AVR, The Netherlands

AVR is a waste processing company based in the Netherlands. Originally founded by 23 municipalities in the Rotterdam area, since its privatisation in the 1990s AVR has grown to become the largest company of its kind in the country, with waste and power plants in Rozenburg and Duiven and trans-shipment stations in The Hague, Utrecht and Rotterdam. Now a part of the Hong Kong-based Cheung Kong Infrastructure (CKI) group, AVR supplies industry and approx. 160.000 of households in the surrounding regions with sustainable energy generated from waste. AVR processed 1.3 million tonnes of Dutch solid waste in 2014 and additionally imported nearly half a million tonnes of waste from the United Kingdom. Besides AVR operates an industrial waste water treatment facility, a thermal paperpulp facility and a waste wood power plant.

PROJECT LOCATION
Duiven, The Nethelrands

CUSTOMER
AVR

APPLICATIONS
Control room waste incineration plant

PRODUCTS USED
10 x VS-62WE78UA
Bilfinger Mauell X Omnium processing

INSTALLATION
Bilfinger Mauell B.V.

FURTHER INFORMATION
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Background

In 2015 AVR decided to upgrade the control room of its waste incineration plant at Duiven. The original system, which featured a video wall with mercury lamp-lit cubes and a Jupiter controller, had worked well, but was becoming expensive to maintain and less able to respond to AVR's requirements. All supervisory control and data acquisition (SCADA) from the plant's systems was displayed on the cube wall, but the feeds from more than 20 CCTV cameras around the site were shown on separate LCD monitors installed at the top of the cube wall. AVR needed a better solution, one which would allow them to have SCADA and CCTV sharing the same screen. The original systems integrator, Bilfinger Mauell BV, was asked to implement the project. Bilfinger designs, operates and maintains plants and buildings for the energy sector and has long experience of working with power station and process control technology, automation systems for power distribution in electricity transmission grids, and the design and furnishing of control rooms with state-of-the art visualisation systems.

Problem & Solution

Bilfinger criteria for the display technology employed were that it should be high-performance, easy to maintain, cost effective and capable of being completely installed and working within a short space of time. In the end, the choice was clear: its long-term partner across Europe, the Middle East and Africa, Mitsubishi Electric Europe.

Mitsubishi Electric has built an enviable reputation for the quality and reliability of its display systems. The firm has installed over 71,000 video wall cubes around the world and is known for a high level of engineering excellence and delivering the reliability that is essential in mission-critical installations.

Due to the complicated and diverse nature of AVR's waste processing, the control room upgrade had to not only be right first time, but easy for operators to understand and a significant improvement on what had been in place before.

Installation & Results

Along with its own cameras, graphics, and SCADA equipment, Bilfinger decided to use Mitsubishi's 78 Series WUXGA resolution 62" front-access Digital Light Processing (DLP) video wall cubes to work with its own IP-based X-Omnium processor.

Mitsubishi Electric's 78 Series incorporates the latest cutting-edge technologies to deliver superior, superior, high resolution picture quality and reliability. Mitsubishi's proprietary automatic colour space control compensates for any colour and brightness differences between individual cubes in anarray, while the digital graduation circuitry adjusts brightness level at the edges of each cube's screen to ensure complete brightness uniformity in a multi-configuration display.

Mitsubishi's video wall cubes are extremely customisable to match any requirement. Optional input board slots allow system integrators to easily and reliably adapt the video wall to any systems architecture. Depending on the environment, users can select a "Black-Stripe" anti-glare screen or a higher -gain cross lenticular screen designed to deliver optimum performance in a wide variety of settings. For simpler applications, each cube's built-in image processing allows multi-window video walls to be created without using an external processor.

Specifications	
Model	VS-62WE78UA
Technology	LED video wall cube
Overall Size	11.1 m2
No. of Modules	10
Cooling system	Air cooling system with efficient cooling pipe and aluminum plate (No liquid)
Type	DLP™ technology (0.96" DLP™ 1 chip), DarkChip3™, BrillantColor™
Resolution	WUXGA, 1,920 x 1,200 pixels (per module)
Light Source	Redundant LED (RGB)
Light Source Service Life	≤ 100,000 hrs.
Brightness	1160 cd/m2 bright mode 810 cd/m2 normal mode 550 cd/m2 eco mode 170 cd/m2 advanced eco mode
Contrast Ratio	1500: 1
Power Consumption	96 W in advanced eco mode, 124 W in eco mode, 174 W in normal mode, 258 W in bright mode.

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

78 Series cubes not only display incredibly bright, vivid and accurate images, they do so for a very long time. The mercury lamp systems previously used by AVR required bulbs to be replaced annually, at a cost of €1,000 each. Mitsubishi Electric's modern, LED-lit cubes do not require lamp replacement and have vastly longer lifespans — 80,000 hours, in the configuration used by AVR. Furthermore, the 78 Series cubes use an air-cooled engine that requires no servicing over its lifespan, which also dramatically reduces running costs. Other cube parts, such as the fan packs, boast service lives of 100,000 hours, significantly reducing the lifetime cost of ownership for the waste processing organisation.

Along with their great advantages in versatility, lifespan and running costs, AVR's front-access video wall cube system means they do not require rear access and can be installed directly against the wall, delivering additional valuable floor-space within the control room. They also feature full redundancy with a Smart Switch function. If a signal disappears for any reason, the display wall automatically switches to an alternative signal, minimising any down time in the event of a signal source failure.

Only three weeks separated the start of the project from the day the new technology went live. The Mitsubishi Electric video wall was effortlessly interfaced with Bilfinger's own equipment, giving AVR Duiven a display solution that will keep them in control for years to come, and with dramatically reduced running costs.

78 Series videowall from Mitsubishi Electric

The VS-62WEF78UA models used at AVR Duiven are Mitsubishi's flagship DLP video wall display technology, capable of displaying continuous static content with no problems of image sticking. Available in all resolutions, the centrepiece of this projection technology is an integrated, ultra-modern DLP® chip. Mitsubishi Electric LED cubes are based around the innovative Smart 7 concept; a pioneering design for LED video wall cubes with a wide, intense colour performance, optimum energy efficiency and a long operational lifespan of over 11 years for some models. 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. The company has over 30 years' experience in LED solution development and large screen project management.

Energy inside. AVR

Request more information