

# Shopping malls.

Case study book.



**“ Our priority was to install a high quality, reliable system using technologies proven in large-scale developments. We picked Axis due to the quality of its products and solutions, because it’s one of the world’s leading camera manufacturers and its equipment offers a good cost benefit ratio. ”**

Francisco Bacelar, engineer responsible for the construction of the development and director of the Real Estate Division at the JCPM Group.

# Face recognition and people counting boost customer service and profitability.

More effective marketing, tailored campaigns and optimized staff levels are among benefits gained by Rajalla På Gränsen shopping centre and retailers.



**Organization:**  
Rajalla På Gränsen  
shopping centre

**Location:**  
Tornio, Finland

**Industry segment:**  
Retail

**Application:**  
Safety and security, smart  
analysis, people counting  
and face recognition

**Axis partner:**  
Valfi

## Mission

With a footfall of several million people each year, Rajalla På Gränsen is one of the largest shopping centres in northern Finland. The centre wanted to acquire accurate data on visitor numbers and demographics, as well as offer shopping opportunities in a safe and secure environment. Rajalla På Gränsen wished to provide a better experience to its customers while optimizing store and security staffing. In addition, individual stores wanted statistics that help them tailor their marketing and merchandise according to customer needs.

## Solution

Rajalla På Gränsen chose AXIS M3006-V Network Cameras and AXIS People Counter software to count people at the shopping centre entrances. The cameras and software were installed by Axis partner Valfi. Inside the shopping centre, Valfi installed AXIS M1125 Network Cameras and Valfi software for face recognition and customer profile analysis.

## Result

The new system provides reliable information about visitor numbers. Rajalla På Gränsen also gets statistics about the time of day people visit the shopping centre as well as their customer profile (demographic data, such as gender and age) and even about their facial expressions and the emotions they reflect. The shopping centre has used this data to improve its customer service and optimize its store and security staff planning to deliver the best possible shopping experience to visitors. Retailers can now create more effective advertising campaigns.

**“We are very satisfied. We have gained new opportunities for creating more effective advertising campaigns that better reach our target groups and can provide more tailored offers, while retailers can better optimize their staffing according to footfall.”**

Jukka Korpimäki, Shopping Centre Director, Rajalla På Gränsen.

## Reliable solution for people counting and face recognition

Rajalla På Gränsen is one of the largest shopping centres in Northern Finland. Located in the city of Tornio in Lapland, it is near the Swedish border. The shopping centre boasts more than 40 stores from home decoration and fashion to sports and leisure and offers a variety of other services, such as cafés, restaurants and a cinema. Footfall at the shopping centre reaches several million each year.

Rajalla På Gränsen wanted to acquire accurate statistical and demographic data about the gender, age and facial expressions of visitors to further improve customer service and shopping experience. Stores, cafés and restaurants wanted to optimize their staff planning according to peak visitor times. They also wanted to create more tailored advertising campaigns for target groups and provide special offers to visitors based on their age and gender. The solution had to be easy to use, manage and maintain remotely.

The previous system used by Rajalla På Gränsen only calculated visitor numbers and wasn't very reliable. One person who had large shopping bags or a shopping cart was sometimes counted as several people. Or, if several people used an entrance at the same time, they were sometimes counted as just one person.

## Reliable solution

The solution installed by Axis partner Valfi consists of eight AXIS M3006-V Network Cameras and AXIS People Counter software to count everyone who uses the entrances to the shopping centre. The wide-angle view of AXIS M3006-V provides a good view of the shopping centre premises. The network camera has a vandal-resistant design, it supports HDTV and is easy to install, manage and maintain.

AXIS M1125 Network Cameras were installed on the interior walls, with Valfi's face recognition software to identify visitors' gender, age and facial expressions.

AXIS M1125 cameras were mounted at the height of 160 cm to allow for easy zooming and image capture of visitors of all sizes. The cameras support HDTV and Wide Dynamic Range, which captures sharp images even from scenes with strong variations in light.

“We chose Axis network cameras, because of their high image quality, robust and reliable design and easy installation and integration to existing security and IT systems. Axis also has excellent customer support,” says Valtteri Kujala, Managing Director, Valfi.

The statistics and analysis solution is entirely cloud-based. Rajalla På Gränsen can access data and images in real time for analysis, but they are not stored.

## Tailored campaigns and safer shopping

Rajalla På Gränsen now has a reliable solution that provides accurate statistics about footfall and demographics.

“We are very satisfied. We have gained new opportunities for creating more effective advertising campaigns that better reach our target groups and can provide more tailored offers, while retailers can better optimize their staffing according to footfall,” says Jukka Korpimäki, Shopping Centre Director, Rajalla På Gränsen.

With the solution, retailers can also analyse their conversion rate, which measures the share of visitors who make a purchase, which also helps improve profitability.

Valtteri Kujala estimates that a store using this kind of solution could boost its profitability by as much as 20 to 30 per cent.

Rajalla På Gränsen is the first shopping centre in Finland to implement a solution that combines facial recognition with people counting. Several other shopping centres have signalled their interest in this unique solution.



SHOPPING CENTRE  
RAJALLA PÅ GRÄNSEN

Valfi

## Respond to tenants need by effective use of IP-based operating system.

Galeria Katowicka shopping mall implements the largest customer counting system in Poland.



### Organization:

Neinver (Galeria Katowicka)

### Location:

Katowice, Poland

### Industry segment:

Retail

### Application:

Loss prevention, safety and security, merchandising and operations

### Axis partner:

TOP-KEY

### Mission

Polish Galeria Katowicka Shopping Mall opened in 2013. Situated in the heart of the Katowice city, the site comprises a shopping center, a railway station and an underground bus terminal. The 52,000-square metre mall houses nearly 250 shops and service outlets, a multiplex cinema and an underground car park with 1,200 parking spaces. Neinver, a company managing the mall, was looking for a solution that would enable the counting of customers not just at each entrance to the site but also in individual stores inside the mall.

### Solution

The client chose a solution from TOP-KEY, a company whose market experience and many years of cooperation with the main investor of Galeria Katowicka has proven its competence and ability to implement challenging customised solutions. IP cameras from Axis Communications with embedded software from TOP-KEY, which offers uninterrupted data collection even during a connection failure with a server, was chosen to be used as counting devices.

### Result

The proposed and implemented innovative solutions from TOP-KEY, along with the installation of cameras in every commercial unit rented out in Galeria Katowicka, have resulted in the largest customer counting system in Poland and one of the largest counting systems in this part of Europe. The decision to have cameras in each retail store was dictated by the need for simple and effective conversion rate monitoring. It is now possible to bring marketing actions closer to the current needs of the tenants as well as anticipate their needs and react to problems.

