The 2010 Horizon Report: Museum Edition. Johnson L. at al . Austin, Texas: The New Media Consortium 2010, 36 p. http://www.nmc.org/pdf/2010-Horizon-Report-Museum.pdf

For museum professionals who not only like to keep up with the emerging technologies that impact the museum, but actually need to, this report is just perfect! Larry Johnson, Project Leader, the New Media Consortium, and Holly Witchey, Co-Project Leader and Editor, Case Western Reserve University, together with their Advisory Board have done all the leg work for us and have identified the emerging technologies that are likely to impact the museum sector in the next five years. The international group of experts from museums, in education, technology, and other fields engaged in an paced, on-line discussion around a set of research questions and together managed to whittle down the key trends and practices that are likely - in their opinion – to enter mainstream use within three adoption horizons over the next five years. Drawing on wide range of resources, current research, and their own practice, and after several weeks of intense on-line discussion, the Advisory Board managed to come to a consensus about the six topics that now appear in the *Horizon Report, 2010 Museum Edition*.

The New Media Consortium (NMC), according to their website, is an international not-for-profit consortium of learning-focused organizations dedicated to the exploration, and use of new media and new technologies and for more than 15 years, the consortium and its members have dedicated themselves to exploring and developing potential applications of emerging technologies for learning, research, and creative inquiry. The Horizon Report deals with teaching, learning, and creative expression within higher education in a number of different sectors http://www.nmc.org/publications, and their interest in our community was both fortuitous and timely for our community.

For those of us who are currently 'thinking culture' in stimulating resources from the museum community for Europeana you will be relieved to hear that we are definitely on *The Horizon*! In respect to our intense efforts in digitizing museum collections they state:
Digitization and cataloguing projects will continue to require a significant share of museum resources. Museums are distinguished by the content they keep and interpret. There is an increasing understanding among museum professionals that visitors expect to be able to readily access accurate and interesting information, and especially high-quality media. This requires museums to plan strategically for the digitization and cataloging of collections. These projects frequently require hard choices in the allocation of money, personnel, and time, but are not likely to diminish in importance in the foreseeable future (p. 4).

The other **Key Trends** they highlight include the increase in value of rich media; images, videos, audio, augmented reality, and animations for digital interpretation, the impact of instant and constant accessibility through mobile platforms, and the new kinds of roles played by the visitor and museum education in an environment of social networks. At the same time the report sets out a series of **Significant Challenges** also identified by the group; after a close reading of rich and varied on-line resources: current events, papers, articles and museum practice. Even though we may all know exactly what is best for our own institutions, a critical realization that kept

cropping up in the on-line discussion was the understanding that while institutions might be eager to adopt new technologies they may also be considerably constrained by realities on the ground - the lack of necessary financial and human resources they would need to actually implement the ideas in their practice.

The **Six Challenges** outlined in the report include (in order of their perceived significance) a lack of comprehensive digital strategy at the institutional level, as well as the scarcity of dedicated funding to drive these kinds of agendas; (and I can see all you readers keenly nodding your head in agreement here – especially in recent months since the dearth of funding has been aggravated by national and local cuts in spending in the cultural sector). An additional challenge, they argue posits the museum, an institution that inevitably prioritizes the physical object over the digital, as an institution that may not meet the expectations of the visitors outside of the museum. While visitors may not only anticipate, but almost demand, comprehensive, reliable and rich information about exhibitions, collections and activities over the Internet and mobile networks, the museum may perceive this as 'frivolous or unnecessary' (p. 5). A further challenge can be seen in the limited publishing options open to museums that are already financially challenged in contrast to similar workflows in the commercial world. Here they argue:

Museum workflows are too often ill-suited to modern content production techniques in which content is created simultaneously for multiple delivery modes. Websites, videos, podcasts, social networks, and blogs should all pull from a content management system that allows any "story", critique, or analysis to be ported to any medium. Failure to align workflows with this model adds costs and limits publishing options for museums that are already operating under financial constraints (p. 5).

