblr, Pinterest, LinkedIn, Instagram, Flickr and Facebook like and Twitter follow button.
Image: Anika Kronberger

The social interaction on a museum's website is limited. With the help of blogging technology parts of the website can be opened for comments and discussion on posted content, or even enable community-based content creation with Wiki software. The Wiki application is a collaborative content management and website building system, but with limitation of layout possibilities. It can be used in addition to a museum's website for a project where contribution and collaboration is useful and wanted. Wiki can be downloaded and used for free but needs some content supervision once started. Users can read, add and delete content on pages and even make and delete pages. The website Wikipedia is based on this system.

WIKIPEDIA AND WIKIMEDIA COMMONS

Wikipedia is the largest online encyclopedia based on wiki-technology that can be used and edited for free. It is used to present basic information and additional references on a topic. In the search engine ranking Wikipedia is very high and it will come up first or second in web searches. This page would be an important starting point for people looking for information about a museum and it can link them inwards to the museum website or to other resources (such as Twitter feed, YouTube channel, etc), without requiring the full development of a standalone website.

A Wikipedia entry is quite easy to upkeep – in fact, once it is created, it is likely that other users would contribute to its upkeep and the museum may not need to do much more than monitor it occasionally to ensure accuracy. A very plain visual presentation is standard, requiring only some good documentation photos – for which the usage rights are free or open. Whatever images are given here are likely to become used and reused over many years, not least because journalists and bloggers on short deadlines often pull stock images from Wikipedia rather than seek out permissions for images obtained elsewhere. So, the selection of image is quite important. The photographer should grant usage rights for the digital image⁴.

4. See this page for more information about Wikimedia image usage: Wikimedia Commons. Commons: Reusing content outside Wikimedia, https://commons.wikimedia.org/wiki/Commons:Reusing_content_outside_Wikimedia, Accessed 20 December 2015.

BLOGS

Blogs are a format that came up in the 1990s and describe websites with chronological sorted entries with narratives build from text, images, videos, audio and links. Often blog entries are written from the first-person perspective and the ‘blogger’ keeps the blog like a journal. But also newspapers and corporations are using this web technology for their purpose. Readers of the blogs are often allowed to comment on the blog posts and join the discussion. Over the years different tools have been created that make it easy to implement a blog on a website or have it published on a blogging network. Wordpress is the most known open-source content management software at the moment. It has an integrated user management system which allows more than one author with different administration rights to contribute blog posts. There are also blogging networks like blogger.com (owned by Google) or wordpress.com that hosts over 71.5 million blogs.

Blogs may be the right format for a museum to use when there is a frequent stream of new content such as events, photos, videos, etc. The most useful way that blogs could be used within a museum context is by allowing the employees

to give more of a human, insider’s perspective on the museum, since museum websites are comparatively impersonal. It can help to build social relations with readers and other bloggers and to have direct response on blog posts.

Over the last years social networks like Facebook and Google+ gained immensely in popularity. 89% of 18-29 year olds use social networks to connect with friends, classmates, co-workers and new acquaintances. Every user has a public or semi-public profile page where all the activities are collected.

With the increasing use of smartphones these social networks are becoming embedded in our daily life. 80% of 18-44 year olds check their smartphone as soon as they wake up⁵.

5. Always Connected. How Smartphones And Social Keep Us Engaged. An IDC Research Report, Sponsored By Facebook. 2013. [http://www.nu.nl/files/IDC-Facebook%20Always%20Connected%20\(1\).pdf](http://www.nu.nl/files/IDC-Facebook%20Always%20Connected%20(1).pdf), Accessed 13 January 2016.

Top 5 Social Platforms Globally / Demographic Breakdown of Active Users
Source: Global Web Index Q2 2013

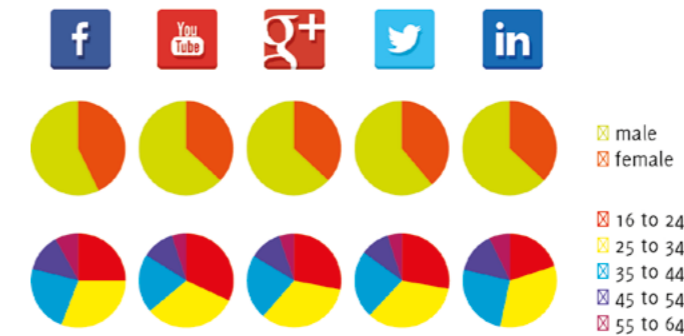


Fig. 6: Top 5 Social Platforms Globally
Image: Anika Kronberger with data from <http://www.globalwebindex.net/blog/stream-social-q2-2013>, Accessed 20 December 2015.

FACEBOOK

Facebook is the world's largest social media platform. It started in 2004 as a website for students at the Harvard University to interact with each other. It gained more and more users from non-academic groups and grew to its current status as the most popular social media platform. In the beginning of 2014 1,310,000,000 users are active worldwide and spend approximately 18 minutes per day on the website⁶. It is used to share thoughts, images, links and videos with friends – to become a Facebook friend a request must be accepted and this allows the friends to follow each others posts on the own so-called timelines. That sharing generates further interaction. Every posting can be liked, commented and shared with other friends. Friends will see what you liked, commented or shared and can take part in the discussion. This enables a fast dissemination of content to a possible worldwide audience.

Facebook profiles are for individuals and have to present a real person. You can interact with other friends, write direct messages, see when they are online, share media and follow each others activities.

Facebook pages are for institutions, companies and businesses. Pages don't have friends, they have fans that follow their posts. Facebook pages can be run from more than one administrator, each of whom must have a Facebook profile.

Facebook group: This is a special interest association of more than one Facebook user. A Facebook group is used for discussing and disseminating information among the group's participants only. Groups can be hidden or public for everyone to join.

Facebook event: Every Facebook user can create a Facebook invitation for a real-world event. Friends, fans and group members can be invited and can respond with 'attending', 'maybe attending' or 'not attending'. All invited users can see news and comments on the event and can preview the invitation and attendee lists. Friends who are not invited will see which events you attended if you let it show up on your timeline. Users who RSVPed will be reminded of the events they wanted to attend.

For the museum Facebook can be used for staying in contact with visitors. By sharing images of current events, exhibitions and behind the scene

stories, the users can stay informed with minimal effort. Once they are fans of the museum, the posts may pop up in the users timeline. If the posts of the museums are liked, commented or even shared further, the audience will grow through friends of friends who will see the activities of their Facebook friends. Opinions or experiences shared on Facebook are likely to be adopted by others and may lead i.e. to visit an exhibition if a Facebook friend recommended it. The more often a visitor interacts with a museum's post by 'liking' or commenting on it, the more likely that museum's later posts are to appear in the user's timeline.

TARGET AUDIENCE

Almost everybody with a computer or an mobile device and an internet connection can use Facebook. To address specific target groups, search for public or private Facebook groups in your area and engage in the discussions to promote exhibitions and events.

TIME

Try to understand who your audience is and who you want to reach. When you take into account that a Facebook post receives half of its reach within the first 30 minutes⁷, it should correlate with the online-time of your audience (which time zone, what hours of the day they are typically online, etc.). Facebook is used in the morning, in the lunchbreak and in the evening to check for news. If you have international fans of different time-zones it will be hard to find out the

6. Statistic Brain Research Institute. Facebook Statistics, <http://www.statisticbrain.com/facebook-statistics/>, Accessed 20 December 2015.

7. N.N. (2012) 'Facebook Posts Get Half Their Reach Within 30 Minutes of Being Published', *MC Marketing Charts*, <http://www.marketingcharts.com/online/facebook-posts-get-half-their-reach-within-30-minutes-of-being-published-24453/>, Accessed 20 December 2015.



perfect timeslot for your posts. There will not be the perfect time for posting, just be sure that the content is appealing. Museums should post between three and ten times a week. If there are comments and discussions on your museum's posts, try to take part and show your presence.

RESOURCES

One person in your museum should have the overview and the overall responsibility to respond quickly to direct messages and comments. The employees of the museum can be encouraged to share content and take part in the communication on the Facebook page with their personal profiles.

MONEY

To register a Facebook account is without a charge. If you want to gain more fans in a shorter time it is possible to advertise the museum's Facebook page with Facebook ads or promoted posts. The ads will show up on addressed target groups profiles and encourage them to like the museums Facebook page. The promoted posts will stay longer in the timeline to get a bigger audience. With a very little amount of money the group of fans will grow. In the beginning phase of a Facebook page it can be useful to start a community quickly.

Fig. 7: Screenshot of the Facebook page of monochrom.
 Source: Facebook. monochrom, <http://www.facebook.com/monochrom.group>, Accessed 20 December 2015.

GOOGLE+

Google+ is the second largest social community platform and exists since 2011 with 300 million active monthly users⁸. Content like text, images and video can be shared with others in 'the stream', the main page of Google+ where all the posts are collected. Other Google owned platforms like Youtube and Picasa offer a good connectivity to the social network. The functionality of Google+ is similar to Facebook and Twitter but it offers some unique features like 'Circles' and 'Hangouts'. Postings can be liked, commented and reposted.

Google+ User Profile: Is a public visible user account where the authorised circles can see the posted messages in the stream – the middle column of Google+.

Google+ Page: Profile page for non individuals like organisations, companies and associations to be present in the social network.

Google+ Circles: It is possible to group friends in specific networks. For example you can have a friends-of-the-museum-circle, a employees-of-the-museum-circle and a circle for each target group and provide them with custom tailored content. This categorisation of people helps to keep

an overview of the contacts and give them specific information.

Google+ Hangouts: The Hangouts are an online voice or video conferencing tool without installing any additional software. You can directly call your friends or have a video chat with a specific circle.

Google+ Communities: These are topic related groups where google users can share content and interact with others.

Google+ Name: You can address Google+ users directly in your posts when you put the Username with an + in front into your text. It is linked to the profile of the marked User.

Museums can use Google+ Hangouts to give exhibition previews or discussions with a curator live on air. It is like broadcasting and it can be scheduled to a certain date and time. The museum could establish special events for certain communities or invite a Google circle to an exclusive online-event.

TARGET GROUP

Google+ offers statistics about the job description of the users. Both female and male users stated student, software engineer, software developer and photographer as their current profession. Nearly a third of people who self-identify as workers in IT-businesses.

TIME

Like in all of the social media channels it takes some time to get started. Let the community grow and decide what your goals are. The amount of posts per week should be around three to ten. If there are comments and discussion on your museums posts try to take part and show your presence.

MONEY

To register a Google+ account is without a charge.

RESOURCES

Like it is with Facebook, one person in your museum should have the overview and the overall responsibility to respond quickly to direct messages and comments. Google+ public hangouts need technical resources like video and audio equipment which can be a basic webcam and microphone integrated in a laptop or a professional live broadcasting system.

8. N.N. (2013) 'Google+ Hangouts and Photos: save some time, share your story', Google Official Blog, <https://googleblog.blogspot.co.at/2013/10/google-hangouts-and-photos-save-some.html>, Accessed 20 December 2015.



