

ELW – Waste Management
Companies in Wiesbaden,
Main Sewage Plant



MOBOTIX ... the new face of IP video

MOBOTIX

CASE STUDY

Network Video: Securing The Quality Of Life

An Obvious Task

The Waste Management Companies in Wiesbaden (ELW) know exactly the job they have to do: “We secure the quality of life in Wiesbaden – we’re customer-oriented, present and competent.” The numbers speak for

themselves: some 760 employees make sure day after day that 550 km of the highways and 380 km of the sidewalks are cleaned, 1,600 waste receptacles and 13,000 garbage cans are emptied, 2,450 m of

channels are cleared and a total of 86,000 m³ of sewage water is purified, all of which are divided between four sewage plants in the city.

48-Hour Job

The major part of the sewage water, approximately 60,000 m³ a day, is mechanically and biologically purified in the main sewage plant. In dry summer weather, it takes about 48 hours to run through the entire purification process, from the grit channel to the raking station, the sand filter, the preliminary treatment tank, the activated

sludge tank, and the final filtration tank into the micro-filter system and finally out into the Rhine River. This is a controlled process that imitates nature’s way of purifying water, but is much more efficient.

State-Of-The-Art Technology

“Today, we use state-of-the-art technology to get our rivers and lakes clean and to make sure that they stay that way. This is how we help to ensure that we have water, life’s elixir, in the highest possible quality,” explained Michaela Kessler, head of the sewage plant. State-of-the-art technology includes not only 250 pumps and countless kilometers of piping, pioneering electrical, measuring, controlling and regulation technology, exhaust fume detectors, gas measurement and person locating system, but also 55 MOBOTIX cameras, which are installed on the approx. 800 m long and 200 m wide sewage plant grounds.



Security Vision Systems





Network Cameras For Secure Processes

Almost Everywhere

Whether you drive down the slight slope on the Theodor-Heuss-Ring in Wiesbaden to the administration building of the main sewage plant, walk through the spacious grounds or go down into the 1.5 km long underground tunnel system between the sewage basins – you'll see the LEDs of a MOBOTIX camera somewhere near you. Why is that?

"We have made extensive changes in the main sewage plant over the past eight years. Many things that were added to the plant cannot be effectively checked by a regular patrol today," said Hans-Peter Schranz, head of electrical engineering at ELW. "That's why we have installed MOBOTIX cameras at specific points to provide us with a good overview of the entire plant at any particular time." These cameras are used for access control and grounds surveillance as well as for observing the sewage purification process.

Analog Planning

"Originally, we had planned to install about 25 analog cameras with pan-tilt heads," remembered Hans-Peter Schranz. "But then, it all happened differently." Passavant-Roediger Controls GmbH (PRC), a system integrator and

solution provider in the field of water and waste water technology, was commissioned with the project planning and set up of the new automation, network and process control system and the organization of the energy supply. "In addition to the analog cameras, we also had a special suggestion," said Herbert Hützen, head of the project at PRC. "Shortly before, our managing director had 'discovered' the MOBOTIX cameras and was so impressed by the technology that he suggested it as an alternative."

Pioneering Digital Technology

There were several good reasons for this: on the one hand, analog technology is now really quite outdated and has no future. "On the other hand, cameras with pan-tilt heads are expensive, quite susceptible to mechanical failure and have to be serviced on a regular basis. And the installation process is considerably more expensive," Herbert Hützen explained. "The robust, maintenance-free MOBOTIX network cameras beat the analog cameras by miles. Thanks to the integrated combination of telephoto and wide-angle lens, they not only perform the same function, they are also very easy to install and integrate into the existing fiberglass network. And they also offer convenient recording features and event-controlled recording based on predefined motion fields."



The entire purification process is controlled from the main office – thanks to the help of MOBOTIX cameras (right: original images taken by MOBOTIX cameras).



“Much Less Expensive”

“And of course we should not forget that this special suggestion was considerably less expensive,” commented Hans-Peter Schranz. So, it is no wonder that the ELW decided in favor of the digital solution.

