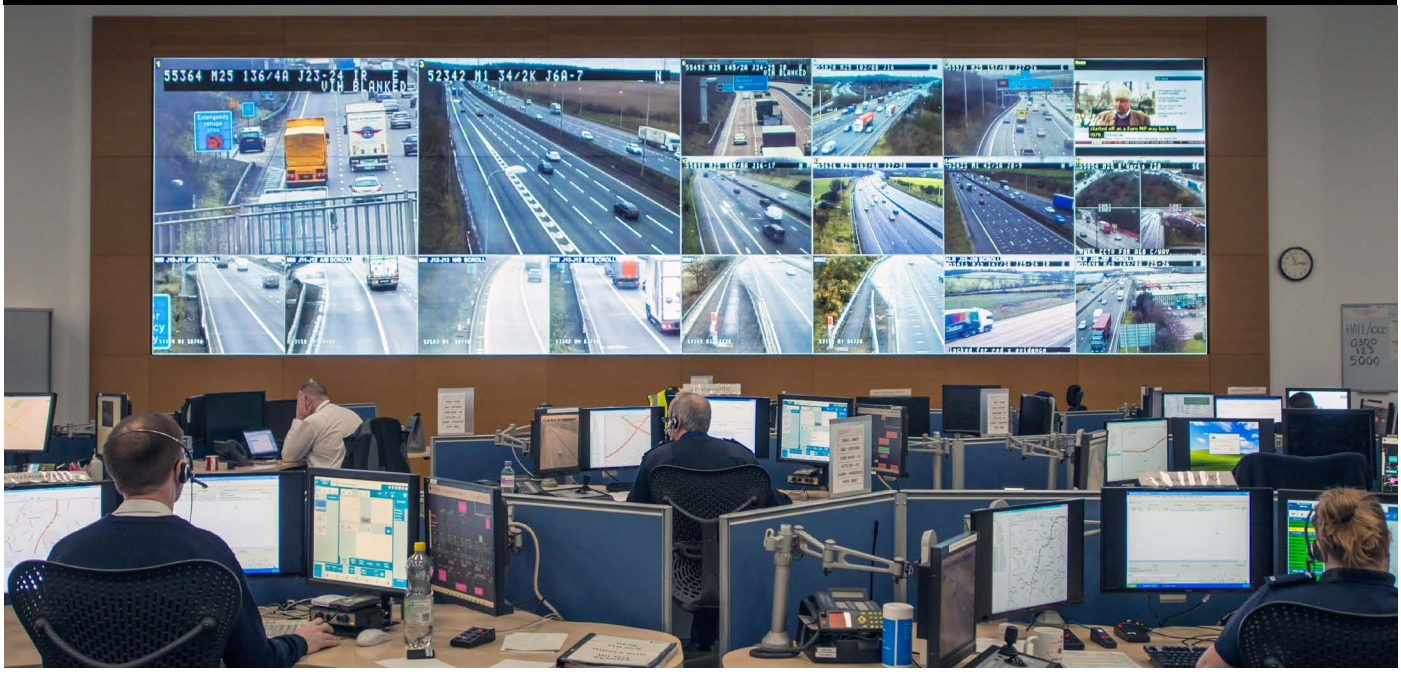
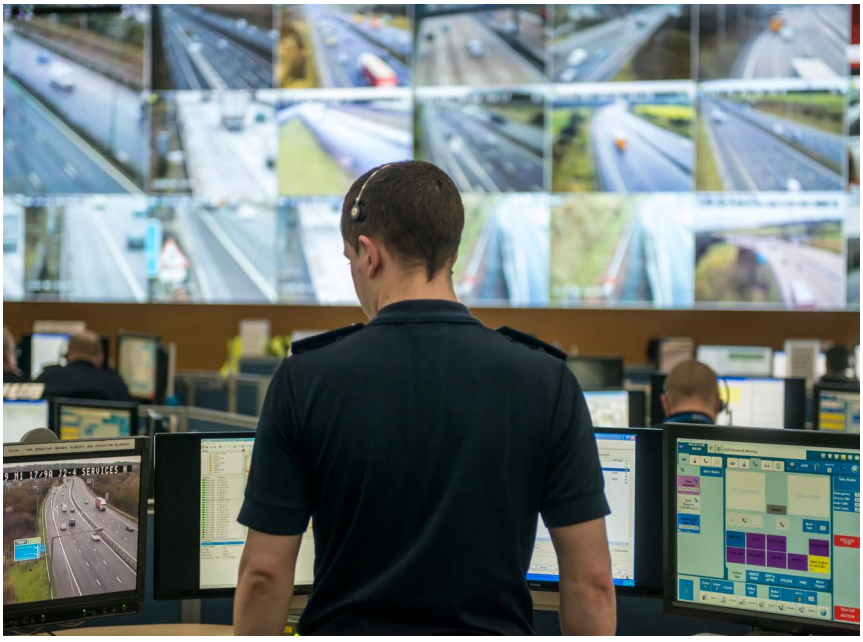
MITSUBISHI ELECTRIC
Changes for the Better