TWITTER

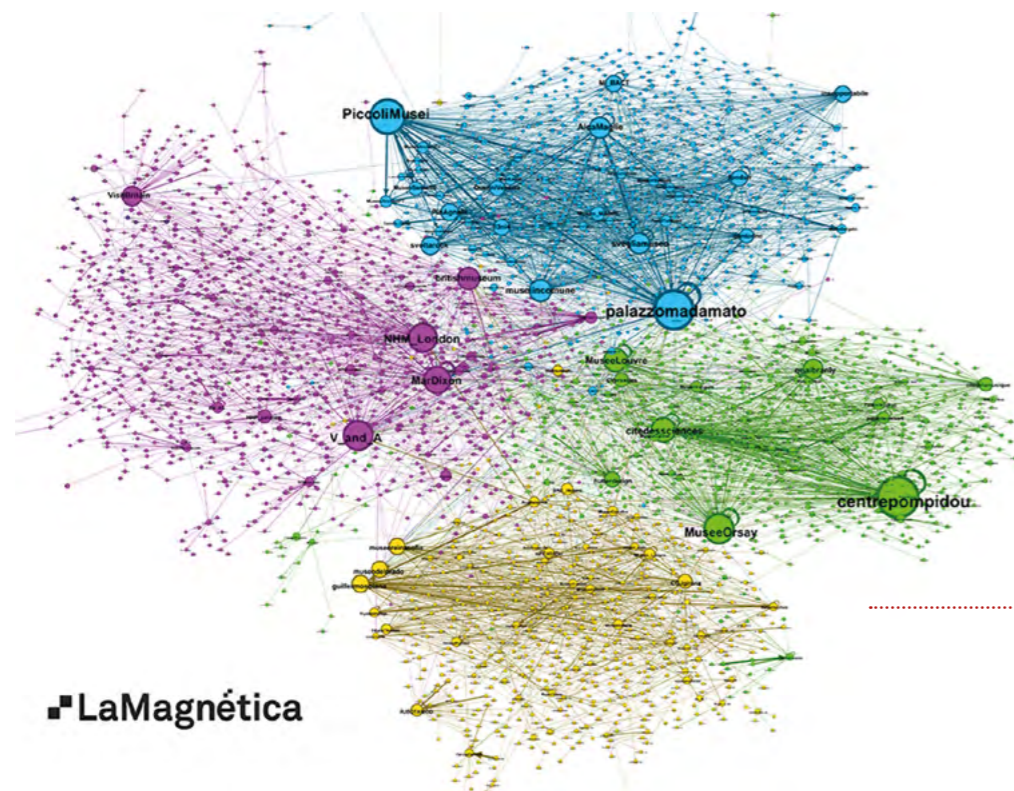
Twitter is a microblogging tool and within the top 10 most visited internet sites. The posts are limited to 140 characters per entry. The community consists of users who can follow other users and subscribe to their messages. All subscribed messages will show chronologically in a timeline. Twitter is often used with smartphone applications because it is easy for the users to post messages from due to the limitation of characters.

9. Twitter, Huffington Post, eMarketer/ Research, <http://www.statisticbrain.com/twitter-statistics/>, Accessed 20 December 2015

Fig. 8: Screenshot of the Twitter page of @EMEEurovision, EMEE – Museums Exhibiting Europe
Source: <https://twitter.com/EMEEurovision>, Accessed 20 December 2015.

- Total number of active registered Twitter users: 645,750,000
- Number of new Twitter users signing up everyday: 135,000
- Number of unique Twitter site visitors every month: 190 million
- Average number of tweets per day: 58 million
- Percent of Twitter users who use their phone to tweet: 43%
- Number of active Twitter users every month: 115 million
- Percent of Twitters who don't tweet but watch other people tweet: 40%
- Number of tweets that happen every second: 9,100⁹

It is possible to address users directly or to add so-called hashtags. To address someone, the @ sign is put in front of the Twitter-user-name and integrated in the tweet. A hashtag always starts with the # character and then a word with meaning or a combination of characters and numbers. These hashtags are a tool to reach out to a wider public. If users click on it or search after it they can read and follow all tweets containing this hashtag. It is important to define one unique



hashtag for the museum and to use it as often as possible. It is advised to print it on every public-relations material and to use it in the e-mail signature. This can be utilized for collecting all tweets around the sphere of your museum. Visitor responses and visitor experiences are findable under one hashtag.

This tool is also very broadly used for special events and conferences. If a hashtag is made public in the very beginning of the event or even earlier in planning and every visitor and participant is encouraged to tweet and use the particular hashtag, every comment will be linked to it. So by clicking the hashtag there is a collection of Twitter users who attended the event, and the museum has the opportunity of getting in touch with the people.

Short time announcements, special offers, reminders, recent news can bring people to the museum. Add value to your tweets - try for example special Twitter discounts, like MOMA tweeted on 21. Feb. 2014: 'Share some art this weekend. Buy 1 regular admission ticket & the second's on us. Just mention ME & YOU at ticketing.'

Existing hashtags examples that can be used:

#museumselfie –Take picture of yourself in the museum

#museumcrush – Valentine's day

#followamuseum – 1. February

#MuseumWeek – is a Twitter UK initiated project where for one week special content of over hundred European museums is promoted and collected. Every museum and every visitor can join.

Fig. 8: Twitter user that interact between each other with a higher intensity during #museumweek. United Kingdom (pink), Spain (yellow), France (green) and Italy (blue)
Source: N.N. (2014) 'Social Network Analysis MuseumWeek 3: A closer look to the country groups.', La Magnética, <http://www.lamagnetica.com/en/museumweek-3-a-closer-look-to-the-country-groups/>, Accessed 20 December 2015.



Topics/ hashtags:

- Day 1 – A day in the life (#DayInTheLife)
- Day 2 – Test your knowledge (#MuseumMastermind)
- Day 3 – Your story (#MuseumMemories)
- Day 4 – Buildings behind the art (#BehindTheArt)
- Day 5 – Ask the expert (#AskTheCurator)
- Day 6 – Museum selfies (#MuseumSelfies)
- Day 7 – Constraint drives creativity (#GetCreative)

Opportunities like the museumweek pop up in Twitter on a daily basis. Follow other museums and try to have a good overview of what they are doing. By using hashtags you can reach and address a new audience. Be spontaneous and join recent hashtag trends.

Leave traces under a special hashtag. Explore and collect a list of hashtags that have value for your museums/ exhibitions topics and address them from time to time, for example: #museum, #[yourarea], #[yourcity], #exhibition, #history, #jewellery, #gold, #paintings, #sight-seeing, ...

Tweet: One message with max. of 140 characters, similar to (but shorter than) an SMS on the phone. Can consist of text, links to websites or images, Twitter usernames to address them directly or hashtags.

Retweet: To forward a tweet from somebody else to your followers.

Fig. 9: Tweet from @Europeanaeu with the hashtag #OnThisDay
 Source: Twitter. Europeana, <https://twitter.com/Europeanaeu/status/465797442446053376>, Accessed 20 December 2015.

Direct Message: Is addressed to just one user and cannot be seen by other users.

Follower: All Twitter users who have subscribed your messages.

Trending Topics: A collection of current topics the Twitter-community is talking about.

Tweetup: Is a term for inviting Twitter users to a special event and encourage them to tweet about it in real time. This can be a good possibility for the museum to get more attention from the social media users. You can invite Twitter users to come to a certain event to meet the museum staff and the other Twitter users.

Lists: You can group the users you follow in different lists. You can make the lists public or private.

Verified by Twitter: Twitter verifies the identity of accounts of institutions and known persons to prevent false and harming misuse of usernames. Following certain criteria, Twitter verifies accounts and decorate them with a white checkmark on a blue badge.

URL-Shortener: Due to the limitation of 140 characters in one tweet it is advised (and often necessary) to shorten the web URL you want to

communicate. There are different web applications that generate a shorter URL and forward the click to the original website. To condense your URL try: bit.ly, tinyurl.com, goo.gl (For example here is a link before shortening: <http://www.museums-exhibiting-europe.de/get-involved/emea-web-2-0/> and after shortening: <http://goo.gl/k3BJiP>)

Some of these link-shortening services additionally allow you to personalize the shortened link to an intelligible word, rather than using a random string of characters.

TARGET GROUP

In a survey of PewResearchCenter¹⁰ in the US they found three groups that uses Twitter the most: Young adults – One quarter (26%) of internet users ages 18-29 use Twitter – residents of urban and suburban areas are significantly more likely to use Twitter than their rural counterparts and African-Americans.

In a survey of Deutsche Bank¹¹ they asked Twitter users why they are using the platform 'being informed on News events' (51%), 'To discover interesting articles/ content' (36,8%) and 'To tweet something interesting' (36,5%) were the Top 3 not exclusive answers.

TIME

Due to the limitation of 140 characters it is not very time consuming to tweet but the preparation and distillation of information may be a time consuming process. You can take some adjustment-time after the registration of your account to learn how the system is working. Follow the users you are interested and are valuable for your work. For your tweets try a mixture of your own info-tweets, conversation tweets and retweets of interesting posts by others. After your first trial tweets you should make it to approximately three to fifteen tweets a week. Your follower will receive the messages in their timeline and they are displaced downwards due to new incoming messages from others. Sometimes it might be necessary or welcome to re-tweet information on multiple days, or at multiple times during the day, to make sure it is seen by people in different time zones.

MONEY

To register a Twitter account is without a charge.

RESOURCES

Plan ahead and make a repository of tweets to post and hashtags you can address. One person in your museum should have the overview and the overall responsibility to respond quickly to comments and direct communication.

10. Smith, A. and Brenner, J. (2012) 'Twitter Use 2012', Pew Research Center, <http://www.pewinternet.org/2012/05/31/twitter-use-2012/>, Accessed 20 December 2015.

11. Deutsche Bank Markets Research (2014) A Closer Look at Twitter's User Funnel Issue. http://boletines.prisadigital.com/Closer_Twitter.pdf, Accessed 13 January 2016.

LINKEDIN

LinkedIn is the most popular social community platform for professional networking. Businesses, employees and self-employed workers present themselves in a formal way. The profiles are filled with career-related information like resumes, skills working history. It is used to find jobs, new employees and business opportunities. To access all the information an active user account is needed. The network makes the relationships between users' so-called connections visible.

For museums a linkedin company page can be helpful to find qualified employees and keep in contact with former colleagues and partners. There are also LinkedIn groups where users can network around a special interest topic. This could be used for museums to create or join a group and get in contact with other museums and museum workers.

TARGET GROUP

specialists, executive staff, college graduates and internet users in higher income households

TIME

To have a LinkedIn account is not very time consuming. After the setting up of the profile and the search for people and institutions to connect with it can live on its own. Notifications can be received via mail. The content should be updated in case of changes. If there is a need for recruitment it can be used more intently to find applicants and get information on their career history.

MONEY

To register a LinkedIn account is without a charge. A Premium account with additional functionality can be purchased.

RESOURCES

One person should have the overview and the overall responsibility to respond to invitations and personal messages.

FOURSQUARE

Foursquare is a location-based social network which is built for mobile devices like smartphones and tablets. The user can check-in at real-world locations worldwide and see recommendations for nearby attractions. The network consists of locations in the categories food, nightlife, coffee, shops, arts, outdoors and many more. The locations can be commented and rated which influences the ranking in the search results. For every location, basic information can be accessed, such as the description, opening hours, how many foursquare-users already checked in, comments, ratings, images that other users took and the map where the location is. Every user can decide to share the location on other social media platforms like Facebook and Twitter with friends and follower. Foursquare uses gamification techniques to keep people using their services. The users are rewarded with the status mayor for often visiting the same location and unlock badges for visiting new locations.

Some locations offer Foursquare specials for checking-in. For example *Mozarthus* in Vienna offers a 'Newbie Special. Get a reduced museum-ticket at your first check-in!'¹²

This can be a good possibility for museums to be attractive for tourists.

TARGET GROUP

tourists, students, young adults

12. Foursquare. Mozarthus, <https://foursquare.com/v/mozarthus/4c99fe63292a6dcbfdc9ca76>, Accessed 20 December 2015.

TIME

As with LinkedIn, to add your museum to the network is not very time consuming. After setting up, it is not necessary to review the site more than once a week. The basic information should be updated in case of changes and specials can be added or changed from time to time. It is a good tool to get to know what visitors think about the museum or the exhibition with very low investment of time.

MONEY

To add an Foursquare location is without a charge.

RESOURCES

One person should have the overview and the overall responsibility to update the data.

In comparison to the the social media platforms social sharing web-sites are limited to one main type of content. The community derives from adding personal comments and discussion on the shared media.

As Nina Simon points out in her book *The Participatory Museum*¹³ referring to Forrester Research and their 'social technographics' that only 24% of social media users actually create content.

The researchers grouped participatory online audiences into six categories by activity:

- Creators (24%) who produce content, upload videos, write blogs
- Critics (37%) who submit reviews, rate content, and comment on social media sites
- Collectors (21%) who organize links and aggregate content for personal or social consumption
- Joiners (51%) who maintain accounts on social networking sites like Facebook and LinkedIn
- Spectators (73%) who read blogs, watch YouTube videos, visit social sites
- Inactives (18%) who don't visit social sites

These numbers show that most of the images, videos and texts are shared and museums as creators can make use of their potential.

