

Westfälische Ver- und
Entsorgungs-GmbH
(Water and Waste Management
Facility)



... the new face of IP Video

MOBOTIX

C A S E S T U D Y

Network Video – New Advantages for Communities

Low Costs Long-Term

What can communities do to avoid increasing costs of public services? As most communities are struggling to maintain balanced budgets, this is not an easy question to answer. And yet, there are promising concepts and solutions. Consider the WVE (Westfälische

Ver- und Entsorgungs-GmbH) that has been founded in the Kaiserslautern area in 1994 as a public services company. The

WVE provides fresh water, sewage treatment and zoning/development services for the communities in the area. The communities, in turn, are able to efficiently outsource expensive tasks.

“Our efforts are based on economic and entrepreneurial thinking”, is a quote from the mission statement of the WVE, a subsidiary of the Kaiserslautern technical services company TWK (Technische Werke Kaiserslautern AG) in Germany. As a result, other communities benefit

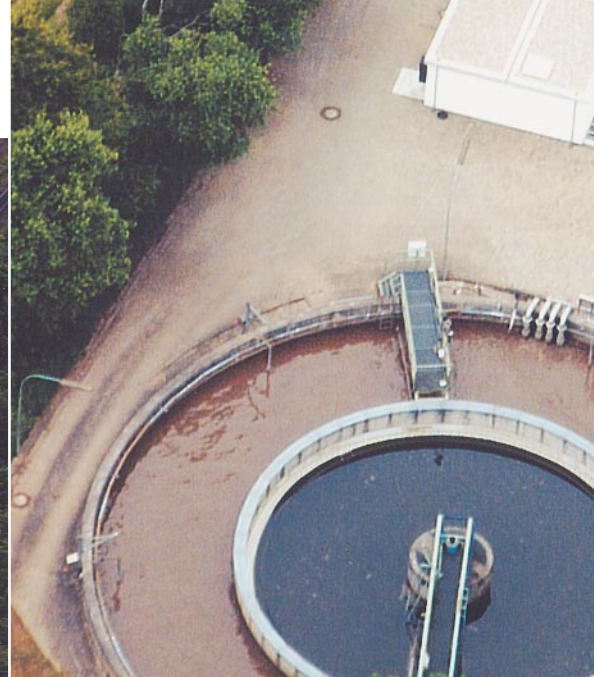
from market-oriented pricing, high quality, efficiency and flexibility. As these communities and cities pay only for services that they actually use, they can minimize their HR-related and other fixed costs.

Example: Sewage Plant

The WVE is able to provide all required services regarding the sewage plant operation at short notice. For tasks like these, the WVE uses its own employees, its special equipment and equipment of other communities. In the process, the WVE cooperates closely with the Kaiserslautern city waterworks and the TWK.

These WVE services are particularly attractive for the small surrounding towns and communities that have a strong interest in reducing their costs. One of these small towns is Hochspeyer – about 7 miles east of Kaiserslautern – with its approximately 7,000 inhabitants.





The final clarifier to be monitored at the Hochspeyer sewage plant.

Remote Monitoring at Its Best

Always on the Ready

The three sewage plants of the Hochspeyer community are located in Hochspeyer, Frankenstein and Waldleiningen. Three WVE employees operate and maintain all three plants locally. Since an on-site 24/7 presence would be too costly, an electronic monitoring system reports possible malfunctions occurring after work hours to the permanently manned control center at the Kaiserslautern central sewage plant. Here, the necessary measures are taken. Because the government requires the installation be checked once a day, the WVE employees have to perform these on-site checks even during the weekends.

Weekend Problems

WVE wastewater manager Michael Theis describes the situation as follows, "these weekend shifts cause our work plans to be quite complicated and are also creating extra costs for the community, as an on-site check at all three locations amounts to around 250 EUR. Additionally, driving to the individual locations on ice and snow in the winter time can be quite dangerous – just to check the sewage plant for 15 to 30 minutes. This prompted us to look for an alternative", Michael Theis adds.

A Network Camera Is the Key

Dieter Burkey, electrician manager with the Kaiserslautern city waterworks states, "at about the same time, we were testing a Mobotix network camera for monitoring the security of our central sewage plant." Michael Theis adds, "next, we started wondering if this camera could solve our weekend problem as well." Indeed, it could. Not only is this reliable and weather-proof camera equipped with a large number of required features, but it is also easily operated using a standard Internet browser. In close cooperation, Mobotix and the WVE have developed some additional features that were necessary for operating at the sewage plant. "The result is a customized solution that completely meets our requirements," concludes Michael Theis.

24/7 Surveillance

With minimum effort, the camera has been installed at the Hochspeyer final clarifier for a pilot project. From there, it sends a tele and a wide-angle image twice a day via ISDN to a server. In the control center at the Kaiserslautern central sewage plant 7 miles away, the operator on duty compares the current live images to the stored images of the target situation. If the images



In the control center at the Kaiserslautern central sewage plant, the live images are compared to stored images of the target situation.

Actual Situation



Target Situation



show signs of abnormal operation, the operator on duty immediately informs the emergency crew.

Secure Operation

A second Mobotix camera installed at the main entrance reports any cases of unauthorized access. On weekends, this camera is switched to event control. Once it detects unusual movement in the image window, the camera immediately sends an alarm email to the control center. As an alternative, the control center could also be notified through an automatic, PIN-protected phone call. If desired, the live images can be viewed from the control center at any time to check the plant's current status. Also, a process control system provides for regular measurements of the PH value. Thus, regular checks are now

implemented remotely, resulting in even more secure sewage plant operation.

An Investment Worthwhile

Thanks to the introduction of camera remote monitoring at the Hochspeyer facility, the expensive weekend shifts are history and the use of on-site manpower has been optimized. Soon the two other locations will also be equipped with Mobotix cameras. "The Mobotix camera comes with all required features," Dieter Burkey summarizes. "A very reliable, high-quality support and a reasonable price for what you get – we are very satisfied with the entire package," he adds. Michael Theis sees another service feature in the cameras. "Other sewage plants can use this inexpensive remote control service as well," he points out. "We can provide the entire range of services – from planning and starting the official approval process via installing and maintaining the cameras to 24/7 monitoring. And this means less problems for the communities," Michael Theis concludes.





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.



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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

