The Digital Transformation of Museums

By Giovanni Tassini , INSEAD MBA 17J, Tong Gu , INSEAD MBA 17J, and Annet Aris , INSEAD

Museums are embracing new technologies to better understand their audience and create a broader, more engaged customer base.

Digital technologies provide a fantastic tool for cultural institutions to democratise access to culture, open a space for dialogue, and promote the exchange of ideas and knowledge.

But, it's not all easy pickings. Faced with changing customer demographics, evolving expectations and an explosion of competing new entertainment options, museums must increase their **digital proficiency** to offer a more engaging journey for their audience.

From the customers' perspective, the path through a museum is often studded with age-old challenges. Just as German author, Johann Wolfgang von Goethe, who embarked on his Italian Journey in 1786 equipped with the standard guidebook of his time, Historical and Critical News from Italy, made some questionable itinerary choices – like skipping Giotto's widely-renowned frescoes in Assisi – today's museum-goers, despite having far greater access

to information, remain surprisingly uninformed about collections or exhibits likely to spark their particular interests. Too many are inadequately prepared for the museums they do visit and miss out on a full experience either from a lack of time, will or easy access to content. At the museum, many find themselves overwhelmed by the sheer size of a collection and struggle building a itinerary to match their interests and schedules. On their return home, few take the opportunity to reflect and connect the dots across their different cultural experiences.

Digital technologies can help cultural institutions offer visitors an exceptional experience. While some museums have adapted, there is still a lot they can learn from each other. In this article, we take a look at the best practices of engaged museums and adjacent industries and the new opportunities that emerging digital technologies offer.

Know the visitor

The first step for museums is to know their visitor base. By truly understanding visitors' identities, interests and behaviours, museums can offer a more educational and engaging experience, involving guests before and after, as well as during the actual visit.

The easiest starting point for museums to collect visitor data is at the point of ticket sale, thus a successful transition from print to online and mobile ticketing is essential. Lessons can be learned from the **Chinese movie industry**, which managed to successfully transition filmgoers to mobile ticketing and leverage the collected data for more effective marketing and engaging content for the audience. Information can also be gleaned by studying visit patterns – the path visitors take through the museum, time spent at exhibits, etc. The Louvre teamed up with **MIT Senseable City Lab** to see how short stay and long stay visitors tour the museum, using Bluetooth signal tracking.

By combining information, museums can develop more personal and effective relationships with their visitors. One institution experimenting with this is the Netherlands Institute for Sound and Vision, where visitors receive a **ring** that powers an interactive experience while collecting visit-related information.

Engage and educate

Technology also allows museums to build a more engaging experience on site. To assist visitors overwhelmed by the size of a collection, individual information can be used to create a personalised path, identifying exhibits more likely to attract interest in much the same way as Netflix guides customers through their library of movies and TV shows. If individual data is lacking, museums can offer pre-defined tours identified by categories based on prior customers' profiles.

More engaging visitor experiences can also be achieved through multimedia solutions. The V&A in London partnered with Sennheiser to provide an immersive audio experience for its **2017 Pink Floyd** exhibition. Some museums are even expanding into the realms of artificial intelligence and virtual reality. The Mauritshuis in The Hague is working with IBM Watson to create deep **"question and answer"** technology for its Dutch Golden Age collection. Other museums, mostly in the history or natural science space, are experimenting with companies such as Google to allow visitors to explore exhibits in **augmented reality**.

Too high-tech?

As technology advances the seemingly endless possibilities generate new questions regarding the role of museums. Pinacoteca di Brera's director James Bradburne suggests caution about the use of VR and AR – fine art museums should offer intense emotions in the **"here and now"**, he claims, interposing no filter between the visitors and the masterpieces on show. Other industry insiders are instead debating how museum content is best organised in the modern world. Should curators' knowledge continue to be the driving force, or should the museum become more "consumer-centred" with collections driven by what visitors expect to see?

Regardless of how institutions respond to these concerns, there is little doubt that gathering information, analysing visitor behaviour and experimenting with technologies will help museum curators make more informed decisions as to which artworks to put on show, how and where to position them, as well as what devices visitors should use on site.

This is not to imply that exhibits should be removed on the grounds that they are of little interest to a general audience. Data and technology should be used to refresh permanent collections and present them under a new light, making them attractive to a larger, and in some cases previously disinterested, audience. Doing so can help museums emancipate themselves

from the dangerous dynamics of blockbuster exhibitions which are complex and costly to create and attract large crowds detrimental to the general user experience.

Reach the visitors

Technology also helps museums engage and interact with visitors through online media, creating opportunities to extend their customer engagement to before and after a visit and offer educational content to distant audiences. To this end, many museums are **redesigning** their websites, bringing them to a whole new level; some, such as the **Rijksmuseum**, publish their entire collection online.

To extend their reach, museums typically use different social media for different purposes. Instagram and YouTube are popular sites for publishing educational content while Facebook is favoured for event promotion. For example, the Stedelijk in Amsterdam experimented with having different artists **"adopting"** its Instagram feed over 24 hours. Geographical focus also plays an important role – Fondation Luis Vuitton has included **Chinese social media** such as WeChat, Weibo and Douban in its social media strategy to communicate better with the growing numbers of Chinese tourists.

Capabilities and execution

Acquiring the digital capabilities to get the most out of technological advancements is challenging and expensive in the face of private sector competition. When **recruiting digital leaders**, museums can attract people with a passion for the arts, or candidates at the beginning of their careers in adjacent fields motivated by interesting projects and higher responsibilities. Other options include leveraging the capabilities of technology partners, or employing digitally-savvy managers on secondment.

Governments can support this effort and should consider setting up units, similar to the specialised teams established to digitise and redesign public administration services in the **United States**, the **United Kingdom** and **Italy**, with a focus instead on the cultural space, supporting institutions on technical matters, building capabilities, and developing coordinated projects.

The way forward

Advancing technologies have created great opportunities for museums to develop coherent and effective digital strategies. And while it is not easy, those who do so will find themselves rewarded with more of their collection discovered and appreciated by a loyal and expanding customer base.

Find article at

About the author(s)

Giovanni Tassini Giovanni Tassini is an INSEAD MBA '17J.

Tong Gu Tong GU is an INSEAD MBA 17J. Prior to INSEAD, Tong worked in investment banking for five years, focusing on Tech and Media industries, and co-founded a big data analytics B2B company, raising $2m funding and growing it to 30 employees.

Annet Aris is Senior Affiliate Professor of Strategy at INSEAD.