DISPLAYSOLUTIONS
CASESTUDY

Highways England, South Mimms, Godstone and Wakefield



Highways England is the government company in charge of operating, maintaining and improving 6,920 km of England's motorways and major A roads, carrying a third of all traffic by mileage, and two thirds of all heavy goods traffic. Formerly known as the Highways Agency, it became a government company in April 2015.



PROJECT LOCATION
South Mimms

CUSTOMER
Highways England

APPLICATIONS
Traffic Control Centre

PRODUCTS USED
24 x VS-67PE78UA

INSTALLATION
Electrosonic

FURTHER INFORMATION
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BACKGROUND

In 2015, Highways England expanded the capability of its Eastern Regional Control Centre, located at South Mimms. The Eastern Centre is one of the biggest of Highway England's seven regional centres, covering some of the busiest roads in Europe, including the southern section of the M25 and parts of the M40, M1 and M4. The control room is equipped with 20 operator positions and is dominated by a large video wall, allowing operators to view any of the 870 cameras overseeing the road network under its management, as well as camera and data feeds from other agencies, off-air broadcasts and temporary camera installations.

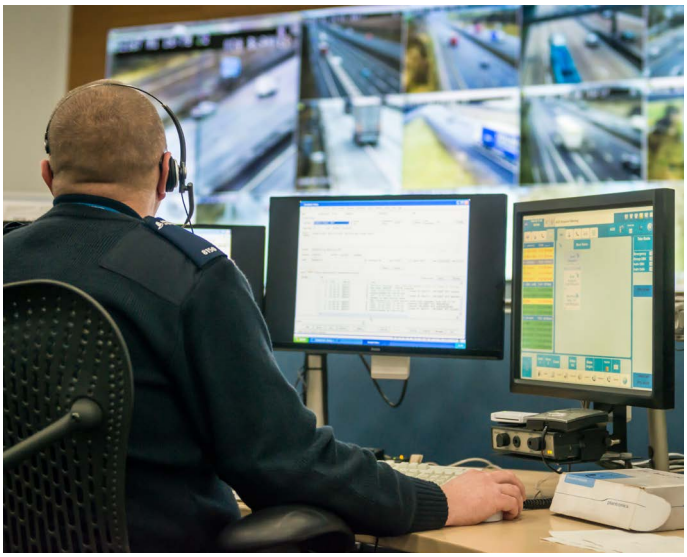
PROBLEM AND SOLUTION

The Eastern Regional Control Centre operates 24/7. The existing 8 x 3 video wall, which was installed by Electrosonic in 2005, employed rear projection displays illuminated by mercury lamps. Although considered state-of-the-art at the time, both the available technology and the demands placed on the system had evolved considerably over that time frame. As part of the expansion of the centre, it was necessary to upgrade the video wall, and Electrosonic was once again chosen to deliver the project. Along with a higher performance display, a key objective was to employ the latest technologies to drastically reduce the running costs of the video wall.

Mercury lamps are expensive, yet have a service life of only around 6000 hours – considerably less than one year of 24/7 operation. In addition, the technology requires the use of a rotating colour wheel, which also requires regular maintenance and replacement. Modern rear projection displays are based around LED illumination, which offers a dramatic improvement in lifespan and removes the need for colour wheels.

Electrosonic initially considered both digital light processing (DLP™) rear projection cubes and LCD tiled displays for the project. However the ability to display static content for indefinite periods with no ill-effects, coupled with the 4:3 ratio of the existing camera feeds, gave DLP rear projection a clear advantage. Other deciding factors in favour of DLP included greater energy efficiency, simpler installation and the ability to deliver a virtually seamless display surface without any visible gaps or mullions.

The display system proposed by Electrosonic was an 8 x 3 configuration of Mitsubishi Electric 67" VS-67PE78 DLP cubes, upgrading the resolution of the main video wall from XGA to SXGA+, improving brightness and dramatically increasing the lifespan to 80,000 hours for the LED light sources and 100,000 hours for the remaining components.