**“Our cooperation with TOP-KEY has been very good. The work went according to schedule and the mall’s normal operation was never interrupted. Since it was introduced the counting system has been expanded, and it is monitored by TOP-KEY. The data from the system make the everyday management of the mall easier.”**

**Śławomir Madlewski, Facility Manager at Galeria Katowicka.**

### **Kilometers of cables and hundreds of cameras**

The size of the mall and the number of entrances were just some of the challenges that TOP KEY had to face as the solution was being implemented. Around thirty kilometres of structure cabling was routed, an optical fiber network laid and patch panel cabinets put in to enable the implementation of such a complex system. With the system being equipped with self-verification procedures and measures related to the functioning of all the system components, the counting is done with maximum efficiency and accuracy. This makes maintenance and repairs very quick.

### **Difficult challenges and ground-breaking solutions**

The mall’s unusual main entrance – very wide and semi-circular – was another test for the system. As many as ten cameras had to be installed with synchronized video transmitted between them to avoid counting the same person more than once.

The coming challenge will be integrating the customer counting system and the parking system that supports 1,200 parking spaces. The integration will enable transparent and uniform reporting from both systems, facilitating the manager’s work and making the correlation of data more fluent. The implementation of number plates recognition system is planned in the future.

Both the software and hardware of the existing system are already being expanded; new cameras are regularly added for thorough surveillance of all the areas of the mall and delivery of essential information. All these actions lead to increased efficiency in the activities taken by the mall’s management.



## Mixed spaces, different answers.

The Hayuelos shopping center redesigned its entire video surveillance system using 15 different camera models—one for each need—as it prepared to celebrate 10 years of operation.



**Organization:**  
Hayuelos Shopping and Business Center

**Location:**  
Bogotá, Colombia

**Industry segment:**  
Retail

**Application:**  
Safety and security

**Axis partners:**  
G4S, Milestone

### Mission

With its mixture of stores and offices, the Hayuelos Shopping and Business Center has become one of the main shopping and business hubs in the Colombian capital. Its concept also integrates public spaces and four conference and event halls. It has a movie theater, a supermarket, go-kart track, and almost 2,000 parking spaces. However, the analog video surveillance system installed at its opening was not capable of responding to its growing needs, nor did it meet the security and control challenges that arise each day at this establishment, which receives more than 1 million visitors on average per month.

### Solution

G4S, an Axis partner, was the integrator selected to design and implement the project. After the demo stage, with support from different brands, it was decided to implement a complete solution consisting of 166 Axis cameras, representing 15 different models. The variety of models reflects the specific needs of each space within the 120,000 square meter shopping center.

The most vulnerable areas in this mixed space were prioritized: for example, access doors (AXIS P1428-E Network Cameras, bullet models with 4K resolution offering a high level of image detail of people entering the mall) and parking areas (equipped with AXIS P1425-LE, with integrated infrared). The cameras are connected to the Milestone XProtect® VMS software for image viewing and recording.

### Result

Many aspects of this project translate into savings. Each of the panoramic cameras installed in the parking lot, for example, replaced four conventional cameras (and thus four times less wiring, installation costs, and even software licenses). Additionally, the implementation did not create a major impact in terms of construction work: all camera models are PoE, which was facilitated by using the existing wiring. This IP feature resulted in cost savings and a minimal impact on the facilities.

**“The technologies that are being implemented nowadays throughout the world made us want to migrate to Axis, so we could enjoy the best developments in terms of video analysis, IP communication, and image quality.”**

**Nelson Bueno, Operations Manager of the Hayuelos Shopping and Business Center.**

### Demos for the selection of models

With its 292 stores and 101 offices, ever since Hayuelos opened its doors it has been considered one of the busiest shopping centers in the entire country. However, over the years its analog video surveillance system had become obsolete. Its equipment was no longer under warranty, and its monitoring system did not allow images to be viewed in detail.

G4S Colombia was selected as the integrator, a company with 14 main offices and 25 branch offices in Colombia and a noteworthy history in the security industry. This company has also been a strategic ally in electronic security for the shopping center since its opening.

“Our customer was very clear that they wanted the best on the market, with equipment that would provide excellent support. That’s why, after the testing and design stage, both the customer and we agreed to use Axis cameras for the entire project,” said Jenny Rubio, a specialist in business automation development at G4S Colombia. Therefore, during the demo stage a large number of Axis camera were used as references, with the goal of finding the ideal model for each specific space in the facilities.

One of the most innovative aspects of the project was the use of cameras with 4K resolution at the entrance doors to the shopping center. The model chosen was AXIS P1428-E. “We realized that for a price very similar to that of traditional cameras, we could get 4K resolution to allow optimal recognition at each of the access doors, with an excellent level of detail and sharpness,” emphasized Nelson Bueno, Operations Manager for the Hayuelos Shopping and Business Center.

### 4 to 1 savings

It has been possible to detect situations such as the massing of large groups, that previously were not easy to capture evidence of on camera.

Additionally, it has been possible to increase the apprehension of people who commit thefts; this has led to the development of routine procedures for the cameras that offer optical zoom and panning, allowing previously vulnerable areas to be monitored.

The technology used in the NVT PoIRE equipment allowed the existing wiring to be reused, further optimizing the resources that entailed the greatest impact and cost. Replacing infrastructure means major construction work in order to replace wiring; this has an impact on time, costs, and above all affects the operation of the shopping center itself.

In contrast, using models such as AXIS Q6000-E Mk II, with its full 360 degree view, made it possible to reduce the number of cameras installed in the parking areas, whose numerous walls and columns present a challenge to overcome. “Each unit in this line allowed us to replace four conventional cameras, which resulted in four times less wiring, installation costs, and even licenses, all without skimping on any of our customer’s monitoring needs,” emphasizes engineer Jenny Rubio.

The 4 to 1 savings could also be seen with AXIS M3007-P and AXIS M3007-PV mini dome cameras, whose 360 panoramic view is used to monitor various areas. The entire field system is complemented by the Pro version of the Milestone VMS recording system, which is used to handle video management of the shopping center and allows video storage for up to 22 days, with 40 TB of disk storage in RAID 5 arrays.

Thanks to the possibilities offered by the equipment and cameras, another stage is planned in order to implement video analytics such as face recognition and people counting.





## Axis cameras in integrated system for shopping mall security and marketing.

Surveillance system based on Axis cameras counts the customers visiting Factory Annapol Shopping Center.