13. Simon, N. (2010), *The Participatory Museum*, online version: Chapter 1, <http://www.participatorymuseum.org/chapter1/>, Accessed 20 December 2015.

YOUTUBE

YouTube is a video sharing website. Since 2005 users can upload, watch and share videos on the YouTube platform which has grown to the most used on the internet. More than 1 billion unique users visit YouTube to watch over 6 billion hours of video each month according to the YouTube statistics¹⁴. The videos on YouTube are a wild mixture of movie snippets, music videos, and home recorded video footage but it is also a repository for educational material from 'how to' tutorials to recordings of university courses. The fact that everyone can record some minutes of video with smartphones increased the variety of uploaded content.

The uploaded videos can be commented, liked/ disliked, shared in different social media channels and added to playlists. The sharing functionality also makes it possible to send it via mail and embed the video to your website or your blog. If content infringes on a copyright, or causes other kinds of harm, YouTube offers the possibility to flag the videos to be approved or removed by the company.

Museums can use YouTube to offer recorded events or guided tours through the museum. Also YouTube channels which can contain playlists can

be used to curate existing videos to a museum related topic. Playlists can engage the viewer to watch more videos. Different target groups can be addressed with the playlists.

TARGET AUDIENCE

The target audience of YouTube is almost everyone. In the US it reaches more 18-24 year olds than broadcast television.

TIME

Once the account is registered, uploading videos does not take a lot of time and can be continually supplemented afterwards. Nevertheless the production of original video material is usually a time-consuming process. Your museum should take time in describing and tagging the videos with keywords. YouTube is the second largest search engine after Google¹⁵, so well-tagged and elaborately described videos will be easier to find.

MONEY

To register a YouTube account is without a charge. A partner program for content creators provides

special tools for editing videos and earning income through embedded advertisements.

RESOURCES

One person should have the overview and the overall responsibility to upload the videos. Resources to produce video materials (equipment, employees) have to be taken into account.

14. YouTube. Press. Statistics, <http://www.youtube.com/yt/press/statistics.html>, Accessed 20 December 2015.

15. Elliot, A. (2013) 'The Second Largest Search Engine [Infographic]', Social Media Today, <http://www.socialmediatoday.com/content/second-largest-search-engine-infographic>, Accessed 20 December 2015.

VIMEO

Vimeo can be used to showcase and collect artistic video work and video references. Museums can open an account on Vimeo in order to be able to 'favorite' and otherwise aggregate videos that are relevant to the museum in some way, such as presentations by artists and curators, related to the exhibition, etc. The museum may not be responsible for uploading this content, but would have the freedom to collect it through Vimeo features such as Groups for sharing and discussion, or Channels for simple curation of a playlist.

TARGET AUDIENCE

The community of the Vimeo platform mostly consists creative professionals and their fans. Vimeo had an audience of more than 100 million unique users between November 2012 and October 2013¹⁶.

TIME

Once the account is registered, the upload of the videos does not take a lot of time and can be supplemented afterwards. Your museum should take time in describing and tagging the videos with keywords.

MONEY

The Vimeo basic membership is without a charge, but if you need more space to upload videos they offer a plus membership (\$9.95 per month) or a PRO membership for businesses.

RESOURCES

One person should have the overview and the overall responsibility to upload the videos. Resources to produce video materials (equipment, employees) have to be taken into account.

VINE

Vine is a video sharing application owned by Twitter. The length of the videos is limited to 6 seconds. It can be recorded in one take or with multiple cuts, or even used to simply create stop-motion videos. The 'Vines' can be shared on Twitter and Facebook or viewed on the Vine app. Commenting, following and liking works like in any other social media platform.

The outcomes are visually attractive and fast consumable short stories. It is mainly used on on mobile devices to share, comment and follow users.

For museums it would be a possibility to give short impressions on new exhibitions or the work behind it. The museum can use it for a certain project or to ask people to submit Vines under a certain hashtag.

TARGET AUDIENCE

Young adults

TIME

Once the account is registered the recording and the publishing of the videos does not take a lot of time. It is not necessary to publish on a daily basis. The museum can use it to enrich other social media posts on Twitter or Facebook.

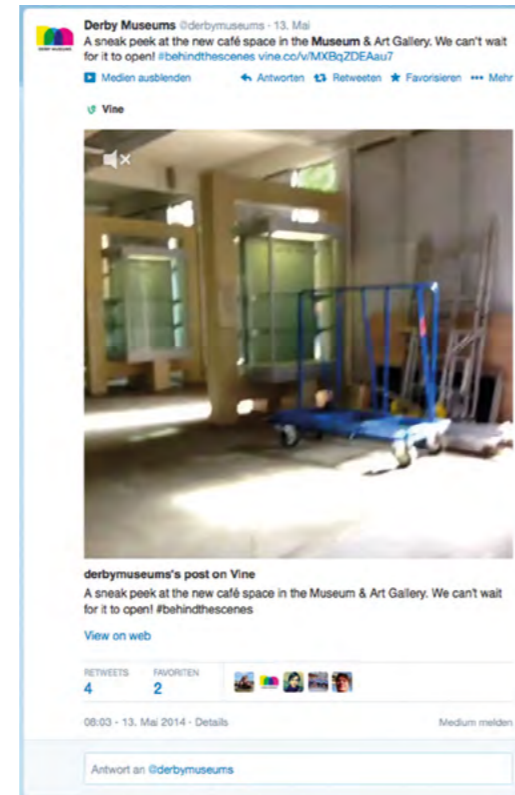
MONEY

To register a Vine account is without a charge.

16. Vimeo user, <http://www.reuters.com/article/net-us-iac-vimeo-idUSBRE9AG0G520131117>, Accessed 13 January 2016.

RESOURCES

One person should have the overview and the overall responsibility to create and upload the videos.



FLICKR, PICASA, INSTAGRAM

The three most used image-sharing platforms besides Facebook are Flickr, Picasa and Instagram which all have a lot of functionalities in common but with different usage.

Flickr is an photo hosting website where big amounts of photos can be stored and arranged in web albums. Photos can be commented, flagged as favorite, shared in other networks, tagged with specific keywords. It is very useful to have sets of photos on Flickr and embed them in blog posts. The images can be viewed in different qualities and the user can define who can download and use the image with different copyright restrictions. There is a 'The Commons' section on Flickr where different museums, libraries and archives put images where the copyright is already in the public domain because it has expired.

The photo hosting platform is perfect for the documentation of events and exhibitions. There are Flickr groups that subsume photos to certain topics.

For museums it is important to tag and describe the photos properly. Find groups where your photos fits into and share them with different interest groups.

Picasa Web Album is a photo-sharing platform owned by Google which works similarly to Flickr. It has also an offline photo-management tool called Picasa from where the albums can be synchronised to the online site. The stand alone Picasa Web Album website is more and more integrated as Google+ photo albums.

Fig. 10: Integration of Vine into a tweet
Source: Twitter. Derbymuseum, <https://twitter.com/derbymuseums/status/467038058144346113>, Accessed 20 December 2015.

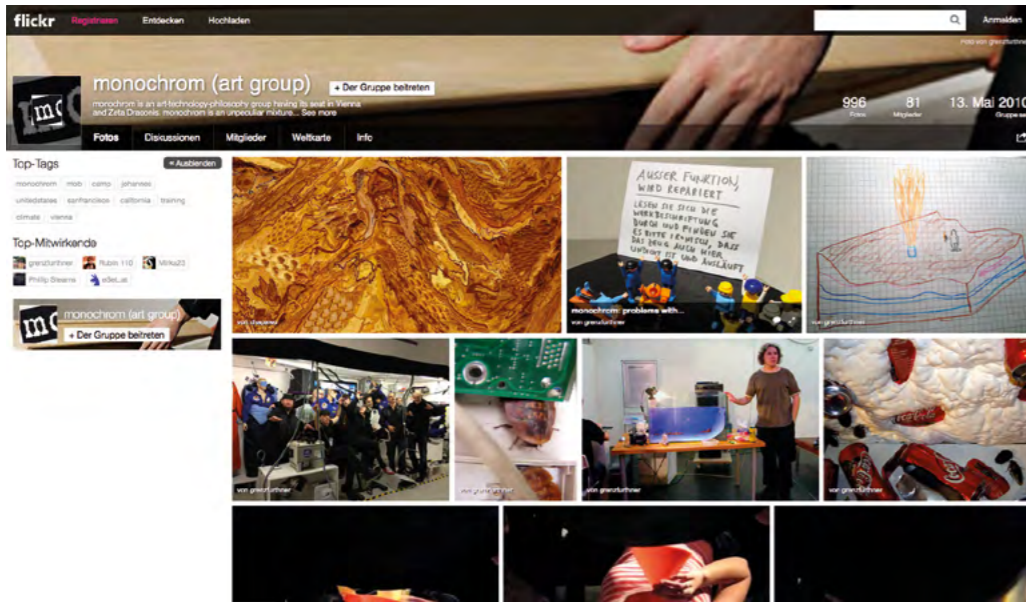


Fig. 11: Flickr group
 Source: Flickr. monochrom (art group), <https://www.flickr.com/groups/monochrom>, Accessed 7 May 2014.

Instagram is a photo-sharing platform owned by Facebook. It is used mainly with an mobile app where the images can be edited and stylised with various photo-effects. The distinctive Instagram-look is created by vintage camera emulation effects which produce a warm analogue look.

To host all online photos of the museum Flickr or Picasa is recommended. Photos can be arranged and sorted in albums for better overview

and navigation. Instagram is more an additional channel which can be used for a certain project or with a certain look on a topic. For example all the behind the scene images are shared on Instagram.

TARGET AUDIENCE

Flickr is mainly used by photographers and bloggers.

Picasa is very broadly used and is very good integrated into Google+. Instagram is mostly used by young adults.

TIME

Once the account is registered and the profile information is filled in the uploading begins. Depending on how many images your museum wants to share it can take some time. The proper description and tagging is time consuming but necessary to make the content be found. Be sure to name the photographer and decide under which licence you want to share the images.

Instagram shots are directly uploaded through a smartphone application. It is more of a steady posting of one image by another, like a social media stream.

MONEY

To register a Flickr, Picasa or Instagram account is without a charge.

RESOURCES

To keep a Flickr or Picasa account updated it needs someone who knows the images and is able to decide which images can be used.

ISSUU

Issuu is a platform for sharing digital publications like magazines, brochures and info folders. Over 15 million publications from all over the world can be found and 80 million people read something every month¹⁷. It increases the audience for a publication by recommending it next to related publications with similar topics. It is also easily searchable and a good resource-site for publications in different networks. Issuu offers the possibility of creating individual stacks for collecting favoured publications. For the connection to the museum website, an Issuu widget can be integrated to embed museum publications on the site. The documents are opened in the issuu reader, where they can be flipped through and searched. If other users want to be informed about your newest publications, they can follow you with one click.

The museum of the city of Vienna the *Wien Museum* uses Issuu to publish sample pages of their exhibition catalogues in German and English with a link on the last page to buy the whole catalogue online. The programme folder with the current and upcoming exhibitions and events can also be found on Issuu.

TARGET AUDIENCE

Publishers, designers, advertising business, fashion industry

TIME

Once the account is registered and the profile information is filled in, the publishing does not take a lot of time.

