



## Architecture firm boosts teamwork and creative spontaneity with collaboration devices

SHoP Architects has always used technology to make the practice and process of architecture more creative and more efficient. By using Microsoft Surface Hub team collaboration devices, the firm will be able to shrink the gap between inspiration and execution, bring more people into the creative process, and use natural, intuitive pen and touch functionality to draw, annotate, and explore the 3-D models that are the foundation of its design process.

**SHoP Architects**

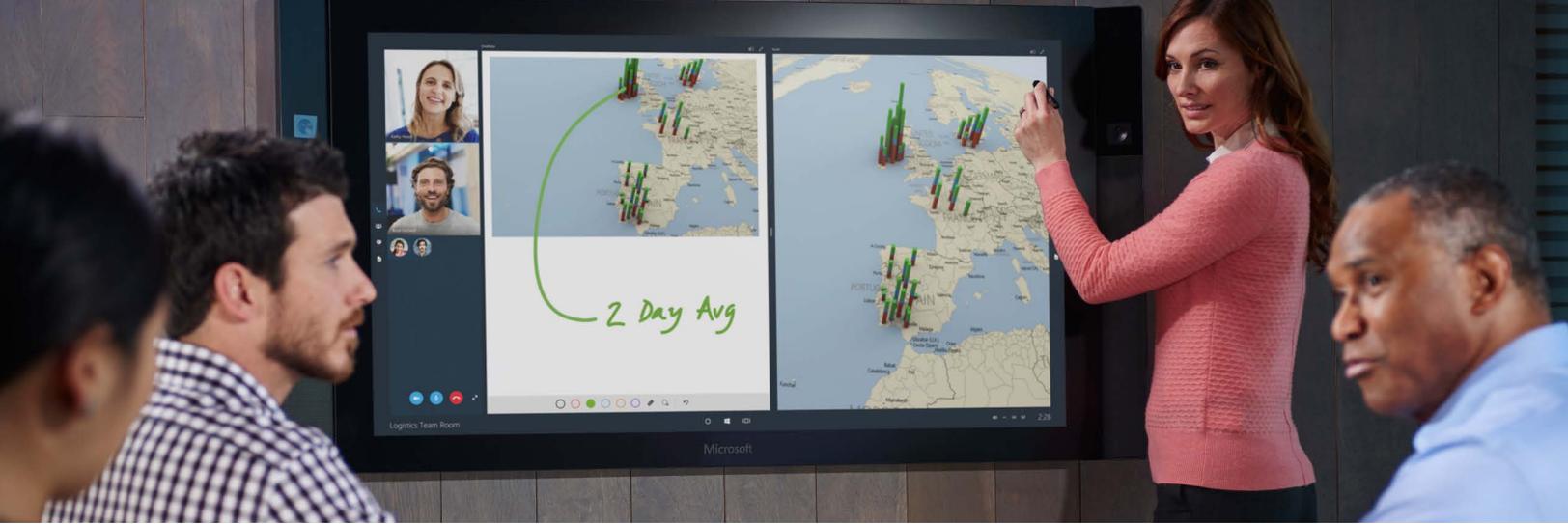
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New York City–based SHoP Architects takes an unconventional approach to design with a willingness to question accepted patterns of practice and expand beyond the architect’s traditional roles.

## Business Needs

SHoP Architects, the firm behind the award-winning Barclays Center in Brooklyn, New York, was founded in 1996 on the premise that there was a better way to design buildings—and it hasn’t stopped innovating since. Technology, especially three-dimensional (3-D) digital modeling, is foundational to the firm’s creative, collaborative, and highly efficient work process. “We use 3-D modeling to organize systems and coordinate trades in a way that has more in common with the aerospace industry than with traditional architecture,” says John Cerone, Associate Principal, Director of Virtual Design and Construction at SHoP Architects.

While the firm’s process is significantly more efficient than traditional practices, its architects constantly look for ways to close the gap between inspiration and final design. “Typically, we’re navigating a model on a screen and sketching and taking notes on the whiteboard right next to it,” says Cerone. “We take screen shots and write on them, but what we really want to do is just write on the screen and have it captured in the model.”