**Organization:**

Neinver (Factory Annapol Shopping Center)

**Location:**

Warsaw, Poland

**Industry segment:**

Retail

**Application:**

Loss prevention, people counting, safety and security

**Axis partner:**

TOP-KEY

**Mission**

The new Factory Annapol Shopping Center was intended to stand out as modern in every respect. The investor, Spanish company Neinver, insisted that the technological solutions used provide information that would facilitate the management of the shopping center. A surveillance system, customer and vehicle counting systems and a customer satisfaction measurement system were integrated in order to gather data with maximum accuracy and to provide unlimited possibilities of creating analytical queries.

**Solution**

TOP-KEY has installed the integrated customer and vehicle counting systems based on cameras from Axis Communications. The devices offer outstanding image quality and real time view, which translates into the highest thoroughness of data collection. The vehicle counting system is based on induction loops routed below the road surface. In 2014 the two systems were enriched with a customer satisfaction measurement module. All the data gathered are stored in a single platform, common to all Factory shopping centers.

**Result**

The integrated customer and vehicle counting systems compatible with the customer satisfaction measurement system enable proper security and frequency of visits checks. The continuous data streaming from the cameras and sensors help the managers to take the right management and marketing decisions.

**“The solutions offered by TOP-KEY need no improvements. Once the detailed engineering design had been agreed, we were informed about the system’s readiness to work and asked to set the date for users training.”**

**Mariusz Melerski, Site Facility Manager, Neinver.**

### **Technology in support of the shopping center management**

10 years after the first Factory shopping center Ursus was opened in Poland, Neinver took the decision to build the fifth center in the country and the second one in Warsaw under the flag of Factory. Situated in a Warsaw suburb of Annapol this modern, 19,700m<sup>2</sup> site offers over 100 brand names. It has been estimated that the new shopping center is reachable for around 3 million people. From the beginning it was assumed that the building would be innovative not only in terms of architecture and functionalities but also through the technological solutions used that were to provide management facilitating information.

The manager of the shopping center needed integrated counting systems capable of, among other things, interoperability with other systems that would be put in the building and offering unlimited possibilities to create queries about the data collected with maximum accuracy and safety of the gathering process.

### **An additional marketing tool**

The monitoring system has been installed to count the visitors to Factory Annapol shopping center, count the vehicles in the parking lot and measure customer satisfaction. TOP-KEY had fitted the integrated counting systems that were later complemented with information delivered by the customer satisfaction measurement system. Network cameras from Axis Communications – the world leader in network video – are the backbone of the system. What they are supposed to do is, among other things, precisely count the visitors to the shopping center. The cameras deliver superior image quality and real time view, thanks to which the data collected are extremely accurate.

The vehicle counting system is, on the other hand, based on induction loops laid below the road surface and thus invisible to the customers, which significantly reduces the possibility of their getting damaged. The existing systems were expanded in 2014 as a tool for measuring customer satisfaction was added based on simple and intuitive customer surveys carried out with the use of widely available tablets. The shopping center staff are not involved in the questioning and the customers respond to questions only if they are willing to.

### **All data in one place**

The TOP-KEY platform based on the camera system from Axis Communications enables data import and export, data recording and archiving as well as generating various reports, while the interoperability of the systems in a single and flexible report interface makes efficient supervision and remote management possible. The systems described above keep the shopping centre manager informed about the foot traffic and the level of customer satisfaction. They are also the perfect tool facilitating the planning and measuring of the efficiency of both marketing actions and activities that raise the quality of service.

Data from all Neinver shopping centres are automatically sent to a single central server. This makes it possible to generate all sorts of comparative reports along with being an invaluable instrument facilitating the management of all the Factory shopping centers. Data analysis over time enables an immediate reaction to the changes in customer preferences. Staff at the shopping centers stays in touch with the TOP-KEY service department whose workers actively support the process of the system development and use.

Thanks to the integration of the systems the manager of the shopping center can make sure the place is safe and can continuously check the level of customer satisfaction and the efficiency of marketing actions.



# Waasland Shopping Center: carefree shopping supported by Axis network cameras.

A safe shopping experience is worth its weight in gold.

**Organization:**

Waasland Shopping Center

**Location:**

Sint-Niklaas, Belgium

**Industry segment:**

Retail

**Application:**

Safety and security, remote surveillance, license plate recognition

**Axis partner:**

ESSC

**Mission**

For over fifteen years, Waasland Shopping Center has been a big name in the retail landscape. When the renovated shopping center opened its doors in 2004, the security system for the complex consisted of 60 analogue cameras which were monitored by means of four overview screens and one main screen. Due to the unavailability of spare parts over time, more and more devices broke down. This led to an increasing number of blind spots, prompting the decision to overhaul the security system and modernize it thoroughly.

**Solution**

Working in close consultation with integrator ESSC, various options were explored, comparing camera types as well as providers. Choosing Axis was a future-driven choice: the open software guaranteed a swift implementation of any future solutions. In addition, the name and reputation that Axis has earned over the years, as well as its focus on cybersecurity, inspire a great deal of confidence.

**Result**

The implementation of the Axis network cameras provided comprehensive camera surveillance which is easy to integrate into the overall security policy. The options offered by the new system ensured that the ties to the local police force could be reinforced and that this collaboration would pay off immediately.

**“We carefully considered several brands, but in the end we opted to go with Axis. It is a reliable, global player with an excellent name and reputation, and they work with open software; that inspires confidence.”**

Toon De Meester, Shopping Center Manager.

### Breath of fresh air

“A while back, we noticed that it was time to update our camera installation,” Toon De Meester (Shopping Center Manager) starts his story. The existing security system had been installed when the original ‘Koopcentrum’ mall was transformed into the shopping center, currently known all over the country as the ‘Waesland Shopping Center’.

At that time, the analog surveillance era was already well into its final days. “We were aware that our previous system was already suffering from blind spots, locations that were difficult or impossible to monitor,” De Meester says. “As more and more analog cameras broke down over time, it became clear that it was time to find a new solution.”

The shopping center looked for solutions by issuing a call for tenders, which led to ESSC as the preferred integrator. “One of our top priorities was the implementation of a License Plate Recognition system or LPR,” De Meester says. “We had wanted to get a better grip on traffic flow in our parking lots for quite some time already. ESSC clearly recognized our needs and came up with concrete solutions. It immediately illustrated their most important added value: excellent advice.”

