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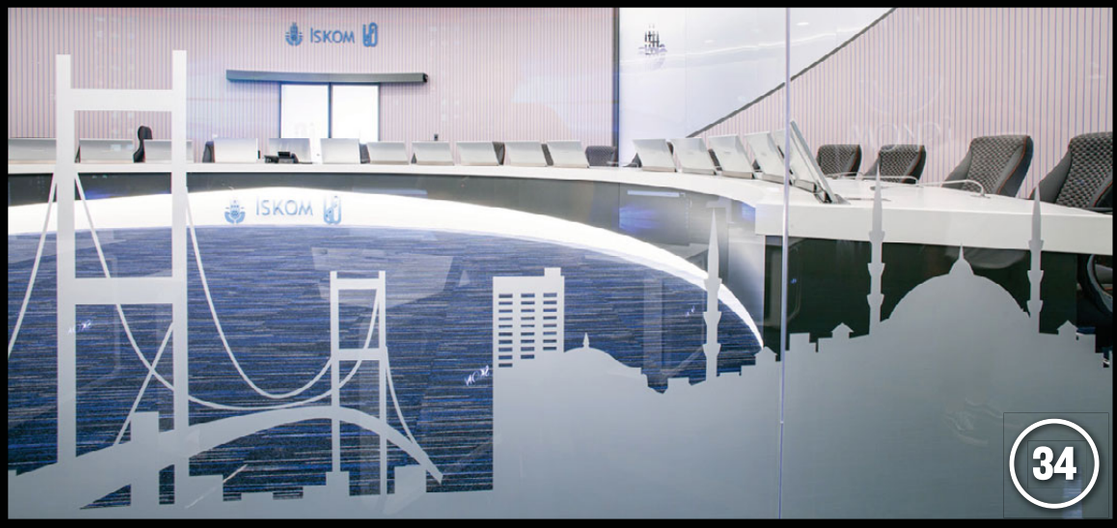

RUNNING WATER

Istanbul now has a futureproof hub to control the city's sewage and water infrastructure. **Paul Milligan** speaks to the integrator who provided a turnkey installation.

Water is an essential part of life, and the management of it flowing through our cities 24/7 is a vital task. The new ISKOM centre is tasked with that job, and covers the entire İstanbul metropolitan area, acting as the main control and coordination hub for drinking water, water treatment, rainwater and sewage systems. The site includes a bespoke control centre and integrated smart meeting room to ensure all staff have the data and information they need at any given time. Given the job of designing and delivering a comfortable, modern, efficient environment in which to do this was CCC Command Control Centers Teknoloji (CCC), a Turkish company specialising in the design of mission critical centres.

CCC supplied a turnkey project at ISKOM, with everything designed from the ground up including a 17-metre C-shaped table. The scope of the work by CCC is hugely impressive here when you consider it includes ergonomic design (staff are working here on a 365/24/7 basis), installing vital SCADA (Supervisory Control and Data Acquisition) systems, making sure access to the site is secure (and taking care of perimeter security), designing and specifying all the contents from videowalls to delegation systems and automation systems, the manufacturing of bespoke technical furniture, providing 24/7 redundancy of all systems including the installation of fire prevention systems in case of emergency situations such as fires, and much more.

The new ISKOM building was built to centralise control of water management in the city, and it's now a hub that can monitor smaller clean water treatment stations, used water treatment stations and pumping stations across Istanbul. Previously, monitoring and checks were made by outdated systems that left the staff struggling to coordinate operations, so ISKOM has provided a huge jump in efficiency overnight for the owners. Having won the tender, CCC began the task of delivering what the client had in mind. "They knew what they wanted in general, but they needed some professional assistance on how to do it," says Yılmaz Özgenal, solutions consultant for CCC. "They wanted to see the big picture, to control all the regional hubs in one centre using its SCADA network, but they had no idea about how to achieve that." Özgenal's plan was to divide the centre into two main areas; control room and meeting room, but for them to co-exist. "It's possible for both these areas to be integrated with each other and to communicate with each other in the same location. From the operator side of the control room site they can control anything they want from the display hub, they can monitor the SCADA status, they can communicate with local operators directly, they can use their internal internet access. Once they've seen how we could make it happen they were quite relaxed."