That would enable greater spontaneity and creative exploration, he adds. “You’re more likely to experiment with ideas if you know you won’t have to scan and trace every single drawing.”

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“What’s important is not the time as much as the energy that gets lost from the original sketch.” Most of the software that the firm uses is controlled with a mouse, which Cerone notes is not a natural way for most people to work in a drawing-centric field. “Pen-to-screen or hand-to-screen is the most intuitive interface,” he says.

Virtual collaboration is another area in which the firm is always looking to advance. “Our screens are portals into a 3-D digital environment,” says Cerone. “Web meetings and screen-sharing sessions are invaluable, and each of our teams has several every day.” However, the firm lacked a way for participants to interact with onscreen content simultaneously.

## Solution

To further promote efficiency and creativity, SHoP is deploying Microsoft Surface Hub team collaboration devices as part of a pilot program sponsored by Microsoft. The firm plans to put one device in its common space—already a focal point for brainstorming and ad-hoc meetings—and another in its formal conference room for meetings with clients, contractors, and other project participants.

With the implementation, SHoP will gain many of the advanced features that it seeks, together in a single device. For example, by using Skype for Business video calls, in-person meeting participants can bring remote attendees into their data-driven and visual creative process. Architects will be able to draw in a digital environment as easily as they would with pen and paper and are already enjoying the benefits of clients brainstorming in shoulder to shoulder collaboration. It also provides responsive digital inking with integrated styli. “I think Surface Hub will be used for every type of collaboration, and by every role in this office,” says Cerone.

## Benefits

### Catalyzing teamwork

Instead of being forced to crowd around a computer or tablet screen, everyone can participate in the creative process comfortably. “I see Surface Hub as being a magnet for collaboration,” says Cerone. “Everyone will be able to annotate and engage with the environment represented on the screen at once. I think we’re going to be doing that more than we can imagine.”



### Enhancing efficiency

Reducing the time from idea to execution has always been a strong focus at SHoP, and Surface Hub will help minimize it even further. “Efficiency is everything,” says Cerone. “The faster you can communicate an idea, the better.” By enabling architects to capture ideas immediately and incorporate them into 3-D models with fewer steps, the firm will reduce the time required for the ideation phase of a project without compromising the quality of the ideas generated.

### Connecting with clients

Truly understanding the intentions, ideas, and decisions of the people who commission its services

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is part of the SHoP ethos. It enables the team to design buildings that meet clients' needs faster and more efficiently. With Surface Hub, SHoP will be able to maintain closer contact with clients, whether they are in the room or across the world. “We're always drawing to illustrate a point when clients are onsite. The ability to do that virtually will be very helpful,” says Cerone.

### Enabling hands-on creativity

Drawing directly on the screen will keep the creativity flowing, especially with remote workers. “We have an innovation hub project in Botswana, with a full-time team there that uses our digital models to coordinate construction,” says Cerone. “We use Skype for Business to work together, and we constantly want to draw on the screen. So we take screen shots and annotate them, which is slow and inefficient. But once we have Surface Hub digital markup tools, we'll be able to keep the creative momentum going.”

### Touching the future

As 3-D modeling and architectural software advance, SHoP expects that the pen and touch functionalities of Surface Hub will become even more integral to its creative process. “The ability to sketch a detail or a component using a stylus and have the software turn that drawing into usable geometry—that will be incredibly influential in what we do,” says Cerone. “Modeling directly on the screen has been a dream for a long time, and the software packages that we use will soon have more touchable interfaces and make that dream a reality.” When those capabilities become available, SHoP will be among the first to make the most of them by using its Surface Hub devices.

## Microsoft Surface Hub

Surface Hub is a collaboration device designed to unlock the power of the group, powered by Microsoft software and services like Windows 10, OneNote, and Skype for Business.

For more information about Microsoft Surface Hub, go to:  
[www.microsoft.com/surfacehub](http://www.microsoft.com/surfacehub).