### Phased transition

For the switch to the new system, Waesland Shopping Center decided on a risky strategy: they chose to make the switch during the end-of-year hustle and bustle. The analog system was retained during a transitional period, as a redundant back-up system. “But we never ended up needing it,” De Meester says. “We divided our available screens between the two systems. Two weeks in, we made the decision to switch completely to the new system, partly because our staff were very satisfied about the increase in efficiency and the improved user convenience.”

To facilitate the transition, ESSC also offered a training session. “Using the Axis system makes us much more capable of tracking any perpetrators, from the moment the crime is committed all the way to their vehicle.”

### Future prospects

“As a shopping center, we have to deal with the changing reality on a day-to-day basis,” De Meester believes. “New laws and regulations, geopolitical changes (such as the increasing threat of hackers), which is why we need to continue investing in technology as well as in our people, for instance by means of training courses. Choosing Axis network cameras is perfectly in line with that strategy.” The implementation of the security system allows Waesland Shopping Center to add not just additional cameras, but also other forms of security. For instance, they can now incorporate additional software which provides new options for the cameras, or other systems such as radar detection and a more advanced integration with alarm systems.

“The open software used by Axis, offers us prospects for the future,” De Meester says. “As an example to illustrate that: our collaboration with local police departments has currently increased both in quantity and quality. We learn from each other and can provide help where necessary. With our old system, that was impossible.”



## Gaining a purchase on crime with Axis.

Stratford Square Mall helps local police catch after-hours vandals with Axis HDTV-quality network cameras.



**Organization:**  
Stratford Square Mall

**Location:**  
Bloomington, IL, USA

**Industry segment:**  
Retail

**Application:**  
Loss prevention, safety and security

**Axis partners:**  
Premier Technology Solutions, Milestone Systems

### Mission

When new owners bought the busy 1.3 million square foot Stratford Square Mall, one of their top priorities was to install surveillance cameras in the common areas and parking lot to ensure the shopping complex maintained its family-friendly atmosphere. StreetMAC Asset Management Company sought a network-based HDTV-quality solution that would be easy-to-use and shareable with the Bloomington, IL Police Department to help apprehend criminals, find lost children and quickly resolve safety issues such as alleged slip-and-falls.

### Solution

The management company hired Premier Technology Solutions, a Mokena, IL-based IT services company and Axis partner, to design and install a surveillance system that included a fiber optics infrastructure and nearly two dozen high-definition Axis network cameras monitored 24/7 from the mall's security command center using a Milestone video management system.

Because the solution is network-based, it enables mall management to give local law enforcement access to live camera feeds and archived video.

### Result

Since the video maintains HDTV-quality, even when zooming in for close-ups, Stratford Square has been able to provide evidentiary detail that assists the Bloomington PD in quickly apprehending suspects. Even though the five anchor stores and many of the smaller retail shops have their own surveillance systems, these establishments often rely on the higher clarity of the Axis cameras to help identify individuals-of-interest once they exit their premises.

**“The zoom capability of the Axis cameras is great. We can quickly pick out a face, get a clear image of a logo or a tattoo without any pixilation and push those details out to the local police department.”**

John Kelsey, Assistant Security Director for Stratford Square Mall.

### Bringing mall security into the IP age

Stratford Square Mall in the western suburbs of Chicago consists of 160 retail shops, more than a dozen food vendors, a multiplex theater, a bowling alley and more. The family-friendly destination attracts an estimated 12 million patrons a year.

When new owners bought the property in 2013, they decided to expand mall security by augmenting foot patrols with 24/7 video surveillance technology throughout the common areas and parking lot.

StreetMAC, the property management company, hired Premier Technology Solutions to design the solution from the ground up with a brand-new fiber optic backbone. Power over Ethernet switches gave the installation team the flexibility to deploy cameras wherever they were needed to in order to provide maximum visibility. It also meant that cameras could be easily added or redeployed as the mall layout changed.

Additionally, “being a network-based solution meant we could give the local Bloomington Police Department direct access to our cameras through a secure web portal,” said Doug Kiehn, General Manager of the Stratford Square Mall. Law enforcement is not only able to monitor live footage, but can also push video to the smartphones of officers responding to an incident.

### A camera for all seasons

Premier Technology Solutions recommended HDTV-quality Axis network cameras because their broad portfolio of features could accommodate a wide range of environmental conditions.

They chose AXIS Q6045-E PTZ Dome Network Cameras to monitor the loading docks and the employee parking area. The weatherproof pan/tilt/zoom cameras deliver HDTV 1080p resolution with superb 20x optical zoom that allow security to read a vehicle’s license plate some 900 feet away.

They chose wide-angle AXIS P3364-V Fixed Dome Network Cameras for the seasonal area where children visit Santa and the Easter bunny. Because the cameras provide a 105o field of view, security can monitor both the immediate vicinity and the hallways leading to this high-traffic area. Equipped with Lightfinder the cameras deliver sharp, HDTV resolution and full color fidelity even when the mall is dimly lit after hours.

The ultra-discrete AXIS M3014 Fixed Dome Network Cameras mounted into the dropped ceilings keep an eye on the smaller, enclosed areas such as the administrative offices, hallways and entryways into the mall. The AXIS P5534 PTZ Dome Network Cameras cover the entryways into the mall. Using the cameras’ powerful optical and digital zooms with autofocus and 360° pan, security is able to continuously follow an individual or an object as it travels through the mall.

### Tracking after-hours mischief

Stores and kiosks are particularly vulnerable to theft and vandalism at night because the movie theater continues to draw patrons to the mall after retail hours. John Kelsey, Assistant Security Director for the mall, recalled how shortly after the cameras were installed they caught two juveniles smashing the glass on a vending machine. “The cameras actually caught them in the act,” said Kelsey. “When the police responded, I was able to provide them with a whole folder of pictures, including close-ups of the offenders, and a CD of the footage with time stamps.” According to Kelsey, the forensic quality of the images was so sharp that the police were able to apprehend the two youths and charge them shortly afterwards.

“There have been other occasions when an incident has occurred inside a store and our cameras have caught a clear shot of the individual as they were coming out,” said Mike Dominguez, Security Director for Stratford Mall. “We’ve shared clips with the police, and they have been quite happy for our help.”



## The value of experience.

The JCPM group, with stakes in 13 shopping centers in the Northeast and Southeast regions of Brazil, chose Axis cameras for its newest venture.



