

NEC Display Solutions Client Installation Public Sector

CityVerve Manchester Immersive Lab

Super-large format interaction and visualisation



Demonstrating how large format touch displays can help to manipulate and visualize complex data, Manchester benefits from an interactive NEC video wall, a huge interface which is connecting the city.

Winning funding from a Government-led technology competition, the CityVerve project aims to harness the Internet of Things (IoT) to create a Smart City delivering enhanced service provision for its inhabitants. Designed to transform our daily lives in the digital age, Manchester was selected as the UK demonstrator city to pilot the project, demonstrating how the imaginative use of smart technology can make a real positive difference to how people live and work.

Using a network of sensors across the city, Manchester becomes a connected city, drawing data to a central server enabling smart improvements to help deliver more personal, efficient and flexible products and services. A network of sensors in parks and along commuter routes encourage people to do more physical activity whilst monitoring air quality; talkative bus stops let bus operators know when commuters are waiting and provide live updates on services; bike sharing and smart street lighting encourage alternative forms of transport to reduce traffic congestion - these are just a few examples of the vast number of innovative elements which connect the city.

SITE INFORMATION

Sector

- Public Sector

Client Information

- CityVerve Project
cityverve.org.uk

Partner Information

- Saville Audio Visual
www.saville-av.com

Installed

- Summer 2017

EQUIPMENT

- 15 x 55" NEC MultiSync® X555UNS-PG video wall configured using NEC's Modular Touch System and ShadowSense™ touch by Baanto.



The Challenge

Involving a consortium of 21 organisations including Manchester City Council, Manchester Science Partnerships and the University of Manchester, the IoT technology concept is powered by Cisco International, driving the platform upon which this innovative project is orchestrated.

Cisco partnered with Saville AV to design and install a number of immersive interactive labs using NEC display technology to showcase its otherwise invisible smart connections. The first public representation of the connected city is accessible at the Manchester Science Park, a huge 5x3 interactive NEC video wall located in the Bright Building. Displaying live, real time data, the video wall generates the visualisation of live feeds coming in from across the city where visitors can manipulate information to gain an overview or deep dive into any particular feature. Virtual maps, transport updates, bus and train locations, traffic data - even feeds from the local Bee Project can be visualised!

Circumstances conspired to leave Saville AV and NEC with just one week to complete the installation, but the project was finished on time, ready for the official opening of the Bright Building at Manchester Science Park, the centre of operations for the CityVerve project, in September 2017.

The Bright Building is also the new nerve centre for the region's digital technology sector, a huge contributor to Manchester's economy. Known as Mi-IDEA, the centre is designed to foster and nurture digital innovation. The building's flexibility allows blue chip corporates to co-locate with pioneering start-up enterprises where the giant NEC video wall is perfectly positioned to facilitate collaboration, enabling innovative ideas to develop and valuable partnerships to form. Allowing multiple touch points and with a VC camera and speakers, the video wall becomes a vast visual interface in an immersive video conferencing space.

On opening night, the video wall was one of the key exhibits and was by far the most popular attraction as visitors experienced intuitive finger touch control, clicking on landmarks and location icons to access information. NEC's interactive video wall solution intuitively invites multiple users to engage, share and have fun with the content.

The NEC Solution

The fifteen-screen wall is configured using 55" NEC MultiSync® X555UNSPG displays which feature special protective vandal proof glass. The 2mm toughened glass with anti-glare coating not only protects the display from damage, but also provides crisp and clear images from different viewing angles and distances whilst acting as a smooth touch surface for the user. The interactive touch screen capability is provided by NEC's solution partner, Baanto, using versatile 'ShadowSense' frames located around the screens to map users' touch points. The NEC Modular Touch System is simple to configure, there is no single huge glass overlay to handle, each module is a separate element, scalable to achieve any size of interactive surface.

The screens are mounted on Uicol pop-out wall mounts and framed by a bespoke veneered surround. Exceptional sound reproduction is provided via an Extron DSP Matrix Processor and amplifier plus eight JBL Control pendant loudspeakers. The wall is driven by a TVone CORIOmaster system, fed from the CISCO cloud-based service.

To ensure user-friendly operation, Saville AV designed a bespoke control system to centrally manage all elements of the video wall operation, controlling input of multiple sources and live feeds. Whilst capable of 24/7 operation, to reduce unnecessary power usage, the video wall is scheduled to power up and power down at the beginning and end of each day. NEC's unique heat management ensures continuous peak display performance and perfect uniformity whilst sensors ensure eye pleasing brightness whatever the ambient conditions.

The Result

Bringing the Internet of Things concept of connecting physical objects with the internet and letting them communicate has been brought to fruition through this innovative project. Cisco and its partners have created a platform upon which to develop limitless open innovation through collaboration to support a smarter, brighter, more efficient community.

Ian Kennedy, Fellow of the Royal Society of Arts, a Chartered Engineer, Chartered IT Practitioner, member of the IET, BCS & IEEE, and BCS Certified IS Consultant commented regarding the large visual interface by NEC: "Visualisation is a critical success factor in the dissemination of complex ideas and developments. The impact of the immersive screens at Mi-IDEA to highlight the ongoing smart city developments across Manchester cannot be overstated. Being able to show visually and interact physically at large scale with complex systems benefits researchers and dramatically improves engagement with the general public - a powerful instrument to highlight innovation!"

