



Usman Haque is the founding partner of Umbrellium designing and building urban technologies that support citizen empowerment and high-impact engagement in cities; and Thingful (<https://thingful.net/>) a search engine for the Internet of Things. Earlier, he launched the Internet of Things data infrastructure and community platform Pachube.com, which was acquired by LogMeIn in 2011. Trained as an architect, he has created responsive environments, interactive installations, digital interface devices and dozens of mass-participation initiatives throughout the world. His skills include the design and engineering of both physical spaces and the software and systems that bring them to life. He has also taught at the Bartlett School of Architecture, including the Interactive Architecture Workshop (until 2005) and RC12 Urban Design cluster, "Participatory systems for networked urban environments". He received the 2008 Design of the Year Award (interactive) from the Design Museum, UK, a 2009 World Technology Award (art), the Japan Media Arts Festival Excellence prize and the Asia Digital Art Award Grand Prize.



↑ *Primal Source, Santa Monica, by Usman Haque: An all-night installation that is managed and brought to life by the festival participants. It responds to the music, voices and other sounds in the vicinity. The mirage-like installation deploys an outdoor mist projection system that glows with colours and patterns.*

Uniting the human-scale with the city-scale

London-based architect Usman Haque is famed for his interactive architectural systems, and for his exploration of newer, more effective ways of creating human engagement and interaction through his designs. Indian Architect & Builder caught up with him, to quiz him on a variety of topics such as his journey as an architect, his inspirations and philosophies, architects using the digital revolution to their advantage, and more!

Can you take us through your journey as an architect? How and why did you decide to become an architect?

I actually applied for a physics program at university, and got accepted, but I switched at the last moment because my father said that, knowing me, he didn't think I would like eventually to be stuck in a lab working for some big organization (apologies to physicists – I know that doesn't capture it all!) and would probably prefer to work for myself in something constructive. I knew very little about architecture and wasn't

particularly interested in buildings themselves but I was interested in systems and politics, while also being heavily into painting futuristic scenes – so I chose architecture mostly because others nudged me in that direction. Once I got to architecture school (I studied at the Bartlett in London) I discovered that architecture was so much more than just the physical fabric of buildings, and yet I noticed that architecture magazines almost always showed photos of physical structures without people in them, so I was determined to develop a type of architecture that made no sense unless there were people in the equation.



[†] *Open Burble, Singapore, by Usman Haque: Burble is a large-scale inflatable form that is configured, built and controlled by the public. The form changes in response to the crowd interactions below it. Its scale is able to visually compete in an urban context with the skyscrapers surrounding it.*



[†] *Mini Burble Paris is an inflatable structure that hangs above a crowd changing colour in response to audience members' tweets and interactions on tablets.*



† Another Life, by Umbrellium is one of Europe's largest permanent interactive public artworks. Bradford City center is brought to life through a public space 'operating system' that connects together sensors, actuators, LED lights, lasers, fountains, mist machines, weather stations and other networked urban hardware.



† Natural Fuse creates a city-wide network of electronically-assisted plant-pots that act both as energy providers and as circuit breakers to prevent carbon footprint overload, helping communities manage their collective energy usage and carbon footprint. (Umbrellium.co.uk)



[†] *Marling, Eindhoven, by Usman Haque, enables the voices of thousands of citizens to create forms through spectacular effects that hang in the air above the crowd, forming a delicate, intricate ceiling of animated colour.*





[†] Marling enables users to create 3-dimensional effects in outdoor public space using their voices. The result is an intricate suspended ceiling with animated colours above the crowds, helping create a shared public memory of collaboration that lasts long after the event transpires.

Tell us more about your early projects and initial challenges.

Early on I was interested in two specific things: first, how people perceive space and the people around them; and, second, how they could change and reconfigure that space. That led me to a number of projects looking at the spatialisation of sound, smell, temperature, electromagnetic fields and even acoustically-couple neural networks.

What factors influence and inspire your design process and design philosophy?

I'm often driven purely by intuition and have to spend a lot of time retrospectively unpicking and making sense of why I produce something. Quite a few projects have started literally at the moment of waking up from an intense dream. That said, there are two things in the world that inspire me continually: the astonishing creativity that others, ordinary folks, have in the way that they perceive and build up their own environments in unexpected ways; and the power of masses to bring about change. I've tried to unite those two things in a lot of my work – producing 'platforms' or 'systems' that connect people together to be more creative together and achieve things that they probably wouldn't have if they were working alone.