Visitors enter the site into a large entrance area and reception desk, behind the desk is a 2x2 videowall consisting of Mitsubishi Electric LCD LM55P2 55-in LCD displays playing a mix of corporate videos. Behind the reception area is a VIP executive office for staff, for meetings where privacy is required.

The control room is dominated by a bespoke 17-metre long C-shaped table designed and built by CCC, which features internal cable trays to hide the AV inside. The shape of the table was key says Özgenal, as CCC wanted every individual participant of the meeting room to see the chairman of the meeting, and the videowall inside the control room

as well (more of how CCC did that later on). The table can seat 27 people and features retractable monitors from Element One. Twenty-two inch Modis 220 full HD displays were chosen for the (one) president and (two) vice president seating positions, so they can lead the meetings. Convers One 185 (18.5-in) displays were installed in the 24 participant positions, the monitors are integrated with mini PC's and matrix switches hidden inside the table. The main meeting room is run using Bosch conferencing software.

At the central point of the room a 65-inch interactive display panel from Konka has been installed for collaborative presentations. For uniformity of design and concept, every single display in the control room works under the same concept, so the interactive display panel (supported by a custom-made lift mechanism) can disappear when not in use, to give a clear view of the control room. Separating the control room from the main meeting room is where you will find one of the standout pieces of AV design in this project. Here CCC has installed a special frosted film over glass panels measuring approximately 27 m2 (3.6 x 0.8 metres). This gives meeting participants the opportunity to see the control room and videowall if needed, when there's no need for that or there's a private session going on, the glass can be frosted at the touch of a button and the meeting room will not be seen from the outside. Özgenal explains how it works: "There's a special tinting film that you stick to the glass from one side. Tinting film (which looks like an elastic frosted panel under normal conditions) has electrodes on it and when you push the button of remote controller (which triggers the power supply circuit that's connected to the tinting film), those electrodes disperse around with electricity and the area behind glass becomes visible. As the film also has electrical insulation on the outside surface there's no risk of electric shock." What actually sounds like a very high-end solution to providing privacy actually worked out cheaper than motorised curtains or blinds would have cost says Özgenal. All of the AV in the main meeting room is connected to the AV in the control room, Cue control systems allow staff to dim the lights, adjust air conditioning etc throughout the building.

The standout AV of the control is undoubtedly the 3x9 videowall, featuring 27 Mitsubishi Electric DLP cubes. It measures approximately 36.5 sq m (13.95 x 2.62 metres), and directly faces the C-shaped table, the videowall is curved by 8% to ensure maximum visibility. Content is driven for the videowall by Mitsubishi's own S-SF software suite and DG series videowall controller. Audio in the building is provided by Bosch LC2-PC30G6-4 celling loudspeakers, PLM-4P125 Plena Matrix amplifiers and a Symetrix Radius 12x8A DSP.

Security is obviously an issue when dealing with infrastructure projects of this size run by official government departments, but any IT/network security issues fears were allayed early on says Özgenal. "One advantage we had was that we started our installation during construction, so we could work closely with the building's staff. We built the network in-house and then brought it to the centre, everything was waiting for them to plug in and boot their systems by the end, so it didn't pose much of an issue. Their IT managers and our technical division were in constant contact. They still are actually. Whenever they need something to be integrated into their systems, or they want to integrate something from another system then they work in collaboration with CCC team and there are no problems."

KIT LIST

Bosch LC2-PC30G6-4 ceiling loudspeakers, PLM-4P125 Plena Matrix amplifiers

Cue touchCUE-5-B touch panel, controlCUE-two controllers, relayCUE-8 eight-channel relay switching unit

Element One Modis 220, Convers One 185 retractable monitors

Konka 65-in Intelligent Hub interactive display

Mitsubishi Electric 78 Series videowall DLP cubes, DG Series videowall controller, LM55P2 55-in LCD displays

Symetrix Radius 12x8A DSP

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>
> *Yılmaz Özgenal, CCC*