17. Issuu user, <https://issuu.com/about>, Accessed 13 January 2016.

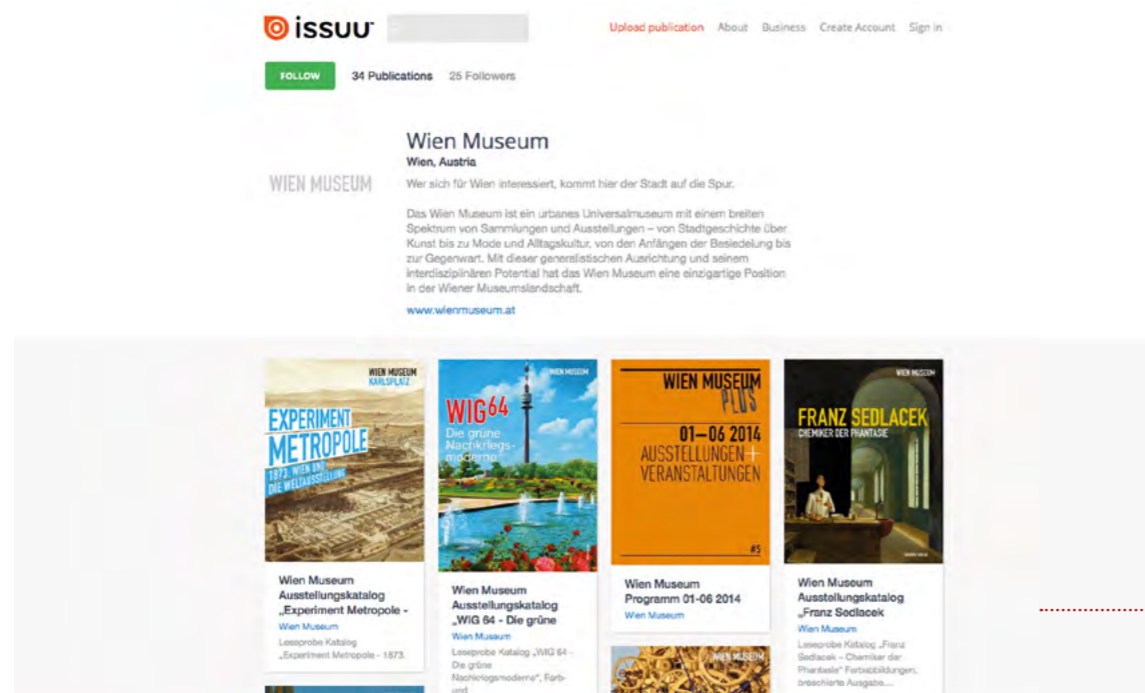


Fig. 12: Wien Museum/ Austria
Source: Issuu. Wien Museum, <http://issuu.com/wienmuseum>, Accessed 20 December 2015.

MONEY

To register an Issuu account is without a charge. When it comes to more customization of the reader app, and targeting special audience groups an Issuu Plus (29\$/ month) or an Issuu Premium (39\$/ month) account must be purchased.

RESOURCES

One person should have the overview and the overall responsibility to upload and promote the publications. The best workflow would be if the one who is responsible for the analog publishing of the documents can take care on the digital publishing too.

SLIDESHARE

Slideshare is a sharing platform for presentations such as PowerPoint and Keynote. Within Slideshare it is possible to both upload your own presentations, as well as 'like' the presentations from other members.

A museum can create its own Slideshare account, and share the presentation slides of some of its fields of work. Not everything needs to be included, but only a representative sample. The museum team should be willing (or could be convinced) to do this since slides do not normally contain all the information from presentation – it will not give away too much but can be a good teaser to engage people with museum topics.

TARGET AUDIENCE

students, researchers, businesses

TIME

Once the account is registered and the first slideshows are uploaded, it is easy to maintain and it does not take a lot of time.

MONEY

The basic Slideshare functionality is free to use. There is a PRO membership with additional advantages.

RESOURCES

One person should be in charge.

PINTEREST

Pinterest is a social curation platform functioning much like a social network. The company name is a word creation of 'pin' and 'interest' which describes the functionality very well. The users can pin mostly visual findings from the internet or uploaded images to virtual pinboards. Every user can make content-related pinboards with growing collections of images which are connected to their place of origin in the internet. Like Twitter it also has a system of following and being followed – on the main page of Pinterest you get all the new pins of pinners you follow, collected in one stream. If you like one pin you can 'heart' it, comment it or pin it to one of your pinboards, which means that your followers will see the new pin in their stream. It is a very potent tool for the spreading of visual content. The platform has a very useful search functionality. With every click on a pin you are provided with related pins and boards.

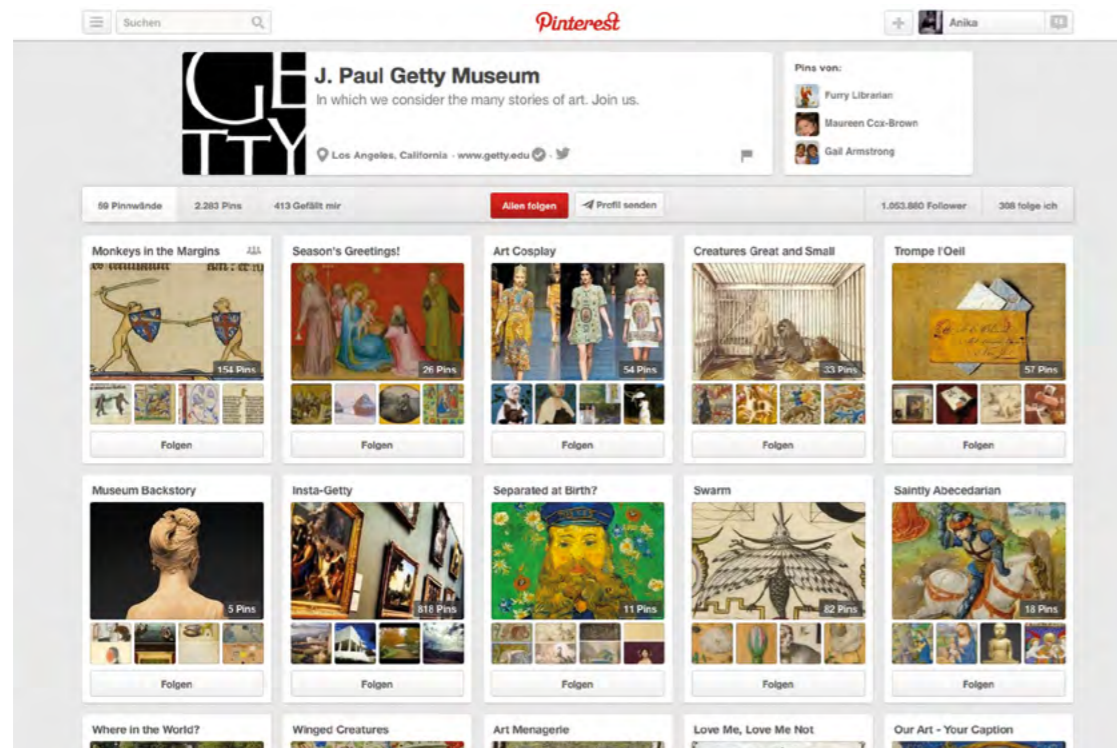
Pinterest reached 70 million registered users in June 2013, among which over 20 million pinned, repinned or liked a pin in the last month¹⁸. 17.2% of all boards have the category Home, followed by Arts and Crafts (12.4%), Style/ Fashion (11.7%), Food (10.5%) and Inspiration/ Education (9.0%). One interesting fact is that 80% of all pins are repins¹⁹. This fact can encourage museums to provide visual content to be shared by the users.

Museums use Pinterest for creating topic related boards to show what they have in their collection or what is happening in their museums. In Pinterest you have the possibility to create a new compilation of existing objects that would never be possible in the real

18. N.N. (2013) 'Pinterest has 70 million users More than 70% are in the U.S.', Semiocast. The Social Media Intelligence Company, http://semiocast.com/en/publications/2013_07_10_Pinterest_has_70_million_users, Accessed 20 December 2015.

19. Moore, R.J. (2012) 'Pinterest Data Analysis: An Inside Look', RJ Metrics, <https://blog.rjmetrics.com/2012/02/15/pinterest-data-analysis-an-inside-look/>, Accessed 20 December 2015.

Fig. 13: Screenshot of the Pinterest Account of the J. Paul Getty Museum
Source: Pinterest. J. Paul Getty Museum, <https://de.pinterest.com/gettymuseum/>, Accessed 20 December 2015.



museum. The pins which are linked to the museums website can create traffic for the museums website and can bring users to other social media channels of the museum.

With around one million follower the *J. Paul Getty Museum* is one of the best established museums on Pinterest. They have boards on special collections titled *Jumping in Museums* with artworks of people jumping, 'Artist Selfies' with selfportraits of artists, 'Swarm' with close up images of insects in paintings, ...

TARGET AUDIENCE

Most of the Pinterest users are women between 25-54 years old.

TIME

Once the account is registered the basic features like pinning and uploading images can take some time, but after this first step it can be done on a from time to time basis.

MONEY

To register a Pinterest account is without a charge.

RESOURCES

One person should have the overview and the overall responsibility to upload and create the boards.

TUMBLR

Tumblr is a short-form blogging platform with mostly visual content. It creates a very simplified page that will display as a stream of links and images arranged straight down the page. It could be considered something related to a regular blog like Wordpress/ Blogger, mixed with an image/ link curating site like Pinterest. Tumblr might be most useful for a specific event or theme but there is no particular urgency to have a Tumblr in general, since a Facebook group can serve the purpose intended – to share links and quick references, with almost zero necessity to deal with a content management interface interface.

For example the MTA (Metropolitan Transportation Authority) uses tumblr to show artworks on trains and subway stations (<http://mtaartsdesign.tumblr.com/>).

TARGET AUDIENCE

General audience

TIME

General audience

MONEY

To register a tumblr account is without a charge.

RESOURCES

One person should have the overview and the overall responsibility to upload and share images.

TOOLS FOR SOCIAL MEDIA MANAGEMENT

Tools for social media management help to provide the overview on the museum's many channels. As more and more social media networks pop up, the social media management tools gain popularity. It is not easy to keep an overview due to an ever-changing market, so most of these apps provide functionalities to administrate the profiles and plan the publishing of postings and tweets ahead. For bigger social media campaigns, the use of these tools can be a big help in understanding and monitoring the activities and extracting the results. hootsuite.com, Shoutlet, Tigerlily, Vitruv and Wildfire are well-known tools in this field.

TOOLS FOR MONITORING AND MEASURING SOCIAL MEDIA

If a museum decides to increase the actions on social media channels, it is good to know where and who already had put some traces and comments about the museum.

The easiest way is to start a Google-Search with the name of the museum or a special recent exhibition title. This process is probably familiar to

your press-department when they are looking for press articles – but it can be widened to the search of blog-entries, tweets, comments or Instagram pictures taken in the museum. This is a good starting-point for further social media plans.

Additional to the Google-Search, there are more tools to help your museum to find the personal entries you are looking for.

blogsearch.google.com or try the regional version of google blogsearch in your local language.

www.technorati.com is a useful blog-search to find any post concerning your museum.

Search all the platforms like flickr.com if some visitor has tagged your museum in his images. Be sure to try different spellings and abbreviations of your museum's name, since brevity is often a desired quality of hashtags, and misspellings may be common.

From all this results you can get a hint where is already a community you can build upon.

If the museum is using different social media channels, after a while it will be hard to follow all the threads that emerge from the spreaded content. Thanks to the possibility that almost all types of media can be commented, shared, reposted and

then again commented, it is impossible to keep the overview. There are tools that are mostly used in the commercial sector to monitor brands and their range of influence. This will help to see how your efforts work, and to analyse the sentiments in which your museum is named. These applications and platforms can give you information on the social media channels where your museum appears, with detailed information on which day and how often. From this data you can easily find out in which geolocations and in which arrays of time the activity is happening.

There are a lot of tools on the market between free and very expensive. Here is a Top 5 list from the Social Media Monitoring Tool Report²⁰ 2013:

- Engagor (\$ 1500/ month)
- Heartbeat (\$ 2,750/ month)
- Radarly (€ 490/ month)
- Synthesio (\$1500/ month)
- Talkwalker (€ 480/ month)

But there are also good and free tools

- Google Analytics
- Hootsuite
- Klout
- Social Mention

20. N.N. 'Social Media Monitoring Tool Report 2013', Goldbach Interactive, <http://www.goldbachinteractive.com/current-news/technical-papers/social-media-monitoring-tool-report-2013>, Accessed 20 December 2015.

GENERAL RECOMMENDATIONS

STORIFY

Storify is a simple tool for taking posts from Facebook and Twitter and put it in a desired order and format with the possibility of adding text and comments around it. This is used for retelling social media conversations or collecting bits and pieces of the social web. It is often used by bloggers creating a story around a debate or conversation which happened earlier on Twitter.