**Organization:**  
RioMar Presidente  
Kennedy Shopping Center

**Location:**  
Fortaleza, Brazil

**Industry segment:**  
Retail

**Application:**  
Safety and security

**Axis partner:**  
Estrela Sistemas  
Eletrônicos, Genetec

### Mission

Representing an investment of R\$ 500 million, the RioMar Presidente Kennedy shopping center has 157,000 square meters of floor space, of which 54,000 square meters are devoted to stores. The development contains 275 stores, including 6 major department stores, 13 "big box" stores, a cinema, restaurants, food court and services. To ensure the safety of the mall's 3,000-plus employees and customers, the JCPM group looked for a security system that could manage and integrate the subsystems of video surveillance, access control, people counting, fire detection and alarm, and the public address system.

### Solution

In designing the project, Estrela Sistemas Eletrônicos, the integrator responsible for the project, focused on coverage areas and image quality, selecting smart devices that offered video analytics, motion detection and anti-tampering alarms.

The more than 380 cameras include anti-vandal models (including AXIS M3004-V and AXIS P3214-V Network Cameras), PTZ cameras with Zipstream for additional compression (including AXIS P5624-E and AXIS P5635-E), and bullet cameras with optimized infrared (such as AXIS P1425-LE). All these devices are managed using the open platform software Security Center, offered by Axis partner Genetec.

### Result

The security system installed at the RioMar Presidente Kennedy shopping center allows monitoring of all areas of interest, inside and outside, with the quality and details essential to ensuring the safety of customers, tenants and employees.

**“Our priority was to install a high quality, reliable system using technologies proven in large-scale developments. We picked Axis due to the quality of its products and solutions, because it’s one of the world’s leading camera manufacturers and its equipment offers a good cost-benefit ratio.”**

Francisco Bacelar, engineer responsible for the construction of the development and director of the Real Estate Division at the JCPM Group.

### Pixels per meter

The new shopping center in Fortaleza invested in a video surveillance system equipped with the latest cameras from Swedish manufacturer Axis Communications. The security plan for the RioMar President Kennedy shopping center was guided by a need for high quality images. More than 380 digital cameras with HDTV or full HD quality were connected to the shopping center’s central monitoring and security station without interruption to operations.

The project, developed by Axis partner Estrela Sistemas Eletrônicos, applies the concept of pixels per meter, evaluating each scene in order to get the ideal image for each situation. Thus, each camera model was chosen taking into account the need for range and image usability in various scenarios. The outdoor PTZ cameras, for example, have a range of between 200 m and 250 m for the intended recognition objectives of the shopping center, and the indoor PTZ cameras offer a range of approximately 60 m when considering physical interference such as pillars and decor.

Images are displayed in real time on screens installed in two rooms: one CCTV monitoring room that covers the shopping center and another CCTV monitoring room covering the 3,198 space parking facility. The system is also used to guide the work of the security staff who patrol all areas of the development, receiving information from operators via radio.

### No blind spots

The biggest challenge in deploying the system was to avoid blind spots. “In addition to the size of the project, shopping centers include many features that interfere with the line of sight, such as columns and beams, architectural details, visual communication and the installation itself, which can disrupt the cameras’ field of view. But we were able to work around all of that”, Francisco Bacelar said. Another major challenge was the size of the development, keeping in mind the entire TCP/IP system and equipment using PoE technology. To work around this, different technical rooms were set up for the equipment, all connected to the video surveillance

center via an optical backbone with redundant core switches for greater security in communication. Some cameras were also interconnected via optical fiber because of the distances involved and the impossibility of constructing technical rooms at these sites.

### Integration

In addition to the primary concern for image quality for recognition purposes, integration capacity has gained importance over the years. Estrela Sistemas Eletrônicos Project Manager Gersio Chiminazzo notes that the video surveillance market increasingly requires solutions with full interaction between the subsystems involved in the project. At the RioMar shopping center, putting together Axis IP technology with the open platform software from Genetec enabled integration with other systems, such as the fire detection and alarm system.

### Technology resources

The RioMar Presidente Kennedy shopping center uses a number of advanced features in its video surveillance system, including:

- > Motion detection to optimize data transfer in areas with lower foot traffic;
- > Tampering alarms, for early response against any vandalism attempts;
- > Smart infrared, or OptimizedIR, which provides intelligent management of the need for infrared light to prevent the cameras from overheating and prolonging service life;
- > WDR with Forensic Capture for automatic compensation of differences in light levels in the image, including for use as evidence in court;
- > Zipstream, which offers approximately 50% savings in the bandwidth and storage requirements.

The customer gives the system a “very satisfactory and positive” review. “The equipment developed by Axis is excellent and meets our expectations. We’ve had great results in both the quality of equipment supplied and the result of the images,” Bacelar said.



“These technologies add value to the video surveillance project and enhance the customer experience with the system in the long term,” Gersio Chiminazzo boasts.





# Peace of mind shopping at Constantia Village Shopping Centre.

Axis network cameras deployed to secure the interior and exterior of Cape Town shopping mall.



## Organization:

Constantia Village Shopping Centre

## Location:

Cape Town, South Africa

## Industry segment:

Retail

## Application:

Anti-theft surveillance

## Axis partners:

MeyCom, Milestone

## Mission

The South African retail industry has experienced rapid and significant growth in recent years. With this growth comes an increasing demand to provide a comfortable, secure environment in which customers can shop. Growthpoint Properties Limited, the largest property investment holding company listed on the Johannesburg Stock Exchange, relies on the latest technology to provide this level of safety and security for both tenants and patrons of their shopping centres.

## Solution

The decision was taken to upgrade the existing analogue surveillance solution at Constantia Village Shopping Centre, one of Growthpoint's top shopping malls. The RFP for the upgrade was overseen by Diversified Security Engineering's Nigel Versfeld, a veteran of the security industry. After a thorough and rigorous bidding process, which included detailed site inspections, MeyCom was identified as the preferred contractor and Axis was selected as the product of choice.

MeyCom has used Axis products in a number of successful installations and one of Growthpoint's largest mixed use sites is effectively monitored by an Axis solution.

## Result

With the active participation of all the various role players, such as South African Police Services, the community neighbourhood watch, and the advanced, digital surveillance system, the Centre has been able to proactively prevent crime. At the same time, the footage is being used to solve many other crimes.

**“The positive results of the installation have been numerous. The enhanced security capability is not the only aspect of the solution; we are discovering other advantages every day.”**

Peter Dicks, Growthpoint Retail Facilities Manager – Western Cape.

### A bustling site

Nestled in the heart of the leafy Constantia Valley, Cape Town, Constantia Village Shopping Centre combines the convenience of a shopping mall and the ambience of a village square. In the centre of the Cape Peninsula, the Constantia Valley is the ideal Cape Town base and it offers tourists and locals a variety of places to stay and things to do.