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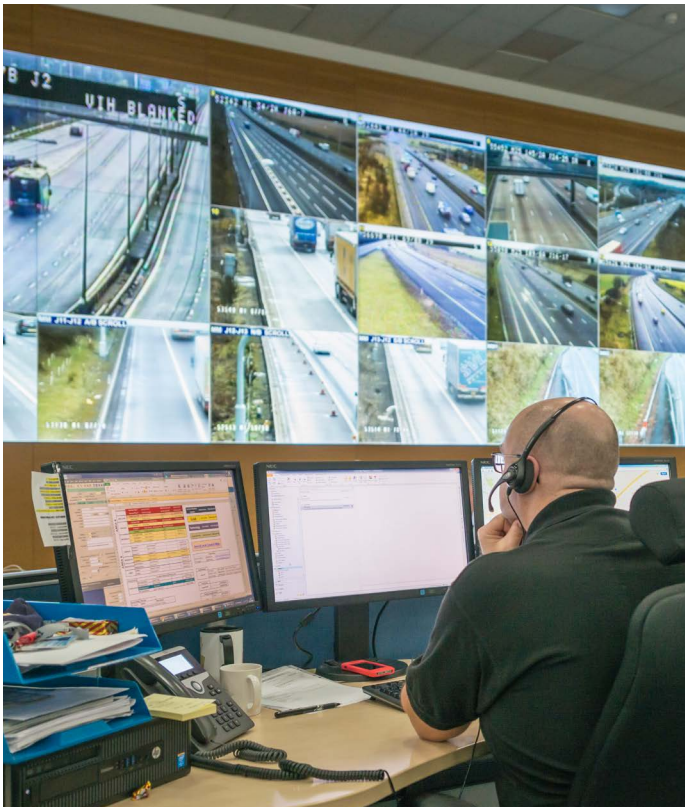
Specifications	
Model	VS-67PE78UA
Technology	LED video wall cube
Overall Size	33.2 m2
No. of Modules	24
Cooling system	Air cooling system with efficient cooling pipe and aluminum plate (No liquid)
Type	DLP™ technology (0.95" DLP™ 1 chip), DarkChip3™, BrillantColor™
Resolution	SXGA+, 1,400 x 1,050 pixels (per module)
Light Source	Redundant LED (RGB)
Light Source Service Life	≤ 100,000 hrs.
Brightness	880 cd/m2 bright mode 610 cd/m2 normal mode 420 cd/m2 eco mode 160 cd/m2 advanced eco mode
Contrast Ratio	1600: 1
Power Consumption	88 W in advanced eco mode, 108 W in eco mode, 147 W in normal mode, 233 W in bright mode.

DLP™ and Digital Light Processing are trademarks of Texas Instruments.



INSTALLATION AND RESULTS

Electrosonic carried out the refurbishment of the control room display under subcontract to the Regional Control Centre's existing IT systems supplier, Kelway. The installation was planned to minimise the impact of the centre's operations and operational capabilities, at times requiring new and existing system components to work together to achieve a smooth changeover. The compact footprint of the Mitsubishi Electric video wall displays enabled plenty of room for rear access, resulting in a neat and practical installation that fulfilled all of Highway England's requirements.

THE BIGGER PICTURE

At the same time the Eastern Regional Control Centre was being upgraded, Electrosonic also completed installations at two other of Highways England's regional control centres using the same Mitsubishi Electric VS-67PE78 DLP cubes and system package, but in slightly different configurations. The South East RCC at Godstone uses a 7 x 2 format display, while the North East RCC at Wakefield employs two 4 x 2 displays.

Electrosonic's unrivalled expertise in control room display system design and integration combined with the high build quality and performance of Mitsubishi Electric video wall displays once again proved to be a formidable combination, providing an elegant and efficient visualisation solution for Highways England that will help keep England's roads running smoothly for the next decade and beyond.

SEVENTY SERIES CUBES FROM MITSUBISHI ELECTRIC

The VS-67PE78 models used in all three Highways England RCC projects are part of Mitsubishi Electric's pioneering Seventy Series. The centrepiece of this projection technology is an integrated, ultra-modern DLP® chip. For its latest LED cube generation, Mitsubishi Electric has developed the innovative Smart 7 concept, a pioneering design for LED display wall cubes with a wide, intensive colour spectrum, optimum energy efficiency and an average service life of ten years. As a global market leader in LED cubes, Mitsubishi Electric currently offers the widest selection of models and is able to provide first-rate, well-engineered technology for customised solutions. We have over 30 years' experience in mission-critical video wall applications, and have installed more than 71,000 DLP projector units worldwide.

Request more information