EVENTIFIER

Eventifier is a very useful tool if your museum is having a bigger event with wider social media coverage like an opening, a festival or a conference. On Eventifier every social media channel is subsumed on a webpage to keep track on the activities concerning this event or a special keyword. It costs \$ 480/ Event but it puts all the ephemeral on display for a longer time, and by accompanying the real event with a virtual coverage, more people can find interest in the museum.

INTEGRATE SOCIAL MEDIA ACTIVITIES IN THE MUSEUM

- The first step should be a discussion which should follow a written consensus on important topics/ problems you will have to decide for your museum.
- Make decisions which content you want to publish and which museum employees will need to approve it. The time from taking photos of an event to posting them should be a short one, otherwise someone else will share similar content and will get the most attention.
- In which tone the museum should enter discussions or answer questions in social media networks.
- Talk about resources and boundaries. How much time should be spend to communicate in social media networks? How much money can be spend for campaigns and special events? Who in the museum should be occupied with the management of the channels?
- Define goals and measure the return of investment (ROI): How many Facebook friends, Twitter followers, unique pageviews, etc should be added in a certain amount of time? How many more real visitors are expected after certain social media activities? Decide on how you will measure the outcomes.

Jasper Visser and Jim Richardson both experienced in social media strategies developed a digital engagement framework²¹ which can

21. Digital engagement framework, <http://digitalengagementframework.com/>, Accessed 20 December 2015.

help thinking about important topics and also gives some good real world examples how this framework could help.

INVOLVE YOUR EMPLOYEES AND CO-WORKERS IN THE SOCIAL MEDIA PLANS

They will be the first friends and follower. If you get them to share and like the content, others will follow.

DEVELOP AN INTERNAL POLICY AND DEFINE ROLES

The general advice is, even if your museum don't intend to use service A, B or C, it can be worth your while to register for each of them, to secure a foothold. Usually registration is free so there is absolutely no harm done, or upkeep required. Then, if you have participation from more employees, it should be set up with clear guidelines for their role. In some cases it may be possible (and is thus advisable) to give these participants a subsidiary role. For instance in the blog software Wordpress you can make someone a Contributor who can write articles, without giving them higher level site-editing access.

This preventative strategy should go a long way to reducing the problems, but you should put into place a policy for the 'what if' scenarios. Lastly, be familiar with the various possibilities for blocking/ deleting/ reporting abusive users on your various platforms (Twitter, etc.)

DEVELOP A MORE VISUAL, PARTICIPATORY, FIRST-HAND, AND EXPERIENTIAL PRESENCE ONLINE

A more graphic and participatory presence online will bring the museums social media presence into the current age.

REVIEW ALL CONTENT (ESP. WEBSITE) ON MOBILE DEVICES (SMARTPHONES/ TABLETS) AND MAKE STEPS TO IMPROVE USABILITY ON THOSE PLATFORMS

More and more people will interact with your content using smartphones and tablets. The museum content must perform well on these sites, and be optimised for them whenever possible.

For your museum website you should consider a responsive web design where the content of the site is arranged and styled according to which kind of device the visitor is using.

TAKE CARE ON THE COPYRIGHT FOR IMAGES

If you have not taken the photo, always make sure you ask the owner for permission to use it. Once you get permission, you then need to ensure you have the correct licence for the image. Make sure you credit your images correctly. Often the photographer will give you guidelines on how they want their pictures credited, the same applies to when you are using stock photos.

KNOW YOUR AUDIENCE

Many sites and services offer tools to help you see who is interacting with you and which contents are most liked and shared. Get in contact and invite dedicated users to meet your team in person.

LANGUAGE

Try at least to have some basic information in English.

DEVELOP CONSISTENT KEYWORDS AND ABBREVIATIONS TO IMPLEMENT FOR SEO (SEARCH ENGINE OPTIMIZATION), TAGS, #HASHTAGS

Hashtags for Twitter, Facebook and Google+ need only be created on a case-by-case basis, but should be thought out in advance of the intended date of use, and shared on related media. For instance at a conference or lecture, you should expect that participants will be tweeting their participation (not because it's required but because they are enthusiastic). On each presentation slide or on posted signs, include the hashtags that you wish them to use consistently during

the conference. The hash should be as short as possible while still being unique and timely, for example: #EMEEurovision. Often hashtags for exhibitions or events include the year and abbreviation of the event, for example: #EMEEvienna14

CROSS-PROMOTE ON OTHER CHANNELS

To spread the information in parts over different channels can be a good way of engaging more than one particular target group. For example you can enrich your blogposts with Instagram images and post the short version of the text and the image on Twitter. Every uploaded YouTube video can be content for a new Facebook post.

TREAT FRIENDS, FOLLOWERS, ... WITH RESPECT

Be kind to your digital opposite even if you are confronted with impolite critique. Try to be constructive and solve the problem in public. If the community is sensing rudeness or censorship from your side the unwanted consequences on your social media reputation (SMR) can be long lasting.

OFFER SPECIALS/ REWARDS FOR REAL VISITS

The main goal of all activities should be to bring more real visitors into the museum. Sometimes a reduced ticket price or a special event for Facebook friends can help. This definitely adds value to your social media activities when you give some kind of advantage to your digital audience.

DON'T SPAM

Avoid to being overenthusiastic with purely informative posts in the social media networks like Facebook or Google+. Your friends and follower will have more posts from you than from his/ her personal friends. This often is a reason that people block or hide the postings from an institution or business.

BE UNIQUE

Try to find new ways and ideas to gain content for your audience. Concentrate on your strengths and your inimitability and transport it into your social media channels.

DON'T TAKE SOCIAL MEDIA JUST AS PUBLIC RELATION TOOL

Try to add value for your audience. It should be a good mixture of basic information, additional insights on the museum's work and direct approaches like contests or invitations to participate.

CONNECT WITH NEW AUDIENCES

It makes sense to get key figures from target groups closer to your institution. Shape content especially for the targeted audiences and provide them with appealing bits. Make references to your neighbourhood institutions and important influencers in your field of interest and address them in your posts.

SPREAD OUT BUT COME BACK

When you provide many different channels with content and discussion issues make sure you get the outcomes back. Have a section on your website where you sum up what is going on at the moment and where your museum is taking part. This is important not only for the visitors, friends and follower to get the impression of not missing out something but also for your employees, co-worker and authorities. It shows off the participation and engagement your museum is achieving.

The essence of the message for opening content and offering interactivity beyond the walls of the museum is to communicate that museums contain things of interest to a wide variety of people, and hold relevance to even the most contemporary interests. From giving access to the digital archives and metadata of the objects, to simply letting the visitor document and share a liked artwork, the scale of openness can differ. Museums should see the advantage of a community-based research project or young visitors with the will of sharing their good experience via social media. While careful preservation of delicate objects has thus far driven museum policies against interaction and photography in many institutions, this restriction could be considered as running counter to the educational intentions underpinning all museums. In an insightful speech by novelist and futurist Cory Doctorow to the 2014 *Museums and the Web* conference, he argues that opening of collections to the public is not merely a publicity stunt taking advantage of visitors' impulse to capture the moment, but is the basis of all cultural preservation:

*»You, whose mission is to preserve our culture and to communicate it: Stop telling your patrons to put their cameras away. If the only way to get something for your collection is to promise that you will prohibit non-flash photography of the item, then that item is not a fit candidate for your collection. You can't convey the mission of cultural preservation and communication to an audience whom you are prohibiting from preserving and communicating their interactions with culture. It's like telling your kids not to start smoking while you put a light a fresh cigarette from the one you've just smoked to the filter.« (Doctorow, Cory. *GLAM and the Free World*²².)*

OPEN DATA

Open data describes the concept of making data of national funded institutions accessible and usable for the public. The main aim is to give the gained knowledge and the possibility of further research to the citizens. With the open data movement in museums and with the democratisation of museums' knowledge comes with many questions like who is the owner of cultural heritage, who should be able to use the images, what can we learn from all the collected data? The advantages of offering the assets is to be more transparent to the public, get people more involved in museum topics and attract new visitors to the real objects. New interdisciplinary ideas and concepts for the opened collections and libraries can arise and give value back to the institutions.

OPEN GLAM

OpenGLAM is a global network of people and organisations who are working to open up content and data held by Galleries, Libraries, Archives and Museums. From their Principles:

»Galleries, libraries, archives and museums have a fundamental role in supporting the advance of humanity's knowledge. They are the custodians of our cultural heritage and in their collections they hold the

22. Doctorow, C. (2014) 'GLAM and the Free World', MWF 2014: Museums and the Web Florence 2014, <http://mwf2014.museumsandtheweb.com/paper/glam-and-the-free-world/>, Accessed 20 December 2015.

record of humankind. The internet presents cultural heritage institutions with an unprecedented opportunity to engage global audiences and make their collections more discoverable and connected than ever, allowing users not only to enjoy the riches of the world's memory institutions, but also to contribute, participate and share. We believe that cultural institutions that take steps to open up their collections and metadata stand to benefit from these opportunities. ²³

One museum that is using Open Data for engaging the public to interact with their collection is the *Rijksmuseum*²⁴ in Amsterdam. They offer high resolution images and additional informations for further usage like making personal sets, reproductions and sharing of the digital artworks.

Similarly, the the *Europeana*²⁵ project is based on the idea of opening the cultural heritage held by museums, galleries, libraries and archives.

CROWDSOURCING

Crowdsourcing describes the sharing of labour to be done bit by bit by of individuals worldwide. The term first came up 2006 by Jeff Howe in the Article *The Rise of Crowdsourcing* in *WIRED magazine*²⁶.

Individuals join together to solve a problem or to help gaining data and material. The motivation behind is mostly to get things done and be part of a bigger community. For museums this could be an interesting engagement process to ask for the digital community to help in certain fields that are manageable. One of the examples where crowdsourcing projects are promoted and handled very successful is the Zooniverse platform.

ZOONIVERSE

Zooniverse is a platform that is hosting citizen science projects. The users are asked to collaborate in projects of different fields of research with a very clear idea of the results. Each project has a dedicated science team which asks for the help of the crowd to translate, transcribe, categorize, classify and observe datasets. Almost one million people are taking part worldwide and committed their help to science for different reasons. The users have the possibility to give their comments, exchange ideas and get in discussion through project-related forums and blogs.

Most of the crowdsourcing projects that are set up on Zooniverse explore space and nature but also history and humanities

23. See more at: OpenGLAM Principles, <http://openglam.org/principles/>, Accessed 20 December 2015.

24. See the chapter 'Best practice examples'

25. See the chapter 'Best practice examples'

26. Howe, J. (2006) 'The Rise of Crowdsourcing', *Wired*, http://archive.wired.com/wired/archive/14.06/crowds.html?pg=1&topic=crowds&topic_set=, Accessed 20 December 2015.

is covered. For example the project *Operation War Diaries – Reports from the Front*²⁷ which uses the voluntary help to transcript and classify 1.5 million pages of unit war diaries. It is a cooperation between The *National Archives, London* and the *Imperial War Museum, London*. Every user can start right away to pick a diary start classifying the pages.

Museums can use this approach to outsource parts of their research to the interested public. People like to engage and see that their effort is fruitful and appreciated. Even smaller projects can return a community of people who can be involved in other participatory events. Projects can be set up in cooperation with a target group organization to get in touch with normally non visitors.

TARGET AUDIENCE

Researchers, students, elderly people, amateur researchers

TIME

It takes time to plan and set up a Zooniverse project. The upkeeping, communication and the data analyses is a long lasting process.

MONEY

The creation of an user account is without charge. The collaboration with Zooniverse to set up an project must be cleared with the team. The set up a small project with the key functionalities of crowd-sourcing can also down with a custom made website plus database and user management or by the use of an existing social sharing platform like Pinterest or social media platform like Google+ or Facebook.

RESOURCES

A team of more than two persons is recommended. To give the project research validity, the researchers and technician should be present online.

