TALKING TECH: A Q&A WITH MATT MAHER

Advanced and emerging technologies can often feel out of reach, especially when budgets constrict. But, given what we've learned from the pandemic, we might ask: Can museums and other cultural institutions afford *not* to invest in new digital tools, especially when audiences have come to expect such offerings in almost every other aspect of their lives? In this issue, editor Jeanne Normand Goswami interviews Matt Maher, Founder of M7 Innovations, to learn how he's helping major brands harness the potential of technology to create meaningful (and fun!) experiences that increase engagement, promote loyalty, and drive sales – and how this might inspire our own adoption strategies.

Q Jeanne I confess that I'm a bit of a luddite. Can you explain what you do for readers (like me) who may be less familiar with advanced and emerging technologies and how they are reshaping the way we do just about everything, from shopping to learning to communicating?

A Matt The greatest technological advances take the friction out of everyday tasks and experiences. Take GPS, Netflix recommending a new show, or Alexa turning off the lights. Think of how easy it is to perform each task: you type a pre-populating address into your GPS, click a button on your remote, or simply tell a speaker, "Turn off the lights." Yet underneath these simple actions are hundreds if not thousands of lines of complex code working to give you a solution in real time. There's a hyper-accurate global positioning system determining an optimal route; a highly trained machine-learning algorithm making probabilistic assumptions based on past viewing behavior; and natural language processing paired with a smart device, respectively. These types of "invisible" technologies have permeated every facet of our lives.

This is the dynamic, digital-first world we live in today. Technologies that were once exclusive to bigger brands are now available to all of us through our phones. This is where I come in – I work with brands to help them navigate these new waters and

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provide strategic guidance on how best to implement these emerging technologies to increase engagement and sales. Part of that is mapping out exactly which technologies and platforms would be beneficial to each brand based on their business and marketing objectives. My company's main purpose is to help the brands we work with navigate the accelerating world of technology, innovation, and emerging media platforms, to find the signal in the noise.

What advice do you give to clients who are undertaking a new digital initiative? What components of the experience need to be in place before they even start thinking about the tech?

The first and most important piece of advice I give to clients when considering any digital initiative is to clearly define what the problem or tension is they are trying to solve. The digital world is ripe with shiny advanced technologies, but often it's just a plethora of solutions looking for a problem. So, is your museum trying to drive visitation or increase engagement at a specific exhibition, scale an in-museum experience to the outside world, or create an immersive experience that brings a piece of art to life? I could pair each of these examples with a digital solution that would leverage a specific technology. Narrow, strategically focused solutions like these are more impactful than just selecting a new technology like Virtual Reality and trying to wedge it into the museum.

The second critical piece to consider is whether the initiative is meant to be a one-off project or an "always-on" solution that will evolve with the needs of the company and its clients. If the latter, it's easier to justify the requisite investment in time, capital, and energy needed to make it a success. If the former, I'd often challenge a client to dig deeper to see if there's a simpler and more affordable solution in the analog world, or to rethink how you can leverage this solution to other parts of the business to amortize the overall cost.

Which technology do you feel has the greatest potential to transform visitor engagement in and with museums?

Hands down, the technology I would lean into to transform engagement in museums is Augmented Reality (AR), leveraging both its visual and auditory components. AR allows you to overlay digital elements on the physical world. Think of the potential of this technology in a museum filled with objects and artworks that are quietly screaming out to tell their stories and rich histories. As visitors, the only information we get is typically relegated to adjacent, small text explanations, or, if we're lucky, perhaps there will be a video on a screen nearby, or an audio player with a prerecorded track playing in our ear. AR allows you to hold a phone or iPad – and perhaps one day soon to don a pair of eyewear – that can bring an object or exhibition to life. The best part of this type of experience is the immersion. Videos are constrained to the screen they play on, but with AR, once you point your device at an object and it initiates the experience, the technology can activate the entire 360-degree space around you. This might include spatial audio, rich animations, and dynamic

multimedia, allowing you to tell the story in ways that were not possible before.

But it's important to remember that it's still early days for this technology. Adoption for older audiences may require more of a learning curve with the technology in its current state, while younger audiences have no issue with understanding how to activate and utilize these experiences. I see this as an opportunity for museums to grow their audience by implementing technologies that may seem advanced but are ubiquitous in the digital lives of younger generations.

As a whole, museums and other cultural institutions have not historically been known as early adopters of new technologies. But, as it did for many fields, the pandemic accelerated interest in and funding for digital projects. Now that we are returning, at least in part, to IRL visitation, how can we keep the momentum behind these initiatives? Do you have any advice based on trends you're seeing in other industries?

Let's start with the trends. There are two key components that need to be in place before any technology can take off and become commonplace – accessibility and adoption. Here's an example: the QR code debuted in 1994 and quickly took off in China, where it was a crucial part of their mobile-first economy. In the United States, the QR code didn't catch on until 2019 when Apple allowed its native camera app to read QR codes (accessibility) and the pandemic in 2020 forced restaurants and stores to find a hands-free way to showcase menus and items

(adoption). Now QR codes are ubiquitous in the States. I dare you to walk through a grocery store, retailer, or museum and not find one printed on a product or label.

