



Stay on top of security solutions for **smart buildings**

Maintaining business flow through analytics



Smart buildings bring in a new era of **safety and efficiency**

Smart buildings bring in a new era of safety and efficiency

We live in a time that's accelerated the need for public environments to adapt to new safety and security measures while maintaining productivity. Smart buildings answer this need by combining technology with data and the ability for existing building systems to communicate with one another. The result of this new integration is a smoother, synchronized environment that operates more safely and efficiently. Run on a single or distributed platform, a Building Management System (BMS) acts as the structure's artificial intelligence, which combines large amounts of data across platforms and identifies trends in use and operations. A BMS can effectively reduce energy and improve occupant comfort.

Smart is secure

Commercial buildings, including campus facilities, factories, retail and warehouses are among the first wave of high IQ structures. One of their key benefits is increased security. As the creation of this integration is crafted, IP cameras will be directly connected and become common sensors in buildings. This will bring with them a spectrum of opportunities to solve beyond-security issues. And they will be a vital technology in ensuring a safe return to the workplace. Read on to discover some of our own solutions.



Opportunities... and challenges

A chance for new partnerships

With the many varied systems and networks involved, collaboration is needed, offering new opportunities in return.

Creating a bigger comfort zone

Maintaining global health and safety has been a prime driver of smart building investment. When we enter the post-pandemic stage, commercial real estate will be outfitted with a range of smart systems that can shift focus to greater occupant comfort.

Building is booming Certain regions are expecting record construction development in the next five years thanks to substantial investment. It offers a promising outlook for industry and growth.

Read more →

Cost and complexity Updating from traditional to contemporary operating systems is financially demanding for some businesses, although it can be managed efficiently, done in stages.

Breaking down silos Much of a building's energy and security systems are operated in separate silos, working independently of one another. This is changing though as owners and integrators see the value in unifying key functions into one for streamlined operation.

Learning to speak the same language A building's many networks not only operate independently, they also each have their own language. However, adoption of an increasingly established shared language, accompanied with greater open standards is in the works.



Area of interest

In the following chapters, we look at some of the common situations within security and operational efficiency that appear in specific areas of smart buildings. With it, we highlight key Axis technologies and partner solutions to enable improvements in each. Based on experience, we must however emphasize that successful design and deployment of many of these solutions require adjustments to fit with your working routines and technical infrastructure. Collaboration between your departments, a skilled system integrator and Axis lays the foundation for achieving robust solutions that deliver over time.

Areas of interest	Customer needs				
	Avoid crowds and manage flow	Limit capacity in designated areas	Minimize contact with selected surfaces	Public address	Surveillance for Identification and suspicious behavior
	Parking lot	Network door controller, license plate recognition	Network door controller, license plate recognition	Network intercoms for remote visitor entry	Wide area coverage, PTZ camera, thermal radar
	Reception/ help desk/ counter	Occupancy estimator, queue monitor	People counter	Network intercoms for remote visitor entry	Network speakers, pre recorded audio messages, background music
	Hallways and stairwells	Touchless access control (QR code, face recognition)	Network door controller	Touchless access control (QR code, face recognition)	Multi-directional corridor coverage, forensic WDR, motion detection, loitering
	Common area/ café	Occupancy estimator, direction detector	People counter, direction detector	Network speakers, pre-recorded audio messages, background music	Wide area coverage
Restricted area		Network door controller, tailgating detector	Touchless access control (QR code)		Forensic WDR OptimizedIR, motion detection



Areas of interest

Parking lots

Security begins in the parking area where occupants can enter and exit the building safely. Automated doors and payment systems ensure minimal contact with surfaces and assist with traffic flow. Video surveillance deters suspicious behavior.

Needs

Avoid crowds and manage flow	Limit capacity in designated areas	Minimize contact with selected surfaces	Surveillance for Identification and suspicious behavior
Network door controller, license plate recognition	Network door controller, license plate recognition	Network intercoms for touchless access (QR code) or remote entry	Wide area coverage PTZ camera, thermal and radar

Learn more 

Take advantage of your parking area's **full potential**

Safety and security

- Prevent vandalism and property destruction
- Prevent break-in and theft
- Detect trespassing and loitering
- Identify and capture altercations
- Identify persons of interest
- Detect smoke, fire, flooding

Operational efficiency

- Monitor and manage traffic flow
- Control access in delivery or restricted areas
- Counting number of vehicles
- Identify illegal or improper parking, with or without automated audio alerts
- Communicate parking availability to drivers

Areas of interest

Reception area

Your reception and front desk area (or help desk) make a memorable first impression in setting the tone to importance of occupant comfort and safety. Guests want to feel safe and welcomed, and advanced surveillance capabilities can help. But you can also use the network to count people, identify gender or age of visitors, and other insightful analytics. And that's just the start. With Axis, smart building surveillance can also add tangible business value your tenants and customers will appreciate.