“We have 1,100 parking bays, a wide array of speciality stores, fashion outlets, restaurants, coffee shops, anchor stores, and various banking institutions that feature prominent ATM facilities,” explains Divan Snyman, Facilities Manager for the Shopping Centre. “We wanted a surveillance system that contains a level of technology that not only assists with the onsite security function by providing a high quality reactive capability but also offers an intuitive solution that can pre-empt criminal activity.”

### Determining the pressure points

Specialist fire and security contractor, MeyCom, has been providing security-related services for almost 20 years. This extensive knowledge and experience of the specific challenges faced by the retail environment (within the South African context) ensures the efficacy of their solutions.

“Our focus was on covering the entire shopping complex, with particular emphasis on the remote and dangerous areas such as rooftops and the parking facilities,” says Andrew Briton, MeyCom Director and Project Director of this installation.

The threat of access via the shopping centre’s roof space has been neutralised with the installation of Axis thermal network cameras. These cameras use thermal imaging, which allows users to detect people, objects and incidents in complete darkness and difficult conditions such as smoke, haze, dust and light fog.

“Potential intruders no longer have the ability to go undetected in these zones,” says Briton. “The Axis thermal network camera is ideal for monitoring an area that requires 24-hour security.”

Of critical importance to Growthpoint is the external parking areas. “Extensive coverage of the exterior of the Centre reduces the risk of parking lot incidents,” says Snyman. “A lot rests on the quality of the footage available from these areas.”

AXIS Q60 PTZ Dome Network Cameras are designed specifically for this type of demanding video surveillance application. AXIS Q60 is an advanced, high-speed PTZ dome camera that enables exceptional coverage of large areas and offers great detail when zooming in.

“The cameras have proved the perfect solution and continue to provide excellent footage. We are able to make use of license plate recognition even when we are experiencing difficult lighting condition,” says Snyman.

AXIS P3364-LVE Network Cameras complete the surveillance of the parking area by offering superb, outdoor ready, vandal-resistant HDTV resolution.

### A security yardstick

Since completion of the original installation of 64 cameras, the system has already been expanded by an additional 17 cameras.

“The upgraded solution at Constantia Village immediately became our benchmark surveillance system for the Cape Town region. Besides the anticipated benefits, we have experienced a few unexpected advantages. For example, we are now able to have construction meetings in our management office and view areas being discussed without even leaving the room,” says Peter Dicks, Growthpoint Retail Facilities Manager.



## Smart use of analytics in Polish shopping mall.

A professional system from TOP-KEY along with Axis cameras support management at Galeria Malta Shopping Mall.



**Organization:**  
Neinver (Galeria Malta)

**Location:**  
Poland

**Industry segment:**  
Retail

**Application:**  
Loss prevention,  
safety and security,  
merchandising and  
operations

**Axis partner:**  
TOP-KEY

### Mission

Galeria Malta Shopping Mall is one of the largest shopping centers in Poznań, Poland covering a total of 162,000 square metres. The mall houses 162 retail stores, service outlets and leisure units as well as a car park with 1900 parking spaces. The manager of the site needed a convenient customer counting system that would provide reliable data at the same time. It was also required that the system should be able to integrate with other systems supporting the site and to be equipped with a function of creating queries about the data, the gathering of which had to be done with extreme accuracy and security.

### Solution

Once again, following a successful implementation of the Global system from TOP-KEY at Futura Park in Kraków, Neinver chose the specialists from TOP-KEY as partners for the job.

At the beginning of 2012 TOP-KEY installed a server embedded with Global2G Customer Counting System that was later integrated with the cameras from Axis Communications – the world leader in network video surveillance.

### Result

Thanks to the implementation of the Global2G software, the functionality of the analytical system at Galeria Malta has risen dramatically. The precision of counting is much higher now and information about the movement of customers inside the mall is delivered. Moreover, foot traffic data were successfully integrated with the parking system data.

**“Not only is it easier to monitor the mall entrances but also to watch and analyze indoor customer movement, both horizontal and vertical traffic routes, provided zonal counters have been installed.”**

*Tomasz Wojsz, Director at Galeria Malta.*

### **Advanced technologies supporting management**

The new system has enabled the counting of customers who enter the mall and visit individual retailers in the shopping center. Furthermore, the TOP-KEY specialists provided the mall's managers with the possibility of horizontal and vertical counting and obtaining information on customers' movement in the mall by installing additional counting cameras. The solution gives a chance to collect information on movement both between the different floors and between designated areas on a particular floor. Dedicated visualisation reports have also been created which show the movement in particular areas on the map of the mall.

### **Systems integration**

Correlating data from the customer counting system and the parking system run by an external company proved to be a new challenge. Thanks to the integration of the Global2G software in the GlobalWeb system, users can obtain information from both systems, for instance on the number of customers in relation to the number of parked cars.

### **Supporting marketing activities**

Striving to meet the Director's expectations, the Global2G platform makes it possible for the user to create all sorts of reports while the systems compatibility, in a single and flexible report interface, enables efficient supervision and remote management. The solution implemented by TOP-KEY offers analytical possibilities that constitute a perfect tool facilitating the planning and measuring of the efficiency of marketing activities, and data examination over time enables a sufficiently quick response to changing customer preferences.

'The Global2G platform from TOP-KEY is a very good tool that makes it possible to follow and analyze the functioning of the mall in terms of customer refreshment. It enables the user to generate independent reports, both numerical and visual. The latter make the observation of the mall significantly easier. Not only is it easier to monitor the mall entrances but also to watch and analyze indoor customer movement, both horizontal and vertical traffic routes, provided zonal counters have been installed. TOP-KEY's flexible and professional attitude helps to fulfil our high expectations for the quality of customer counting and analyses of data generated by the system', says Tomasz Wojsz, Director at Galeria Malta.



## Over 700 Axis cameras installed at Belgorod's largest shopping and entertainment center.

GRINN Corporation and IT Center LLC jointly selected Axis cameras to provide security at the MegaGrinn shopping and entertainment center in Belgorod.



**Organization:**  
GRINN Corporation

**Location:**  
Belgorod, Russia

**Industry segment:**  
Retail

**Application:**  
Safety and security

**Axis partners:**  
IT Center LLC, ITV

### Mission

During the construction of a new shopping and entertainment center, the developer had the task of ensuring security not only for the facility itself, but more importantly for the future customers and tenants. The core of an integrated system needed to consist of an IP video surveillance system with cutting-edge features. The key objectives were continuous monitoring of shopping and entertainment center halls, surveillance of storefronts, and monitoring of store cash register areas.

