

## Transmission of customer satisfaction.

EDP stands out in the Brazilian electricity sector by combining cameras, radars, speakers, and video intercoms, in a project that has improved its operations.



### Organization:

EDP Brasil

### Location:

Espírito Santo and  
São Paulo, Brazil

### Industry segment:

Critical infrastructure

### Application:

Safety and security, access  
control, audio

### Axis partners:

Digifort, M3 Tecnologia,  
SS Brasil, WDC Networks

### Mission

EDP Energias de Portugal is an energy-sector multinational with a presence in 19 countries. It has more than 20 years of experience in Brazil and is one of the largest private companies in the country's electricity sector. It transmits, sells, and distributes power to approximately 3.4 million customers in the states of São Paulo and Espírito Santo. It has dozens of substations, service units, and offices. One of the main challenges at the substations was break-ins and cable theft. This is a potentially fatal risk for the criminals and can cause power outages to customers, as well as a drop in EDP's evaluations from the regulatory agency and damage to the company's image.

### Solution

EDP's own technical team developed a project to prevent break-ins and thefts using cutting-edge technology. The solution includes Axis cameras, audio systems, access control and radar, as well as Digifort's VMS. EDP used the services of two integrators: M3 Tecnologia in São Paulo and SS Brasil in Espírito Santo.

The substations combined AXIS Q6074-E PTZ cameras with AXIS P1435-LE and AXIS M3115-LVE fixed cameras. The cameras are linked to AXIS D2050-VE Network Radar Detector to detect intruders and with AXIS C1310-E Network Horn Speakers to broadcast deterrence messages. In other locations, access is controlled using AXIS A8105-E and AXIS A8004-VE Network Video Door Stations, which are connected to AXIS A1601 Network Door Controllers.

### Result

The system allowed EDP Brasil to reduce substation break-ins by 95%, and to save lives by preventing fatal accidents. Video intercoms have reduced the number of employees needed. More recently, EDP was honored as the most innovative company in Brazil in the Electricity category<sup>1</sup>. Thanks to improvements in the continuity of services, EDP Espírito Santo won the 21<sup>st</sup> Modern Consumer Award for Excellence in Customer Service in the Electricity segment<sup>2</sup>.



## Collective impact

One of the strategies that the EDP security team used in securing approval for this innovative project with internally standardized technologies was to explain the relevance of security to other areas. "A good security system can provide services for the entire company," explains Erika Zanete, security manager at EDP Energias do Brasil. "Whether that means solving a simple problem or something more complex, everything goes through the operator, who can call the specific department to take care of each situation."

The images that the cameras capture are monitored at two EDP Integrated Security Centers. These two centers control everything that happens at the substations, offices, and service distribution centers. All images are managed using Digifort 7.2 software. The system generates alerts that allow the necessary actions to be taken to protect the company's assets.

"We've used Digifort at the company's facilities for many years, and it has worked really well for us. The software has been improved over time and is now quite comprehensive. It meets our management needs very well," Erika said.

The Axis cameras integrated with the VMS exceeded expectations in terms of image quality, low bandwidth consumption for images, and reduced storage needs.

"At some substations we installed the Axis speed dome on a telecommunication tower and managed to monitor neighborhood streets, and even use the zoom to identify license plates," Erika added.

### Loud and clear

One of the highlights of the project was the integration of cameras. When the radar detects someone approaching who shouldn't be there, a pop-up appears on the operator's screen. Meanwhile, the PTZ camera is automatically directed to the location of the incident.

The IP speaker is then activated to send a message that is loud and clear, without sounding like a robot. In most cases, this is enough to prevent the break-in.

If the intruder proceeds and penetrates the perimeter, a new message from the AXIS C1310-E loudspeaker lets them know that the authorities have been called, which in many cases prevents further damage. If necessary, the operator can also use the 2N SIP Mic desktop microphone to speak with the intruder in real time.

"The Axis loudspeaker is, without a doubt, the biggest game-changer in this project. Installing it inside the units had produced incredible results, and we are very satisfied with its performance. The way this system is used has shown us a new way to discourage break-ins and had made it clear that we're on the right path to ensure the security of our assets," she said.

### CAPEX versus OPEX

Another relevant aspect in securing internal approval for the project was its investment in technologies that led to a reduction of operating expenses. The access control system, for example, which is used in several locations within the company, allowed remote access management using the AXIS A8105-E and AXIS A8004-VE video intercoms.



<sup>1</sup> 6th edition of the Valor Brazil Innovation Award, organized by PwC in conjunction with the newspaper Valor Econômico.

<sup>2</sup> Conducted by Consumidor Moderno magazine, in partnership with the Centro de Inteligência.



"Installing the video intercoms in several units was a double victory. First through the reduction of staffing needs, and second, the monitoring itself, using images generated by the video intercoms, thanks to the range and angles that this equipment can provide. The images are so sharp that the Security Center can identify both the visitor and the people with them inside the vehicle. This equipment has greatly reduced our project costs," she explained.

### Expansion

The professionals involved said their work relationship with EDP gets stronger every day. Mauricio Thome and Jonas Rocha, integrators of M3 Tecnologia in São Paulo, said that "Thanks to EDP's technological vision, we were able to create strongly preventive and future-proof solutions, using the best equipment available on the market, integrated in a way that considers the new rules of the General Data Protection Law and is prepared to guarantee cybersecurity at the company's facilities. The Axis equipment low bandwidth and storage needs, along with its robustness, makes it ideal for installation in critical environments such as electrical substations."

Edson Alves, from the integrator SS Brasil, also recognized the importance of a long-term partnership with manufacturers. "This relationship involves a great deal of working together; our team works in a way that aligns with the Axis engineering and sales teams, analyzing and understanding EDP's demands and needs. In addition, we aim to make sure our team constantly undergoes training and gets certifications for new products, generating added value in the solutions we provide to EDP," he said.

This partnership allows greater agility in project execution. Wesley Lima, Senior Infrastructure Analyst at EDP in Espírito Santo, explained that, despite similarities between projects, there are always differences due to the size of the area covered and the characteristics of different types of terrain. As a result, the partners' expertise is a key factor in supporting EDP's plans. "In 2020 alone, we completed three new substations. In addition to that, another two are under construction, and two other areas are in the process of being contracted," he added.

**"It is essential that the security system equipment undergoes proof of concept in order to assess its operation in practice."**

**Erika Zanete, Security Manager at EDP Brasil.**



# About Axis Communications

Axis enables a smarter and safer world by creating network solutions that provide insights for improving security and new ways of doing business. As the industry leader in network video, Axis offers products and services for video surveillance and analytics, access control, and audio systems. Axis has more than 3,500 dedicated employees in over 50 countries and collaborates with partners worldwide to deliver customer solutions. Axis was founded in 1984 and has its headquarters in Lund, Sweden.

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