

## A new standard in school security.

Avenues São Paulo applied a comprehensive concept of technological integration to support its teaching philosophy and the experience of parents and students.



**Organization:**  
Avenues São Paulo

**Location:**  
São Paulo, Brazil

**Industry segment:**  
Education

**Application:**  
Safety and security, access control

**Axis partners:**  
Averics, Milestone

### Mission

Within the next few years Avenues World School will have campuses in the world's major cities. This initiative seeks to minimize global boundaries and create a highly integrated and connected learning community built on the foundation of a shared vision, shared curriculum, collective professional development, and the benefits of contemporary technology. IP technology is a fundamental aspect to accomplish this: first through integration, and also in order to prepare for what is to come.

### Solution

At Avenues, IP technology is a part of every process, from students' arrival to solving everyday problems such as finding a forgotten object. The headquarters has 340 Axis network cameras that are part of a system based on open platforms, and that also integrates AXIS Perimeter Defender, Axis access control, and solutions from partner companies such as Milestone and Averics.

### Result

Using digital tools, Avenues São Paulo was able to expand the scope of the video surveillance project without giving up the cornerstones of the institution: welcoming, safety, and respect. Instead of physical barriers that greet parents and students each day and create tension starting with the first contact with the school, Avenues uses a smart system. Because the investment in the school will be paid for over 5 years, throughout this period Avenues will have guaranteed system operation through the 5-year warranty, with a future-proof platform that will remain ready to add new technologies and services even five years after its launch.



## Welcome

Avenues World School is concerned with shaping the citizens of the world. It would be inconsistent to do so while working with physical boundaries and barriers—from architecture to day-to-day operations.

"Instead of having physical barriers at the school's entryway—which would promote a very hostile interaction with parents and students in their first contact—we adopted a smart imaging and access control system to provide a safe and functional welcome for parents and students, whether arriving or leaving. The technology has enabled operational efficiency using leaner and more integrated teams," says Lia Muschellack, Director of Technology.

The video surveillance project for the 40,000 m<sup>2</sup> Avenues campus in Brazil included 340 cameras monitored by two employees per shift. The devices integrate with Averics' access management platform and Milestone's Xprotect® management software.

### Employee and visitor access

Employees use their badge to gain access to the location's parking lot; their arrival is recorded through high-resolution images. There is a turnstile gate with a badge reader at all accesses from the parking lot, which also works for persons accompanying students. Avenues provided a badge for everyone who has the right to access the building.

Employees who arrive on foot or who do not use the parking lot are controlled using an AXIS A8004-VE Network Door Station with a badge reader. This product can read QR codes, which can be sent, for example, in invitations to school events. Thus, each guest or visitor receives a QR Code on their cell phone, and the equipment grants them entry based on the code.

The administration was also concerned about accessibility. The video entryway phone was purchased with a kit that allows autonomous and intelligent access for people with hearing or vision impairments.

### Big picture, small storage

In a school spread out over 40,000m<sup>2</sup>, video surveillance cameras help find students who do not show up when their guardian comes to pick them up.

The cameras can also be used to quickly solve occurrences that are common in every school: forgotten objects. "Our students don't use their cell phones at school; instead, they get an iPad or MacBook to do instructional tasks. And it is not uncommon for a student to forget them somewhere in the institution. To resolve this problem easily, we retrieve the images and follow the student's route to see where they left it," explains Muschellack.

With 340 cameras assisting security, cleaning and educational staff, the volume of data was a concern for IT staff. This was resolved using Axis Zipstream technology. "It's fantastic because of the volume of images we need to save. The images are stored for an extended period of time and would be impracticable without Zipstream," comments Muschellack, discussing the feature that preserves important forensic details while reducing bandwidth and storage requirements by 30% for the school.

### No fear of the light

In terms of the cameras, one highlight is the discreet placement and appearance of the equipment, which avoids clashing with the architectural design of the institution or creating a feeling of constant surveillance. The architecture emphasizes natural lighting, which requires equipment capable of adapting to different lighting conditions at each moment of the day.





**“What strikes us is how innovative the solution is—it’s open and easily integrates with new features. The best part of the project is how the technology is always at the service of processes, and also the accuracy of its alarms.”**

**Lia Muschellack, Director of Technology, Avenues.**

The cameras needed to be ready to deal with contrasts, and this was a concern overcome using the lighting compensation technology called Wide Dynamic Range, (WDR) that the chosen equipment offers. Thus, in both shadowy areas and areas with strong light, images remain sharp and capture the smallest of details.

### Perimeter solution

The Avenues São Paulo campus, with its eight above-ground floors and three basement levels, is located near one of the city’s main thoroughfares. Avenues has opted for an innovative solution to protect it from possible intrusions. Instead of security staff making rounds, the project prioritized the Axis perimeter protection solution, using AXIS Perimeter Defender.

This is a highly effective system that automatically detects and responds when people exceed the boundary set by Avenues, reducing the number of false alarms. The solution uses advanced cameras and analytics to detect and analyze events, discarding non-threatening threats and notifying security staff of potentially critical situations so that professionals can decide what is an emergency and what is not.

At Avenues, the perimeter has a large tree-lined area and therefore requires in-depth analytics to disregard the movement of leaves or birds. “Achieving accurate alarms is a very positive thing. Another factor is the possibility of the technology adjusting to the specific use of each area. In the first week, for example, we had some false alarms, but adjustments to the analytic have allowed us to correct them,” says the director of technology.

Even without relying on security staff, the entire area is protected. For example, when intruders jumped the wall of an empty parcel of land next to the school that will eventually be home to another enterprise. Because the parcel is already protected by the Axis perimeter protection solution, the control center received the alarm immediately and alerted the police, who prevented the intruders from continuing to accumulate garbage and from turning the area into an illegal land-fill.

### Around the world

Avenues has one campus in New York and one in Brazil, and has future addresses planned for 2019: two campuses in China and one in Miami. In the future, the integration that right now only covers academics and administration may expand to all processes thanks to IP technology.

“The idea is that they have integrated solutions for all campuses. A student who joined at Avenues São Paulo can access all the others with the same registration, and the same thing for employees, who can, for example, perform the same duties anywhere without needing specific training for each location, since the system is the same. Axis was also chosen because it is global. And the São Paulo campus will serve as a technological model for future campuses,” says Muschellack.

Another expected expansion in digital technology is the use of IP audio for mass communication in real time. “These daily notices are now made by e-mail or by the teachers. Well-targeted audio in any field is very interesting,” she says.



**Avenues**  
THE WORLD SCHOOL

  
**Averics**

 **milestone**

# 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.

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