I say all of this because when a technology instantly provides value, becomes ubiquitous, and is easy to use, it generally will become cheaper to deploy and garner more engagement through adoption. This is true regardless of what industry you look at. So, when it comes to museums and other cultural institutions, they've made advancements and adopted things like contactless payments, QR codes, and even Virtual Reality so people can "visit" a museum on the other side of the world without ever leaving their house. The pandemic accelerated adoption, and even though we're again comfortable doing more and more things in person, the technology won't fall by the wayside. In fact, I believe the past few years have primed us all not only to expect to see and use new technologies, but also to be more comfortable with it all. So, even though museums may not be early tech adopters, I believe they're on the right path by testing and trying out new technologies at their own pace. The reality is that once a technology becomes more ubiquitous and affordable, it puts us all on a trajectory where we can't imagine what the world was like before we had it.

Great technology doesn't have to be expensive, but to deploy it effectively and make the investment worthwhile you need a compelling answer to the key question I mentioned earlier: What problem are you trying to solve?

Museums often operate individually, but I'm struck by the fact that each museum building its own app or experience from scratch is not only not financially viable, but also not a way to create a good experience for visitors – no one wants to have to download and learn a different app for each museum in New York City or Paris. Are there existing platforms that museums could partner with to create a more seamless experience for visitors that are also more budget friendly and have the potential to reach more people?

I couldn't agree more. We are all in app overload; numerous reports show that most Americans will spend more than 90 percent of their screen time on five or fewer apps, even though hundreds are downloaded on their phone. So, even if a museum does perform the Herculean task of convincing a visitor to download its app, in all likelihood, it will be used once or twice and almost never once that person leaves the museum. The good news is that QR-code readers, AR, and voice technologies are now available on native device apps (e.g., iPhone's camera), on the mobile web, and in popular social apps like Instagram. This means a museum can leverage cost-effective partners like Blue Bite (QR codes), Post-Reality (AR), or RAIN and its subsidiaries (voice) to build on the mobile web or social platforms, which anyone with a smartphone can access. As an even simpler solution, if a museum has a following on social platforms like Instagram, Facebook, or Snapchat, it can hire a freelance developer to build custom lenses (AR) or add 360-degree functionality to its website.

Larger institutions often have the benefit of having in-house digital teams to help implement new initiatives. What advice would you give to those without in-house experts that are hoping to enhance the visitor experience through technology?

When looking for a partner to help bring the initiative to life, make sure you find one that isn't just about execution, but education. A great partner will teach you about the possibilities of a technology or digital initiative, assisting you in creating a strategy and benchmarking its success together.

But, even if you hire an external partner to fully handle a digital initiative, there needs to be someone on the museum's internal team who can act as a point of contact and who has some semblance of what success looks like when the project is complete. If it's truly not possible to have a tech person on staff, my advice would be to find the curious "Swiss Army knife" on the internal museum team and put them in charge as that point of contact or project manager.

How would you address the naysayers who think that museums should remain largely technology-free spaces focused on interactions with "real" objects?

It's a really difficult question because, while I believe there is value in being fully present in analog, real-life experiences, technology has permeated every aspect of our lives. So, it's difficult to strip technology away from visitors without receiving negative feedback. It's muscle memory to google more information, to snap a photo to capture a

moment in time, or to listen to an audio guide for deeper context. Technology has hit such a critical mass that it's become like gravity, and that's a hard one to fight against. I also think it's a disservice to the museum experience because, if technology is implemented correctly, it enriches the space, making it more immersive and engaging than it would be otherwise. Not to mention the next generations of museumgoers (Gen Z and then Gen Alpha) are digital natives, born into a completely connected world via the internet and social media, rarely being in spaces where technology is "shut off."

What new developments do you see on the horizon? What has you most excited for the future of technology-driven customer – or visitor – experiences?

This prediction is a little further out into the future, but I am excited for AR glasses and what will be deemed a "spatial computing" revolution. I'm sure anyone reading that sentence instantly thinks of a dystopian future – but look where we are today. The average American spends four hours and two minutes a day on their smartphone; in China the average is over seven hours a day. Our necks are constantly craned down staring into our little black mirrors, and usage is only increasing. Enter AirPods, smart watches, and, eventually, lightweight AR glasses. These technologies will lessen our reliance on smartphones and hopefully pull us back into a "heads-up" world. Layer on elements like image recognition, Google search, and AR overlays, and a visit to a museum becomes an entirely new experience. I am sure there

will be naysayers who believe the picture I'm painting is too "connected" and a future they want to stay away from. I stand firm with my belief that technology has become like gravity – you'll get nowhere trying to fight it, so figure out how to use it to ground what matters most to your institution. ∎