MUSEUM COLLECTIONS IN PUBLIC SPACES

One opportunity which has been growing in recent years is the expansion of virtual collections not only in the world wide web but also into public spaces outside the museums. Popular locations include shopping areas, conference centers, public venues such as sports arenas, and public transportation hubs. This is especially true of airports, which have a captive audience that often are looking for a way to occupy their idle time, and which have a special relationship to the promotion of cultural events in their host cities. Interactive exhibits could undoubtedly take their place in these scenarios, offering an additional way to engage with potential visitors and providing outreach to groups who might not otherwise visit the museum. It offers the potential to showcase collection items which may be too fragile or valuable to place outside a carefully controlled museum environment, and even allow visitors to interact with these objects. For instance, a kiosk in a soccer arena might give non-visitors access to a museum's collection of ancient sporting tools and artwork from around the world.

27. Operation War Diary. Reports from the Front, <http://www.operationwardiary.org/>, Accessed 20 December 2015.

INTERACTION WITH THE VISITOR IN THE MUSEUM THROUGH INTERACTIVE INFORMATION AND SOCIAL MEDIA TECHNOLOGIES

Museum professionals are looking for ways to transition from traditional ways of interpretation, such as signage, print guides, audio guides and docent tours, which were essentially rooted in the 19th century and to newer means of engagement and interpretation such as kiosks, videos, information visualizations and interactive installations, to scenarios that will appeal to future audiences.

However one major concern among museum professionals is to avoid drawing attention away from the direct experience of the collection in favor of the lure of the screen and of interaction. The goal is rather to enhance the first-hand experience of a museum, to 'bring it to life', to enrich the experience by giving the opportunities of social media interaction.

An exhibition which combines physical objects along with digital interactive content can enhance the comprehension and appreciation of the collection items. Digital technologies offer enormous potential to be used not only on location but also give possibilities to enrich the pre and after experience. These technologies can be the link to a social media relationship with the visitor, their social sphere and the museum and therefore emotionalise and strengthen the museum-visitor involvement.

Not only can the museum give knowledge and resources to the visitor like images and additional information to take at home on a smartphone, but the museum can also take advantage of the visitor's

DIGITAL INFORMATION AND COMMUNICATION SYSTEMS IN MUSEUMS

enthusiasm. They can be engaged to share experiences, take part in discussions around museum topics or leave personal contributions which can be presented in the museum. The people that are engaged over digital technologies can act as multipliers for the museum and reach new communities and non-visitors.

The following sections outline a number of possibilities and specific technologies which have been used in recent years to connect the visitor and let them participate with the use of social media and to enhance the visitors' pre- and post-visit experience.

KIOSK

The possibilities for kiosk-based interactivity are of wide variety. On the simplest side, a kiosk might be a touchscreen interactive application providing deeper information about an exhibition topic or object. For objects and archives that are not suitable for displaying in the exhibition a simple digital representation can be used instead. As an information resource, kiosk systems may also offer possibilities to search, tag and hyperlink within the content and can be understood as a topic-specific website.

Kiosks may be a standalone game designed and developed to complement the exhibition collection. At a more complex but deeply engaging level, kiosks may be linked to one another forming a continuous interconnected experience that the visitor interacts with while moving through the exhibit and stopping at different stations. These connections can be made through a visitor tracking system such as bar codes (such as used in Stockholm's *Abba Museum*) or RFID bracelets (like those used in *Star Wars: Identities*, recently on display in Paris's Cite du Cinema). This tracking also allows content from an exhibition to be saved with a personal code and stored in a database and accessed later by the visitor at home, for re-viewing and sharing in social media.

The variety of interface technologies offers interactive application creators an expansive palette of interactivity to choose from, to make kiosk content that is best suited to the Museum's curatorial

intentions. For instance while a touchscreen might be appropriate for a text- and menu-heavy interaction, a camera system such as the *Microsoft Kinect* 3D camera can enhance kiosks which want to address a visitor's physical relationship to the collection, such as *Strike a Pose*²⁷ at *Gallery One – Cleveland Museum of Art*.

One opportunity offered by kiosk-based interaction is collaboration and teamwork, as well as competitive game experiences often driven by technological possibilities like multi-touch surfaces or tangible user interface. These opportunities generate social interaction between co-visitors such as parents and children, or members of a school groups. Interactive experiences which are specifically designed for cooperative or competitive play with certain types of groups can take into consideration the qualities of those groups such as mental and academic abilities, and social roles.

EXHIBITION-BASED MOBILE APPS

Customised apps for mobile devices such as smartphones and tablets can be created for an existing or new museum exhibition, and are especially good for adding interaction to what might otherwise be a static museum experience. These apps can be an additional information layer but also with game based learning elements like the Rijksmuseum is offering it. The visitor can mark artworks during the visit to review at home.

Smartphones are more and more an alternative to the traditional audioguide equipment providing advantages for visitors and the museum. The museum can provide access to downloadable audioguide packages, either for free or for a small fee depending on the strategy. In addition to the audio it can feature text and photographic content.

The advantage for the visitor over similar but web-based audioguide systems is that all the content is downloaded upon purchase of the specific museum. After the download, no network connection is needed to run the audioguide. The audioguide can be purchased in advance of the visit, and accessed on the familiar device.

The advantages for the museum are the simpler creation and update of content compared to a custom system, and eliminating the need to purchase, maintain and distribute specialised hardware.

To engage the visitor interaction, game based museum experiences can be a solution. It should not be imagined that a game on a smartphone must operate in the same way as games such as *Angry Birds* or *Candy Crush*, which demand all of the player's attention and

focus completely on the small screen. Instead, using the capabilities of smart devices, museum apps can reflect and enhance the visitor experience, drawing them into a real-world interaction with the collection using camera, accelerometer (detecting the phone's movement through space), audio recording, location identification, NFC, and other features. One such example is the *Beestenbende* (Animal Mayhem) game at the *Universiteits Museum Utrecht*, which invites visitors to take photos of animals displayed in a historic cabinet of curiosities in order to help these creatures clear up their confused identities.

According to Paul Voogt of the *Universiteits Museum Utrecht* (UMU), the museum wanted to deepen the visitor's engagement with the *Cabinet of Curiosities*, which as a historical exhibit is a fixed collection. Since many visitors to the UMU are children with their parents or grandparents, they hoped to inspire social interactions between different generations of visitors within a small group, with players cooperating to beat the challenges. The game was successful in taking advantage of the skills of both groups – the perceptiveness of the children, and the knowledge base of the parents. The museum

wanted the game to engage players both physically and mentally, which it achieves through the necessity to move throughout the collection, figuring out the solutions to puzzles by looking everywhere and taking pictures. The methodology the museum used was to team up with a local developer of mobile and physical games, and to repeatedly prototype and test the gameplay. Through this iterative process they discovered design issues which prompted changes and redevelopment of the software to make it more useful and engaging.

An app-development is cost and resource intensive and the maintainance is another challenge due to fast technological changes.

Still, an app can be an essential extension of the exhibition and be worth the effort. Apps can be an important part in the mediation of the exhibition concept and be a motivation for people to visit or re-visit the exhibition.

IDENTIFICATION TECHNOLOGY

Identification technologies are a key solution for extended museum experiences. They offer convenient ways to access information, to interact with exhibition objects, to personalise content, to track the visiting experience, to save and store content for later access, to link to social media platforms.

A number of technologies have come on the market in the past decade or so which allow exhibition elements to be 'tagged' with identifiers which can interact with personal devices such as smartphones, tablets, and e-readers. Though sharing many similarities, each such technology is slightly different in its capabilities and thus allows variations on the 'enhanced' visitor experience. The following describes some of these technologies and the similarities and differences between them.

RFID-TECHNOLOGY

Radio Frequency Identification (RFID) technology relies on a small physical object called a 'tag' which transmits a pattern of electromagnetic waves when detected by an RFID 'reader'. The tag's response links it to unique identification data such as a serial number. The tag is small and flat and can be attached to a surface, but it should be noted that certain RFID specifications will not function if the wave must pass through certain substances such as metal, while others specifications are not obstructed by these materials. So, before investing in

an RFID for a specific purpose, the museum must enumerate the use cases, and purchase a system according to its specific needs. In general, high frequency RFID cannot travel through metal but has a greater detection range, while low frequency systems are not disturbed by metal but have a smaller range of detection.

RFID enables one-way communication only, for instance the tag can tell the reader what its ID or other information is. No information can be sent the other way, from the reader to the tag.

In 'passive' RFID, the tag is not powered and so it must be held closely to the reader in order to be seen by it. This is ideal for 'touch' identification, for instance of a wristband worn by a visitor to a reader embedded in or attached to a display. In 'active' RFID the tag is powered, and so identification information can reach readers at a much greater distance.



NFC

Newer and less widespread than classic RFID, Near-Field Communication (NFC) is similar to RFID in function (is in fact a subset of RFID), but with important differences. NFC can only be used at close range (around 10 cm), but is capable of two-way communication (compared to RFID in which information can only be sent by the tag and received by the receiver). Notably, NFC capability is being built into newer era smartphones to enable applications such as contactless payment, where the phone or other device is simply held near to a reader to transfer money for a purchase. It's estimated that by 50% of smartphones manufactured contain NFC capabilities²⁸.

Since NFC communication can be two-way, it's possible to turn any NFC-enabled device (such as a Smartphone) into a reader that can interact with a 'Smart Tag'. An NFC Smart Tag is a bit like a classic RFID Tag in this regard. For example, information about an object on display could be encoded by a Smart Tag, which would allow anyone with an NFC enabled smart device to 'read' the data on their device simply by bringing their device close to the Tag.

But NFC also brings interesting capabilities which RFID lacks, since two devices can send and receive signals between one another. For instance, in addition to obvious workplace applications like data-sharing, NFC technology could enable interpersonal interactions such as relay races, collecting/trading activities, and other playful behaviors. Museum exhibit and

28. A list of devices which are NFC enabled is available at Rapid NFC. NFC Enable Phones and Tablets, http://rapidnfc.com/nfc_enabled_phones, Accessed 20 December 2015.

Fig. 14: NFC sign used on the South Downs Way. See the chapter 'Best practice examples' for more information, <http://www.nfcworld.com/2013/01/11/321877/south-downs-way-gets-nfc-sign-posts/>

activity designers may wish to create group activities using this simple sharing ability which requires no knowledge of specific hardware or interfaces, provided each user has a sufficiently enabled device.

BAR/ QR-CODE

Bar codes and Quick Response (QR) codes are printed patterns in the visible light spectrum, either of black lines of varying thicknesses, or black squares of varying position, which can be read by software with a camera. The familiar bar code system has been in use for many decades in the retail context as a means of product tracking and identification. For a time in the early 21st century (roughly 2008-2011) QR codes gained popularity as an encoding method since they are able to encode a larger quantity and complexity of information. Whereas a bar code usually contains only numeric data, the two-dimensionality of the QR code enables it to carry larger amounts and types of information. This feature is especially useful for encoding URLs to offer quick website access from a smart device,

without needing to type in the information by hand. Many smart phones are sold with code-reading software pre-installed on them, but it should be noted that most users (beyond perhaps a core group of early adopters) have no familiarity with these applications.



BAR CODE



QR CODE

The primary advantage of Bar and QR codes compared to other Tag systems is the ease of creating unique tags. Since these methods use markings in the visible light spectrum, Bar and QR codes can be created using simple desktop applications and printing software – no special resources such as NFC SmartTags must be acquired.

Since the early 2010's the popular use of QR codes has been on the decline, perhaps due to the advent of easier methods such as NFC. Though QR codes were extremely popular for a short time

period, they were not always used in an intelligent way; for instance a QR code of a web site address and a written spelling of that address may have appeared side-by-side on a flyer. For various reasons including their overuse and misuse, and perhaps as a side effect of their iconic pixelated appearance, QR codes have fallen abruptly from favor and thus may seem 'dated' to key constituencies such as young digitally literate visitors.

ROOM-BASED LOCATION IDENTIFICATION

More sophisticated ways of getting the visitors location in the museum is to make use of GPS or Wifi signals of the visitors mobile phone. This technology can be used to offer room-based information on the exhibition or make the app more interactive for visitors in the same room.

For example the *Horizon Run*²⁹ app will let museums create a room-based 'map' of an indoor space using only the existing Wifi signals to create a 'fingerprint' for each room. It is not intended to be precise enough to map multiple locations within any given room, but is accurate and robust for establishing a unique identity for each room, so that when a user with the app enters any particular room, it knows where they are and can push content based on that location.