Needs

Avoid crowds, lines and manage flow	Limit capacity in designated areas	Minimize contact with selected surfaces	Public address	Surveillance for Identification and suspicious behavior
Network intercoms for remote visitor entry	People counter	Network door station visitor entry management	Network speakers, prerecorded audio messages, background music	Wide area coverage, fixed box camera, loitering and sound detection

Learn more —>



A warm and intelligent reception area

Safety and security

- Prevent break-in and theft
- Discourage and capture aggressive behaviors or altercations
- Identify persons of interest
- Monitor for loitering or trespassing
- Secure authorized staff entry or exit
- Monitor and manage pick-up order services
- Identify blocked exits
- Remote access to select areas during off hours

Operational efficiency

- Manage occupancy
- Measure and predict footfall
- Audio announcements (safety warnings)
- Ambience (background music)



Areas of interest

Hallways and stairwells

Passageways are a main area of concern in the present and post COVID-19 era where crowds of people in constant motion headed in different directions can pose serious repercussions. This is where the ability to move from one area to another with minimal surface contact is critical. Adequate surveillance coverage and capabilities are a given. But imagine that this same technology can also measure foot traffic and successfully maintain maximum capacity levels.

Needs

Avoid crowds, lines and manage flow	Limit capacity in designated areas	Minimize contact with selected surfaces	Surveillance for Identification and suspicious behavior
Touchless access control (QR code, face recognition)	Network door controller	Touchless access control (QR code, face recognition)	Multi-directional corridor coverage, forensic WDR, motion detection loitering

Make every passage a safe one

Safety and security

- Discourage and capture aggressive behaviors or altercations
- Manage occupancy
- Measure and predict footfall

Operational efficiency

- Play live or pre-recorded audio announcements (closing time, keep distance, safety warnings, etc.)
- Identify persons of interest
- Monitor and collect pre-specified data (footfall, age, gender, etc.)
- Provide ambience (background music)

Areas of interest

Common areas/Café

The last thing you want an occupant to feel in the public spaces of your building including cafes, is that that you are allowing them to become overly crowded. A good surveillance network can help by making it easier to secure your common areas and manage foot traffic to manageable and safe occupancy levels. It could also be part of a system for making digital signage to communicate real time security advisements.

Needs

Avoid crowds, lines and manage flow	Limit capacity in designated areas	Public address	Surveillance for Identification and suspicious behavior
Occupancy estimator, direction detector	People counter, direction detector	Network speakers, prerecorded audio messages, background music	Wide area coverage



Communicate common sense in your **common areas**

Safety and security

- Prevent break-in and theft
- Discourage and capture aggressive behaviors or altercations
- Identify persons of interest
- Monitor for loitering or trespassing
- Detect stay-behinds after hours
- Enable quick response to emergencies
- Detect smoke, fire, flooding
- Manage occupancy
- Measure and predict footfall

Operational efficiency

- Audio announcements (closing time, keep distance, safety warnings, etc.)
- Connect messaging with pre-determined identifiers (age, gender, etc.) for
 - personalized digital signage
 - Monitor and collect pre-specified data (footfall, age, gender, etc.)
 - Public interest information through audio announcements
 - Ambience (background music)



Areas of interest

Restricted areas

Axis solutions can ensure that restricted areas stay so. Deter loiterers and trespassers, and use smart access technologies to ensure peace of mind during deliveries, staff changes and unexpected events.

Needs

Limit capacity in designated areas

Network door controller, tailgating detector

Minimize contact with selected surfaces

Touchless access control (QR code, face recognition)

Surveillance for Identification and suspicious behavior

Forensic WDR optimized IR, motion detection

Read more 

Keep restricted areas **exclusive**

Safety and security

- Prevent vandalism and property damage
- Discourage trespassing and loitering
- Detect smoke, fire, flooding
- Track and manage authorized personnel entry and exit

Operational efficiency

- Monitor and communicate
- Control access remotely
- Monitor waste handling areas
- Monitor delivered goods

Protect what matters on your campus

Get a clear picture of dark stairwells, corridors and weather-beaten car parks. Monitor and manage entrances and restricted areas remotely. And communicate with staff, students and unwanted visitors.

Smart and sophisticated

Created for seamless integration, Axis products work beautifully with partner video management software (VMS). Perfect for smart building installation, when complex networks are coupled with advanced functionality requirements.

Network cameras

- Wide camera portfolio for high resolution video
- Discreet designs that blend in with the environment
- Robust cameras
- Public view monitors to act as a deterrent or to easily share the video to others (staff rooms, canteen, etc.)
- 360-degree cameras for complete area overview
- Cameras for live streaming of school events or classes

Network speakers

Use speakers for clear live audio or pre-recorded messages to communicate with students, staff and unwanted visitors.