### Solution

The set objectives required high image detail, while the size of the facility required a large number of various types of cameras; this, in turn, required smart algorithms to reduce loads on both security system operators and video surveillance system network resources.

Based on these assumptions, GRINN Corporation technical specialists tested cameras from various manufacturers on exhibition stands from IT Center, and selected a series of Axis network cameras integrated with Intellect software. The key selection criteria were not only high reliability and dependability of equipment and software, but also the wide spectrum of features needed by the client.

### Result

Careful work resulted in a single IP video surveillance system for all the client's facilities. Data from all video cameras stream to the operator post, providing continuous monitoring of the entire shopping and entertainment center grounds. The smart component of the video system significantly reduces the required number of security system operators compared to systems of previous generations.

**“We tested cameras from many manufacturers, but only Axis cameras provided us with the necessary image quality and reliability. Axis equipment does a great job of handling the workload even under worst-case conditions, and thanks to the highly qualified specialists from IT Center LLC, we have at our disposal a reliable system that allows us to achieve a wide range of objectives.”**

**Viktor Yazvinsky, GRINN Corporation Communications and Specialized Technology Manager.**

### Facility characteristics

The Mega Grinn shopping and entertainment center, built and opened in 2013, comprises 168,000 square meters and is the largest shopping and entertainment center in Belgorod. Much of the center's space is dedicated to customer recreation: a huge amusement park for the entire family; a children's play and exercise center; a six-screen movie theater for 1,200 viewers with cutting-edge digital movie equipment and 3D-Auro sound systems; a bowling alley with 26 lanes; a regulation-size Olympic ice hockey rink; "Chasy" night club; a billiard club with 26 tables; a karaoke club with two halls; a food court with six operators; three themed restaurants; and many cafes and bars.

### Camera selection

A facility with so many functions always requires an integrated approach to video surveillance. The large number of customers and employees, delineation of access areas, changing lighting and contrast – these are just a few of the many factors the installer must consider. Around 700 Axis cameras were installed within the site. AXIS P3344 Network Dome Cameras were selected for surveillance of shopping areas; these cameras ensure sufficient oversight, and they also blend in well with the stores' interior decor. Monitoring of cash register operations, which requires high detail, was organized using AXIS P1344 HDTV Network Cameras. The "main force" at multiple entertainment sites consists of over 300 AXIS M1114 Network Cameras. Security for the parking lot required more resilient solutions, both in terms of climate and the human factor, so vandal-resistant outdoor cameras were selected: AXIS P3346-VE fixed dome cameras and AXIS M3114-VE discreet, compact cameras. The impressive operating temperature range (from -40 °C to 55 °C for AXIS P3346-VE and -20 °C to 50 °C for AXIS M3114-VE) make them irreplaceable for Belgorod's harsh winters.

### Infrastructure solutions

700 cameras generate an enormous amount of information, so a dedicated fiber optic cable infrastructure was developed to transfer video data. Video data are processed by 12 DELL PE R720 servers (2 CPU E5-2643/32G/3\*300G SAS/Win 2008 Server). Memory is provided by a DELL PV MD 3260i + MD3060i system with a total of 360 TB of memory. The network is built on 4 DELL PowerConnect 8024 switches (24\*10 Gbps); DELL PowerConnect 3524P and 3548P switches were selected as floor switches. The operator post is equipped with 20 DELL Precision T3600 graphic stations using DELL OptiPlex PCs with Intel i7 and i5 processors.

### Software selection

Operation of such a huge system requires not only integrating video surveillance from the entire complex, but also significantly automating processes in order to minimize the human factor in surveillance and reduce the number of operators required. Intellect software was selected, with help from IT Center specialists. It was exactly what was needed: broad scaling capabilities, convenient interface, high analytical capacity, compatibility with Axis equipment, and continuous manufacturer support – the competitors never stood a chance.

### Project outcome

The video surveillance system has become an irreplaceable tool for both the security service and the GRINN Corporation management. The user interface can (with the corresponding access) create ad hoc queries to the archive to obtain precise access to times, events, or facilities, which greatly simplifies and accelerates resolution of incidents. Smart video signal processing optimizes the surveillance process and greatly reduces the workload of security service personnel, which has a positive effect on the quality of their work.



## Data-based operation for smoother customer experience in shopping mall.

BarraShoppingSul adopts smart Axis cameras with video analytics to support marketing strategies and analyze the flow of customers.



**Organization:**  
BarraShoppingSul

**Location:**  
Porto Alegre, Brazil

**Industry segment:**  
Retail

**Application:**  
Safety and security

**Axis partners:**  
Anixter, Digifort,  
K2 Segurança

### Mission

BarraShoppingSul is one of 18 shopping malls managed by Multiplan, a Brazilian retail group that oversees more than 2 million m<sup>2</sup> of properties. This area is visited by some 180 million customers each year—almost as many people as the entire population of Brazil (200 million). Despite this concept, BarraSul used an analog video surveillance system when it first opened, which hindered the display of details.

### Solution

K2 Segurança, a system integrator partnered with Axis Communications, conducted a detailed study of all aspects of the shopping center so that it could propose the right technologies for a successful operation, taking into consideration the mall's concern in enhancing its customers' experiences and emotional well-being.

The old analog camera system was entirely replaced by Digifort software and Axis network cameras, using models ranging from the tiny AXIS P1204, to vandal-proof cameras that offer Full HD resolution, to the robust AXIS Q6044-E PTZ dome. It also uses video analytics such as license plate reading (LPR), customer flow analysis, and virtual fences.

### Result

From a security perspective, operators in the control room no longer have to decipher low resolution images. With this change, the mall can provide an even better customer experience. By measuring the flow of people and analyzing which places were most visited at specific times of day and which entrances saw the most traffic, BarraSul gained an advantage from a commercial point of view, enabling the design of new marketing strategies.



## Analog problems

With more than 225 shops on two levels, BarraShoppingSul was launched with a video surveillance system using analog cameras encoded for use with VMS software over an IP network. At the time, there were two separate systems: one for the parking lot and the other for the rest of the mall. Before long, this setup proved to be problematic, mainly due to the difficulty in accessing the separate systems and the low quality of the images.

For example, it was hard to see if a customer had actually removed their card from the parking lot card dispenser just from watching it from the control room. To complicate matters, the shopping mall's modern architectural design uses large glass structures to take advantage of natural light. Analog cameras did not respond well to the intense difference in light levels in some environments, resulting in overexposed or underexposed images.