However, how can you manage more than 50 cameras so that they can be easily operated by the sewage plant workers in the main office? “That was a major problem,” admitted the head of electrical engineering. “What we needed was a flexible management system to conveniently control all the cameras. The MOBOTIX system made it possible to manage several cameras using a standard Web browser. But with more than 50 cameras, we needed a special solution.”

Effective Management System

“Three different suppliers took up the challenge, installed elaborate test systems – but they didn’t get the job done,” remembered Herbert Hützen. “Then MOBOTIX recommended uniserve Internet & Multimedia.” This company (www.uniserve.de) offers the “WINSTON” camera management software that can be ergonomically operated extremely easily, quickly and intuitively. This software can also be easily adapted to the individual needs of the sewage plant and includes such useful

features as a site plan or alarm pop-up windows. “They actually delivered a management solution that fits the cameras – and it really works,” summarized Hans-Peter Schranz. “We are very happy with this complete solution.”

Other Projects

The head of the electrical engineering is already thinking about other projects: “The sewage plant in Biebrich is currently being expanded and is controlled by the main sewage plant at night. That’s why we plan to install cameras in Biebrich in the near future as well.” Since the ELW plans to centralize the night-shift staff, they may also install cameras at the waste disposal site to have them monitored by the staff at the sewage plant. This concept could be used in the works yard as well. “I am firmly convinced that we will be able to fulfill these expectations with the MOBOTIX cameras. The system can be easily extended to meet future requirements.”



MOBOTIX Technology – Cost Savings in Every Aspect

High Resolution For Sharp Images

All MOBOTIX cameras are high-resolution cameras with integrated image storage and 960 lines (1280x960 pixels) resolution. The **stored image** thus contains 12 time more detail for creating zoomed sections of the image than regular cameras with 240 or 288 lines (CIF, 2CIF). This is why one single MOBOTIX camera with a 90° wide-angle lens is sufficient to monitor an entire room and yet provides more detailed images than traditional technology. The MOBOTIX Day/Night cameras feature zero maintenance with one color and one B/W image sensor.

Intelligent Storage Technology Uses Fewer DVRs

The new, decentralized storage technology pioneered by MOBOTIX reduces the number of recorders that store the smooth high-resolution video by up to 90%. 40 cameras store smooth video streams including audio on a single PC, each managing its own ring buffer and database. Intelligent search features provide swift access to the stored events. There is no software required for storing and managing video, eliminating license fees and the need for expensive software. Event-controlled recording and automatic increase of frame rates upon detecting movements drastically reduce the storage requirements.

Low Power Consumption Means Enormous Savings

Since MOBOTIX cameras are anti-fogging, do not require heating and only use 3 Watts each, power can be injected into the network cabling using standard PoE products, year round. This drastically reduces the amount of cables and the power requirements for backup power.

Integrated Telephone Features

All MOBOTIX IT and Secure models feature bidirectional audio support. The built-in microphone and loudspeaker are used for live audio transmissions and storage purposes. Voice messages with PIN confirmation and call forwarding via IP or ISDN telephony have been integrated as well. Using the switch outputs, you can switch lights or open doors from the phone or from the computer.

Robust and Well-Protected

The fiberglass-reinforced housing is shockproof and the SecureFlex mount protects the network cabling as it completely conceals the cables (M12/D12 models). Weatherproof (IP65) from -30° to +60°C (-22° to +140°F).

High Return on Investment

Since the number of cameras and storage capacity are freely scalable and any kind of data connection can be used (ISDN, DSL, Ethernet, Wireless, GSM, copper, optical), MOBOTIX means high ROI, even years after installing.

State-Of-The-Art Technology

Developed and manufactured in Kaiserslautern, Germany, MOBOTIX produces image-storing weatherproof high-resolution cameras, including lens and wall/ceiling mount for as little as 598 EUR excl. VAT. To date, more than 100,000 cameras have been sold worldwide.



Download **MxViewer** alarm management software free of charge. 30 cameras with 30 fps each, layout editor, remote alert notification

MOBOTIX AG
 Security Vision Systems
 Luxemburger Straße 6
 D-67657 Kaiserslautern
 Tel.: +49 (631) 3033-103
 Fax: +49 (631) 3033-190
 E-Mail: sales@mobotix.com
 www.mobotix.com