While we are all probably aware of our own challenges, the authors here agreed that digital agendas are often hampered by a lack of ex-

perimentation and innovation, which, according to the report, the deployment of digital programs are often limited by the ways museums evaluate themselves, when 'the documentation of the impact of programs delivered via digital technologies is often expected as a prerequisite for adoption or even pilot efforts, creating, what the report calls a chicken versus egg" conundrum. Last but not least in the list of challenges facing the museum is the argument that museums do not prepare their staff for the skill sets required, or with the adequate training, and preparation that museums professionals need for their practice in this exponentially growing field.

Having reminded us of all the hurdles needed to be surmounted; the Horizon Report goes on to lay out the technologies to watch for according to the different time-to-adoption horizons: one year or less; two to three years; and four to five years. The list is probably obvious to all of us - mobiles, social media, augmented reality, location-based services, gesture-based computing and the semantic web, but the strength of the report lies in its clarity and concision. According to each time-to-adoption horizon you will find a discussion of each technology and why it is relevant to museum education and interpretation. If you choose to travel the electronic version (highly recommended) you can connect directly to all the on-line resources set out in each category, but even just reading through the print version you will appreciate the succinct explanations of each category. Take for example the way the report describes the semantic web

The semantic web reveals relationships between concepts, people, and events that are embedded in the wealth of content on the web but not always easy to see using other means. Semantic-aware applications expose those relationships by determining the context in which information exists; such applications can aggregate related information much more quickly than it could be done by hand. Museums have a unique opportunity to expose and mine semantic information in their own collections, which would allow greater exposure of and context for vast collections of objects (p. 7).

A Word from the Advisory Board

While my role here is clearly that of reviewer of this publication, please allow me to switch hats for a moment to describe what it felt like on the roller coaster ride as a member of the on the Advisory Board. My 35 co-members came from the museum sector to represent a broad spectrum of museum practice as well as key writers and thinkers from education, business and industry. Our job was to sift through the e-mountain of research, articles, papers, blogs, and interviews, to analyze them and prioritize them according to relevance, and to subsequently slot them into the time frame - the three different time horizons. To this goal, we combed through selected RSS Feeds, dynamically updated news from more than 75 leading resources, items tagged in delicious.com and the Horizon Project Custom Google Search to search on the carefully selected web reference sites. Our goal (the rollercoaster ride) was to move through the difference stages of the discussion on: Emerging Technologies; Challenges and Trends; Published 'Technologies to Watch' Lists; Technology in Popular Culture; Reports and Research; Miscellanea - Stories, Examples, Food for Thought; Essays and Interviews on the Future.

The on-line discussions and results took place on the **Sandbox**; the wiki http://museum.wiki.nmc.org and were paced so that we could keep up with the ongoing discussion accordingly, and pitch in with our own thoughts as the discussion progressed; each with his or her own wiki signature. This could have resulted in cacophony, but instead it was well orchestrated by our leaders to produce a flowing, and coherent progression throughout the process. The wiki now acts as a stand alone; a reference tool - including

those technologies that were dropped along the way but still languish there, biding their time so that they may pop up in future versions of the Horizon Report, Museum Edition. For those of you interested in process you are welcome to track the timeline and follow how we moved to one stage to the next http://museum.wiki.nmc.org/Timeline.

Then came the fun part - a real lesson in on-line democracy - it was time to vote! At this point I would urge you to dive into the report yourselves, but for those who can't wait a minute longer - the winners are:

Time-to-Adoption Horizon: One Year or Less: Cloud Computing; Geolocation; Mobiles; Social Media

Time-to-Adoption Horizon: Two to Three Years: Augmented Reality; Game-Based Learning; Location-Based Services; Open Content

Time-to-Adoption Horizon: Four to Five Years: Gesture-Based Computing; Statistical Machine Translation; Semantic Web; Visual Data Analysis

If you would like to know a little more about the people behind this report, please go to the Horizon Report Advisory Board Page - http://museum.wiki.nmc.org/Advisory+Boa. If you are interested in serving on a future Horizon Project Advisory Board, or have someone to nominate you are welcome to contact NMC.

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