Fig. 15: Bar code and QR code.
Image: Anika Kronberger

29. *Horizon Run*, <http://www.etc.cmu.edu/projects/horizon-run/index.html>, Accessed 20 December 2015.

The base for other location-based information systems could be the use of the variations in the Earth's magnetic field to get a unique fingerprint of the museum's area. Smartphones can sense and record these magnetic variations to map indoor positions. *IndoorAtlas*³⁰ offers the technology to determine the position of the smartphone user in a building and guide him/her to a point of interest.

ADVANCED TECHNOLOGIES

Advanced net-based technologies and precious concepts sometimes can arouse a large digital community which is closely involved to a museum based on just one exhibition object. The installation *Telegarden*³¹ (*Ars Electronica Center*, 1995-2004) for example built up a strong community over nine years. Participants could act as gardeners via internet through intuitive interfaces to take care of a physical garden in the foyer of the museum.

»»*The Telegarden creates a physical garden as an environment to stage social interaction and community in virtual space. The Telegarden is a metaphor for the care and feeding of the delicate social ecology of the net.*« (Randall Packer, *San Jose Museum of Art*, April 1998.)

The application of sophisticated digital technologies like virtual reality or augmented reality is becoming a common approach. However, mostly the implementation of these technologies extends only a single exhibition object. The potential of these technologies in connection with social media is wide-ranging.

The uprise of devices like *Google Glass* as an augmented reality tool possibly connecting many social media channels extends the possibility of immersive and social media driven museum experiences to new fields. The acquisition of the virtual reality glasses *Oculus Rift* by Facebook gives a strong hint that virtual reality experiences closely refer to social media spheres.

Augmented reality museum walks or virtual reality extensions of a museum's space are only the most obvious possibilities.

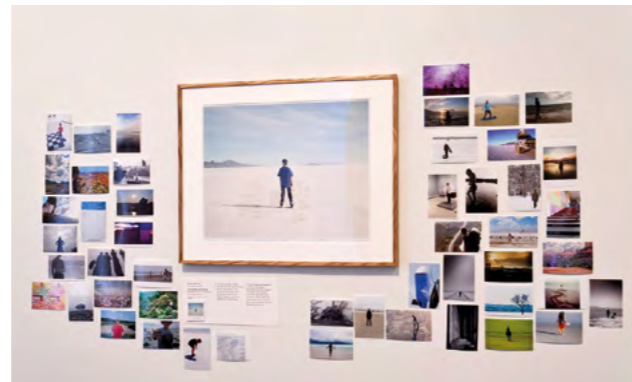
30. Hardy, Q. (2014) 'Mapping Our Interiors', *New York Times*, http://bits.blogs.nytimes.com/2014/05/18/mapping-our-interiors/?_php=true&_type=blogs&_php=true&_type=blogs&_r=2&, Accessed 20 December 2015.

31. The Telegarden Website, <http://www.ieor.berkeley.edu/~goldberg/garden/Ars/>, Accessed 20 December 2015.

USER-GENERATED CONTENT IN THE MUSEUM

The advent of connected media technologies on the internet and in mobile devices affords many new opportunities for museum professionals to engage visitors with their exhibitions. Technologies that are already taken for granted, such as the ability to capture and then instantly share an image, can with the right contextual design give museums a special power: they can allow us as visitors to see ourselves IN our culture, connected in an unbroken timeline, not separate from the one on display in the vitrines.

Connected media technologies can be a cultural mirror, showing ourselves back to ourselves at a certain remove, enabling us to look more objectively and see the bigger picture of our connection to our culture. This affords museum professionals working at this moment a unique chance to shape how culture and history are made relevant and connected to citizens' daily lives. A large part of that relevance is visitors' ability to share their personal experiences with others, both those with them in the museum, and at large. In this section we outline some of the specific opportunities afforded by social media and sharing technologies that are ripe for inclusion in the design of exhibitions and visitor experiences.



IMAGES

In the first quarter of the 21st century, images are the native medium to the millennial generations: the primary form of communication to and between young people, widespread anywhere that smartphones have gained a foothold. So it could be argued that visual literacy is the primary form of literacy for this generation, and in any case, it's impossible to deny the power of the image in the formation of cultural narratives. To wit, most (perhaps all?) of the other media platforms mentioned in this document have built-in methods to incorporate still imagery (photos, illustrations, diagrams, artwork) in their offerings. So how does a cultural institution make use of their wealth of visual resources (collections, buildings, events, etc) to tap into the innate tendency of these desirable clusters of visitors to create and share images?

One starting point is to understand the reasons behind existing behaviors. While young digital natives are often perceived or portrayed as 'over-sharing,' their social media activity is usually in the service of a carefully-maintained public image. To the degree that cultural institutions can become part of this front-facing persona, by supporting and reflecting the interests and personalities of young visitors, rather than being perceived as simply an aspect of their educational context, young visitors will freely incorporate museum collections into their personal expressions. This type of accessibility requires that museum holdings be available for visitor photography, ideally without confusing restrictions.

Fig. 16: OhSnap! Exhibition, source: <http://musemtwo.blogspot.co.at/2013/03/guest-post-oh-snap-experimenting-with.html>
Photo: Nina Simon

ILLUSTRATIONS

Using either a dedicated piece of software, or modifications and reuse of existing software, it is possible to add visitors' own drawing and painting to an exhibition. For instance, while done in an art context rather than historical or natural, the final station in the exhibition *Memory Palace*³² at the *Victoria & Albert Museum* in London was a strong example of this possibility. The exhibition was themed around books and the role that they play in the digital age. Each week that this themed exhibit was on display, in the last room of the exhibition, a collection of touchscreens running custom software allowed visitors to comment on and respond visually to the narrative of the exhibition by adding their own illustration in white on a black background. The purpose of this interactive participatory work, created by illustrator Johnny Kelly, was to act 'as a memory bank for visitors to add to, generating life for the story beyond the exhibition.' Over the course of the exhibit, each individual visitor's illustration was appended to a giant poster-sized combined illustration, and these were also on display in the gallery. Lastly, a visitor could view the website of the exhibition, identify the week that they attended the exhibit, and download a digital version of

the combined poster containing their own illustration, as well as view the drawings created and added throughout the duration of the exhibition.

VIDEO

With the progress of smartphone technology, making and watching videos has become almost as easy as taking still photos. The primary drawbacks of using low-fi digital video such as created by smartphones are the lower resolution and quality, and the divergent aspect ratios of these videos, as visitors commonly shoot in both 'landscape' and 'portrait' mode, according to their subject matter. Additionally, longer videos can create larger file sizes which are less simple to share and less predictable in upload times.

Drawbacks aside, the ease of use for creating videos offers a unique opportunity to exhibition designers to include video material from museum visitors. A simple 'video wall' that collects the visitors' short videos, such as those created on Vine or Instagram, could let visitors share reactions in the way they are most familiar.

One example that used a basic setup with a webcam and a computer to get visitor contributions was the *Black List Project*³³ in the *Brooklyn Museum*.

32. Nocte. *Memory Palace*. London – Victoria and Albert Museum, <http://nocte.co.uk/work/memory-palace/>, Accessed 20 December 2015.

33. See the chapter 'Best practice examples'.

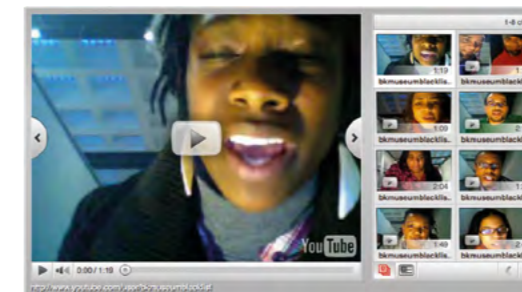


Fig. 17: Screenshot Blacklist Project, www.youtube.com/users/bkmuseumblacklist, Accessed 7 June 2014.

TEXT

Text is of course one of the most ubiquitous of all communication methods within the museum context – even the traditional exhibition comments book could be seen as a way for visitors to create and share their own thoughts about the work that they saw, and how it affected them. Now using digital means, visitors can share thoughts, memories, prose, poems, questions, and more, not only with other visitors to the physical location, but also to the larger world.

The microblogging service Twitter provides some of the most concise text-writing opportunities. By confining the writer to 140 characters, Twitter encourages responses to be brief, or at least to be broken into easily-digestible thoughts. While this brevity may also be considered one of the downsides of Twitter, it may encourage participation by keeping the bar low enough for visitors with short attention spans, lower patience, less language skills, or less time to still participate, perhaps even after they've left the museum.

Displays of tweets or other text entries could be shown in a wall display inside a museum, or keywords with hashtags could appear in a tagcloud of recurring ideas and phrases.

Another benefit of text is the low technical bar to use it. Even a pre-smartphone cell phone is capable of sending short text messages via Smart Messaging System (SMS), and it's this capacity that inspired the creators of Bristol's *Hello Lamppost* to confine their interactive city-wide project to the textual medium. In this project, visitors to the city of Bristol, UK could communicate directly with the everyday objects in the city such as lamp posts, trash bins, and mailboxes, to have a short conversation, answer questions, and help out the object in whatever way it asked.

When other visitors approached and communicated with an object, they could witness the traces of what previous visitors had left behind, in the personal narrative which the object told them.



AUDIO

Allowing visitors to record and share their own audio is a less common practice in exhibitions, but can have an especially personal resonance. Visitors can share their perspectives and thoughts on the collection, to be listened to by later visitors. The user-generated Audioguide program Sonospheres was designed specifically for this purpose by the French creative technology design firm Orbe. Using QR codes attached to the walls as reference points, visitors can record their anecdotes and musings for other visitors to browse. These systems have been installed in cultural institutions in Paris and elsewhere. In their own words, 'The visitor is invited to contribute to the SONOSPHERE throughout the exhibition, responding to existing content by recording and sharing their own perspective [...] The voice of the people, visitors, residents and artists come together to discuss the multiple layers and stories of place, at once a both a place of heritage and a space for cultural experimentation.'³⁴

Participative audio commentary could be especially appropriate for history museums, in which some percent of visitors may have directly participated in the events under discussion. A simple interface to the audio sharing capabilities, designed for the mobility and sensory abilities that come with age, will enable more elderly visitors to add to and comment on the historic subject matter.

34. Orbe, <http://orbe.mobi/>, Accessed 20 December 2015.

Fig. 18: Twitterwall: Galerie der Gegenwart 2014, Lange Nacht der Museen Hamburg
Source: © Der Museumsdienst Hamburg
Photo: Mario Sturm

CAUTION

As a word of caution, it may be necessary to add a review or filtering step between the uploading of user-generated content, and allowing it to appear within the museum. This step prevents the automatic unfiltered appearance inside the museum of questionable or off-message content from visitors. A simple approvals application should be created to allow museum staff to quickly review and approve or deny content for in-gallery display. Alternately, it could be possible to permit immediate posting most of the time, with the capability to quickly delete any offending content. This method is less labor intensive, but more risky.

As can be seen in the given examples, there are many types of opportunities for museums to engage in discussions and connection to the visitor using social media platforms and interactive media. Nevertheless, or perhaps because of, the great variety of social media applications, museum staff must think carefully about what they want to convey and how they want to convey it. Not every technology or application is the right thing for a museum's information and marketing strategies. Social media use requires precise consideration, not only to achieve the desired results, but to avoid wasting museum resources implementing ineffective communication efforts.

BROOKLYNMUSEUM

website, social media strategy

The Brooklyn museum is using several social media channels for several purposes. The museums website is the central part of all their activities. In their blog they describe also the process of integrating social media into their worklife and how they come to certain decisions. Recently they adapted their social media strategy to their current needs and changed or even stopped some activities.

<http://www.brooklynmuseum.org/community/blogosphere/2014/04/04/social-change>

They also started very early with a user-curated exhibition where photographs were submitted by artists, preselected by an online community and then the images for the exhibition were chosen by the ranking of the jury.