"In addition to image quality, we wanted to change the system because the old design was based on the wrong concept, employing too many dome cameras," says Eduardo Vitagliano, the project's operations manager. By prioritizing mobile cameras in places more suitable for fixed cameras, it was difficult to track people and suspicious vehicles.

There were also problems with the system's intelligence. The number of visitors, for example, was estimated based on the number of vehicles in the center's 3,800 parking spaces.

### Gold trust

The change in the BarraShoppingSul security concept was led by K2 Segurança, which directed the studies that included everything from observing operators at work to assessing the system's vulnerabilities.

From the beginning, K2 looked to Axis not only because of the durability of the equipment and the high resolution of the images, but also due to its confidence in the brand. "We have had great satisfaction working with Axis. They are much more than a manufacturer; they have been a partner we can count on at all stages of the project."

"The company gave us support during the pre-project period with planning, customer presentations, and a convincing demonstration of the product's advantages, and with the commercial aspect and with everything involved in the after-sales period," said André Colla, K2's Technical Director.

The fact that K2 is a certified partner in Axis' Channel Partner Program made the developers feel more confident in investing in the new project, with the assurance that they would receive the expected results.

Eduardo Spinelli Vitagliano, the mall's operations manager, says, "We are very pleased with the system, with the quality of the cameras and the software, and with the support that K2 has given us in designing the project. We have achieved huge advances with this project, not only in terms of image quality and security, but in the whole operational process.

### Rethinking everything

This project involved much more than replacing equipment; it included a conceptual shift in the system, taking into account the customer's real needs. The main monitoring operation shifted its focus to fixed cameras, with mobile cameras now playing a supporting role.

The license plate reading technology (LPR), for example, was not part of the initial plan, but K2 suggested that the new design for the vehicle accesses use cameras with capacity to add on this application in the future. Ultimately, the feature was implemented in the first phase. "The mall decided on this add-on, and the license plate reading system was installed without the need to make any adjustments or change to the cameras," adds Colla.







For some of the more critical areas where lighting could be switched off by mistake or intentionally, the design called for AXIS P1405-LE Network Cameras equipped with infrared. This means that even if someone sabotages the lighting, the camera will keep capturing good-quality images. All the frontage of the shopping mall is monitored by AXIS P1427-E bullet cameras with 5-megapixel resolution. They also monitor the parking lot. This way, the system ensures complete and continuous coverage of large areas, even if the PTZs are facing the other direction.

In cases where a PTZ is really needed, AXIS Q6044-E Network Cameras were used to approximate the image of a person, a license plate, or something suspicious. In the indoor areas, the concern was to cover the largest possible area with sufficient resolution and quality to enable the recognition of people.

### Results from the start

K2 Segurança's André Colla saw the results from the beginning. "We managed to increase staff efficiency in detecting events, thanks not only to the quality of the equipment but to the way the system was laid out and how the systems were designed."

The new system began offering forensic analysis features that facilitate the operators' work in identifying suspects and reduce investigation time. Using filters, mall security staff can optimize their searches based on physical characteristics. For example, it is possible to search for images of a man wearing blue pants and a red shirt, without having to scan through all available hours of recordings. Another goal of the change was to better integrate the cameras into the mall design. After all, the project won the "Innovative Design" category of the ICSC (International Council of Shopping Centers) Latin America Shopping Center Award. Compact and discreet cameras were therefore desirable.

A highly discrete camera—the AXIS P1204—was used for vehicle access totems. Set up to capture the face of the drivers while they insert or remove a parking card, the camera allows the operator to identify the driver in a less invasive way, preventing visitors from feeling uncomfortable with a very large piece of equipment. "In practice, we see that customers tend to not have that unpleasant feeling that their privacy is being violated," says Colla. The Digifort software module allows real-time centralized display of all screens and shows if a customer is having difficulties completing the process.

### Head count

BarraShoppingSul uses smart cameras with people counting to generate customer traffic reports based on the time of day, day of the week, and heat maps. These reports even allow comparative analysis.

The installation of an IP camera system with analytics resources means the areas involved can extract data to support decisions regarding the provision of services, for example. "The system measures the flow of people, which is generating benefits for the management area, because it makes it possible to identify areas with higher traffic, or to learn which entrance is more frequently used, and thus get a better understanding of customer dynamics," said Colla.

Today, AXIS M3004-V cameras count people at the entrance. "But we have other points where we would like to count the number of people. To achieve this, we're increasing the number of cameras that offer this feature," Eduardo Vitagliano added.

"One difficulty we have is with the communication between the control room and elevators; this will be resolved with the installation of audio-equipped IP cameras. In other words, a communication problem will be solved with a camera. It is very interesting to explore the possibilities that cameras currently offer," reflects Vitagliano. In this case, the customer can press the emergency button in the elevator and he or she will be heard and seen by operators in the control room.

### Benchmark in security

Shopping centers face constant threats of vandalism, either due to clumsiness or intentional defacing to facilitate illegal activities. To work around this challenge, vandal-proof AXIS M3004-V and AXIS M3005-V cameras were suggested. "Vandal-proof cameras are essential for a shopping center project," André Colla said.

In the mall area and technical corridors where these acts are most prevalent, using this type of camera reduces sabotage attempts—such as breaking the equipment or facing the lens in a different direction.

Over time, the IP cameras installed at BarraSul have increased visitors' sense of security and have given BarraShoppingSul a reputation as a safe, family-friendly environment. Some situations were prevented thanks to the monitoring system, such as the early identification of suspects or people about to lose a purse, which helped create a reputation as being a safe place to shop. This is especially important in times of greater violence in the city. On one recent occasion the state governor went so far as to ask for the support of the National Army in dealing with escalating violence in Porto Alegre.

According to André Colla, "Porto Alegre has become a city with high crime rates, and it is natural that some cases of violence in shops will appear in the media. If some developments appear frequently in the media as targets of criminal acts and, in contrast, BarraShoppingSul does not have this history, this has a positive impact."

**"We succeeded in measuring the benefits of the new system financially, since it solved some problems and avoided others."**

**Eduardo Spinelli Vitagliano,  
BarraShoppingSul Operations  
Manager.**



**“ We are very satisfied.  
We have gained new  
opportunities for creating  
more effective advertising  
campaigns that better  
reach our target groups and  
can provide more tailored  
offers, while retailers can  
better optimize their staffing  
according to footfall.**

**”**

Jukka Korpimäki, Shopping Centre Director,  
Rajalla På Gränsen.



[www.axis.com/retail](http://www.axis.com/retail)

# 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 3,000 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.

For more information about Axis, please visit our website [www.axis.com](http://www.axis.com).