You've coined the terms "hardspace" and "softspace". Could you tell us more about these, and other concepts that influence your designs?

This is now quite an old distinction for me, that I was first using in the 1990s, but it essentially referred to the distinction between seemingly hard, immutable, physical stuff (like walls, roofs and floors) and the soft, ephemeral, sometimes subjective experiences within the physical stuff. I now don't use this distinction quite so much because I've realized that everything you think is "softspace" could be seen as "hard" in some contexts and vice versa.

Could you elaborate on 'Architecture as an operating system' from your Open Source Architecture Experiment?

This is also a bit of an older concept for me but it guided a lot of my early work. I was interested in how different kinds of computer operating system (Mac, Windows, Linux) afford very different types of user-engagement and relationship, especially with regard to how much the user is able to tweak, configure, build and reimagine their own computer (very little perhaps on the Mac end of the spectrum and so much more on the Linux end). I believed that a similar paradigm could be applied to architecture, in which an architect could imagine the spatial system they're designing, comprised of both hardspace and softspace elements, affording or not affording their inhabitants the capacity to tweak/configure/build/reimagine their own spaces, and all the consequences that might bring. In some cases you might need a Windows-like experience in architecture, but I was much more interested in Linux-like experiences: open, flexible, mutable and created by many people – 'open source'. I explored this at length in Urban Versioning System, published in 2007, and co-authored with Matthew Fuller.



† The system turns public spaces into engaging and inviting outdoor interactive environments where inhabitants collectively design and transform their cityscapes enues a sense of belonging and ownership towards the built-environment, almost akin to a place-making initiative.

You are known to develop software, analyze data points, and use interactive installations and digital interfaces for your designs. How can architects use the digital revolution to their advantage, without being overwhelmed by the digital 'noise'?

The opportunities of digital technology for me have less to do with data, optimization, safety and convenience and more to do with making things dynamic, responsive and conversant. Done in the right way, architects can use digital technologies to make the environments they create more user-friendly, more inviting, more sustainable and more adaptable. I do have to stress though that working with such technologies requires an expertise – an expertise that architects don't usually have in-house – otherwise, yes, you do end up with environments that are overwhelmed by digital 'noise'. In my studio, Umbrellium, while our mission is to design and activate urban environments with technology, in fact much of our work is non-technological: creating shared visions with clients to help define problems, challenge assumptions and identify uncertainty, and ultimately it's measurable impact that we're trying to achieve with any digital technology – very hard to identify and quantify in some cases, but crucial for demonstrating a return on investment.

How can architects address issues of contemporary architecture in the increasingly digitized world today?

Architects need to be aware that much of the built environment is now conceived, designed and built by non-architects. Even Google is getting in on the act with their initiative Sidewalk Toronto. They absolutely need to keep up with developments in the world because in most urban projects these days, some kind of technological element is expected, usually during the design process but increasingly during the occupancy phase as well. Just offering 'free wifi' in

your building no longer cuts it! For us at Umbrellium, this means working on everything from digital master-planning to software development to interactive urban design to building financial models that help define business, operations and experience use-cases for technology. Ultimately, our goal is to unite the human-scale with the city-scale, engaging communities in technology deployments to de-risk and boost innovation.

ould you elaborate on the thin line between art and architecture, and how you constantly explore this distinction to inform your design?

Architecture is the discipline that I want to contribute to and have an effect on. I'm not that interested in art to be frank and I don't have a good definition for it. Having said that, there are many that see some of my work as 'art' and I won't challenge their perception, as I'm fine with whatever engages them!

Is there a practice/architect that inspires you?

I'm very interested in the work of Assemble, a multi-disciplinary collective working across architecture, design and art, most importantly because they explore many complex democratic models in their work.

Lastly, what message would you like to give to students pursuing architecture and young architects in practice?

We're almost at a time that we can build anything we can imagine, given the resources. This makes it even more important to consider both the lyrical and the ethical consequences of what we imagine and what we bring into the world. This is an opportunity, not a constraint! ■