<http://www.brooklynmuseum.org/exhibitions/click>

<http://www.brooklynmuseum.org/community/blogosphere>

<https://twitter.com/brooklynmuseum>

<http://instagram.com/brooklynmuseum>

SMITHSONIAN 2.0

website, wiki, social media strategy

The *Smithsonian Museum* was the winner of the *Museums and the Web Conference* 2011 in the category 'Best of the Web' for their social media strategy wiki. The wiki offers insight and participation in their

process of opening the *Smithsonian Institution* website to a broader digital public.

<http://smithsonian-webstrategy.wikispaces.com>

RIJKSMUSEUM

app, open data, personalization

The *Rijksmuseum* in Amsterdam offers multiple ways to interact with the museum and its collection. Besides the website with the general information and various social media channels the online visitor can use *Rijksstudio*, an online application to use the online library of artworks not only for gaining further information but also for making personal sets of artworks or order reproductions and products with the artwork. To use this functionality during a museum visit, an app must be installed on the smartphone. By clicking a little heart next to the artworks the visitor can make his/her choices and review them at home. The *Rijksmuseum* App 'Family Quest' offers an additional activity for the whole family.

<https://www.rijksmuseum.nl>

FRITZPLUS

Facebook

The project *fritzplus* gave the King of Prussia and more fellows of his time a voice and interaction possibilities in the 21st century over Facebook profiles. The aim of the project (which is no longer operational online) was experiment with history and new ways of knowledge transfer.

SFMOMA, 2ND FLOOR

Vine

Video producer and artist Ian Padgham gave insight in the exhibition on the 2nd floor of the SFMOMA in a six second video on Vine and shared it on Twitter.

<https://vine.co/v/bP9dHFzV62j>

HANDWRITING PROJECT BY HANS ULRICH OBRIST

Instagram

Hans Ulrich Obrist is a curator who collects sayings, comments and signatures of the artists who present their works in his shows, and posts them on his Instagram account. <http://instagram.com/hansulrichobrist>

#EMPTYMET

Instagram

#EMPTYMET is an instagram community building project for the Metropolitan Museum of Art, New York. The photographer and social media expert Dave Krugman started the initiative and organised a special event where he reached out to photographers who have large followings on instagram and brought them to the museum on a day when it was closed to the public. After this event the followers on instagram raised from 4,000 to now 90,000 people.

STIFTUNG MUSEUM KUNSTPALAST DÜSSELDORF

Facebook

Besides constant topics like quizzes about artists and 'artwork of the month' posts the *Kunstpalast Düsseldorf* uses Facebook also for creative exhibition promotion like the call for *EL GRECO* artwork-patrons. Twelve people became patrons for a certain artwork and had to report about the exhibition and the painting on their Facebook profile. The best patron was awarded with a prize.

<https://www.facebook.com/stiftungmuseumkunstpalast>

WIEN MUSEUM

Issuu

The museum of the city of Vienna the *Wien Museum* uses Issuu to publish sample pages of their exhibition catalogues in German and English with a link on the last page to buy the whole catalogue online. The programme folder with the current and upcoming exhibitions and events can also be found on Issuu.

WELLCOME COLLECTION'S HIGH TEA

online game tied to exhibitions

High Tea is a browser-based digital game which puts the player in the role of a merchant trader during the era of British sea power, originally created as a companion to their exhibit High Society, which examines this questionable moment in British history. By transporting both tea and opium in a fleet of tall ships, the player learns in depth about the economic cycles of supply and demand between India, China, and the U.K. at the time before the Opium Wars.

<http://museumcultures.wordpress.com/2011/03/23/making-the-case-for-museum-games>

TATE LONDON MAGIC TATE BALL : A NEW WAY TO DISCOVER A COLLECTION

app

'Using date, time-of-day, geographical location, live weather data and ambient noise levels the app will select from a wealth of artworks from Tate's Collection for the best match.'

<http://www.thoughtden.co.uk/magictateball>

LIKE IT – ESSL MUSEUM

Facebook, social curating

Five curators made a pre selection of works for the next exhibition. They create an album on Facebook for the chosen pictures where people could like their favourites. The thirty most liked ones made it to the exhibition.

http://www.essl.museum/jart/prj3/essl/main.jart?rel=de&reserve-mode=active&content-id=1366790541558&article_id=1374242651922

MUSEUM WEEK

Twitter, hashtag

#MuseumWeek is a cooperation between Twitter UK, the museum education advocate Mar Dixon

and the Culture Themes group. In March 2014 over hundred European museums joined this project to especially promote and encourage museum attendance and social sharing of cultural content for one week. For every day of the week a special topic was suggested:

Day 1 – A day in the life (#DayInTheLife)

Day 2 – Test your knowledge (#MuseumMastermind)

Day 3 – Your story (#MuseumMemories)

Day 4 – Buildings behind the art (#BehindTheArt)

Day 5 – Ask the expert (#AskTheCurator)

Day 6 – Museum selfies (#MuseumSelfies)

Day 7 – Constraint drives creativity (#GetCreative)

BRAIN SCOOP

YouTube

Brain Scoop is a documentation project by the *Field Museum* and Emily Graslie. The YouTube channel offers explanatory and behind the scene videos around the *Field Museum*. The target group is basically kids and teens.

<https://www.youtube.com/user/thebrainscoop>

J. PAUL GETTY MUSEUM

Pinterest

With around one million followers the *J. Paul Getty Museum* is one of the best established museums on Pinterest. They have boards on special collections titled *Jumping in Museums* with artworks of people jumping, 'Artist Selfies' with selfportraits of artists, 'Swarm' with close up images of insects in paintings, and similar.

<http://www.pinterest.com/gettymuseum/>

THAMES DISCOVERY PROGRAMME

community project, Flickr

The *Thames Discovery Programme* is a community project where the river Thames is archaeologically researched and the results and findings are shared on different social media channels.

www.thamesdiscovery.org

<https://www.flickr.com/photos/thamesdiscovery>

EUROPEANA

open data, collaborative project

The *Europeana* project collects cultural heritage of galleries, libraries, museums and archives across Europe to make it accessible online. From this pool of images they create virtual exhibitions and theme based collections. The website also offers a 'My Europeana' account where registered users can tag favourite images and save search-results.

<http://www.europeana.eu>

GALLERY OF LOST ART

online exhibition

The *Gallery of Lost Art* was an online exhibition July 2012 to July 2013 curated by the *Tate Gallery* about artworks that had disappeared due to different reasons. The virtual exhibition on around forty artists of the last hundred years offered background stories about the lost artworks enriched with images, essays, video and audio footage and a unique interactivity to explore the exhibition.

<http://galleryoflostart.com>

OPERATION WAR DIARIES

crowdsourcing

The project *Operation War Diaries - Reports from the Front* which uses the voluntary help to transcript and classify 1.5 million pages of unit war diaries. It is a cooperation between The *National Archives*, London and the *Imperial War Museum*, London. Every user can start right away to pick a diary start classifying the pages.

<http://www.operationwardiary.org>

'I WENT TO MOMA AND...'

user-generated content

Visitors can write down or illustrate their feelings, thoughts or stories of their visit in the museum on a piece of paper and exhibit them on a wall in the museum. The best pieces are shown on a website and on a blog.

<http://www.moma.org/iwent>

IVORY BANGLE LADY

Twitter, game in exhibition

With the use of Twitter and text-messages a quest through the Yorkshire Museum can be solved and certain additional information can be unlocked.

<http://www.yorkshireremuseum.org.uk/Page/ViewCollection.aspx?CollectionId=26>

BLACK LIST PROJECT

YouTube, user-generated content

To give the visitors the possibility to add statements on the exhibition and on the topic the *Brooklyn Museum* installed interactive kiosks in the space. Visitor could record themselves and post the videos on the YouTube channel of the exhibition. Various videos can still be found on YouTube where visitors talked about the museum, the exhibition, the atmosphere, the artists, the people or just about themselves.

<http://www.youtube.com/user/bkmuseumblacklist>

SONOSPHERES

app, usergenerated content

Sonospheres is a geo-located contributory sound application. It allows visitors to add their thoughts and memories of a place or item using an application and the microphone on their mobile device.

<http://orbe.mobi>

<https://vimeo.com/40978160>

DRENTSMUSEUM+

RFID, personalization

The museum uses RFID entry card where visitors can use the card to mark their favorite artworks at the museum to review them online at home by the card-number. The benefit for the museum is to have all the data of the most liked objects.

<http://www.museumplus.org>

MUSEUM OF LONDON

NFC, personalization, app

The *Museum of London* was the first museum to use NFC to give the visitors the chance to learn more about the exhibits and take the information at home. They use it not only as information layer but also to access vouchers for the shop and the cafe but also to connect with the museums social media channels.

The museum also offers an app where the streets of London can be explored in a innovative way. By recognising the user's location and overlaying historic images onto the real image a new perspective can be gained. Walks can be saved and reviewed afterwards. <http://www.museumoflondon.org.uk>

CAPTURE THE MUSEUM AT NATIONAL MUSEUMS SCOTLAND

mobile game tied to exhibition

Capture the Museum is a museum-wide mobile-device-driven game of *Capture the Flag* in which two live teams compete in a short duration of time to digitally 'capture' and 'hold' various physical locations (such as galleries) of the *National Museum of Scotland* in Edinburgh.

<http://www.capturethemuseum.com>

SOUTH DOWNS WAY INTERACTIVE SIGNPOSTS

QR, NFC, outside of the museum

'The new way signs allow walkers to "tap in" to the signs via NFC or scanning a QR code to discover more information about the local area and nearby places of interest. Details that visitors can uncover include map references, links to YouTube videos, photos, local history, audio commentary and information about the wildlife that lives nearby.'

<http://www.nfcworld.com/2013/01/11/321877/south-downs-way-gets-nfc-sign-posts>

INSMUSEUM.COM

collaboration of museums

Insmuseum.com (translated ‘come to the museum’) is a collaborative project of Austrian museums where they exhibit one object of their collection online. This collection is also available as a printed book. <http://insmuseum.com>

THE FOLLOWING EXAMPLES WERE TAKEN FROM OUR MAPPING PROCESS. ADDITIONAL INFORMATION CAN BE FOUND HERE³⁵.

ABBA THE MUSEUM

BAR Code

In addition to the many memorabilia, the exhibit features multiple interactive stations that can be saved and tracked by scanning the barcode on the visit ticket. After the experience the visitor can access a web page with all of their performances: trivia questions, singing auditions, trying on virtual costumes, and performing on stage with the band. Some of the more unusual real-world-linked features are a ‘red phone hotline’ that could ring at

any moment, connecting you directly to one of the members of the group (the four of whom are the only ones who hold the number to the red phone), and a studio piano which is virtually linked to that in the island studio of Björn Ulvaeus and will begin to play automatically whatever he plays in real life, enhancing a feeling of participation and connection to the artists. <http://www.abbatheuseum.com/en/on-the-museum>

STAR WARS IDENTITIES

RFID, personalization

Upon entering the exhibit, each visitor each visitor is given an RFID-embedded wristband which allows them to interact with game stations throughout the space and save their choices.

The visitor is then sent on their personal ‘Quest’ – to discover who they are in the Star Wars universe, and learn something about the creation of identity in the real world, by creating a unique Star Wars character with detailed personality attributes. Each station explains and reveals the core components of human identity such as place of origin, family style, mentors, careers, and personal values. A visitor can touch her RFID bracelet to the display

to choose the aspects that she would like her Star Wars identity to have. In the end, each visitor must make the ultimate choice – will he follow the path of good, or join Lord Vader on the Dark Side? Finally, visitors can see their created character projected in the space, created from any one of over 50 million possible identity combinations. Each visitor can print out their Star Wars identity, and are given a unique web site access code in order to visit their character later, and share it over social media. <http://sw-id.com/5197ad0c790c2>

EXPLORATORIUM

Instagram, Apps

The *Exploratorium* has a big fan-base on the social networks and they keep in touch with the visitors and users in many different ways. The Instagram photostream is integrated on the first page of the website and communicates the positive emotions of the visitors. They have also photo-contests on current topics and regular postings of news and behind the scene stories of the museum. They offer apps for download to encourage to play with science in addition to the museums-visit. <http://www.exploratorium.edu>

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