I/O modules

- Alarm inputs from restricted areas and panic buttons can be used to trigger alerts, recordings or audio messages
- Control other equipment that turns on lights, locks doors or opens gates to improve efficiency

Intercoms

- Easily manage entrances after school hours
- Remotely manage the entry of visitors, such as parents, delivery drivers and maintenance personnel
- Receive alerts if a door has been forced or held open

Access control

- Easy administration of access to the premises
- Validate entry by comparing live video with card-holder photo
- Investigate incidents with access control logs combined with video
- Receive alarms when a door is open for too long or forced

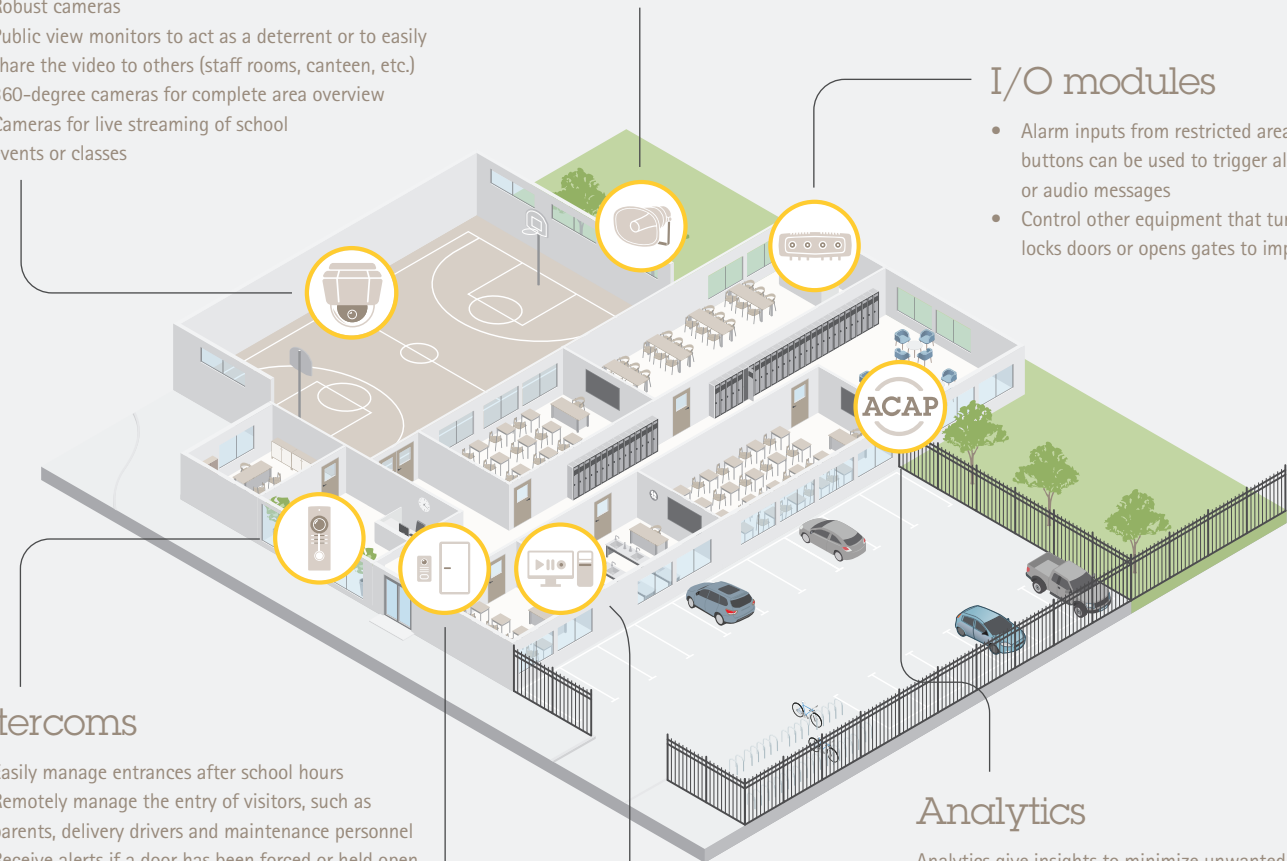
Network video recorders

Build your solution around our out-of-the-box network video recorders. They come with AXIS Camera Station – our powerful video management software is so easy to use that anyone can manage the system, handle incidents and export high-definition evidence. You can also protect third-party privacy by masking objects before exporting your recordings.

Analytics

Analytics give insights to minimize unwanted behavior

- AXIS Perimeter Defender – detects and responds to people and vehicles intruding on the school premises
- AXIS Loitering Guard – alerts if people or vehicles have been in a selected area of the school for too long



For all your needs in manufacturing

Get clear, detailed recordings, inside and out – no matter what the conditions. Monitor and manage entrances and restricted areas remotely. And communicate with staff, and unwanted visitors. With AXIS Camera Station, it couldn't be easier.

Read more →

Network cameras

- Wide camera portfolio for high resolution video
- Robust cameras for harsh environments
- Thermal cameras to detect temperature changes in machinery
- Height strip cameras for eye-level identification at entrances and exits
- 360-degree cameras for complete overview

Network speakers

Use speakers for clear live audio or pre-recorded messages to communicate with staff and unwanted visitors

I/O modules

- Alarm inputs from machinery, safety system and restricted areas doors and panic buttons can be used to trigger alerts, recordings or audio messages
- Control other equipment that turns on lights, locks doors or opens gates to improve efficiency

Analytics

Analytics give insights through highly advanced and powerful tools to minimize unwanted behavior

- AXIS Perimeter Defender – detects and responds to people and vehicles intruding on the factory premises
- AXIS Loitering Guard – alerts if people or vehicles have been in a selected area of the factory for too long

Access control

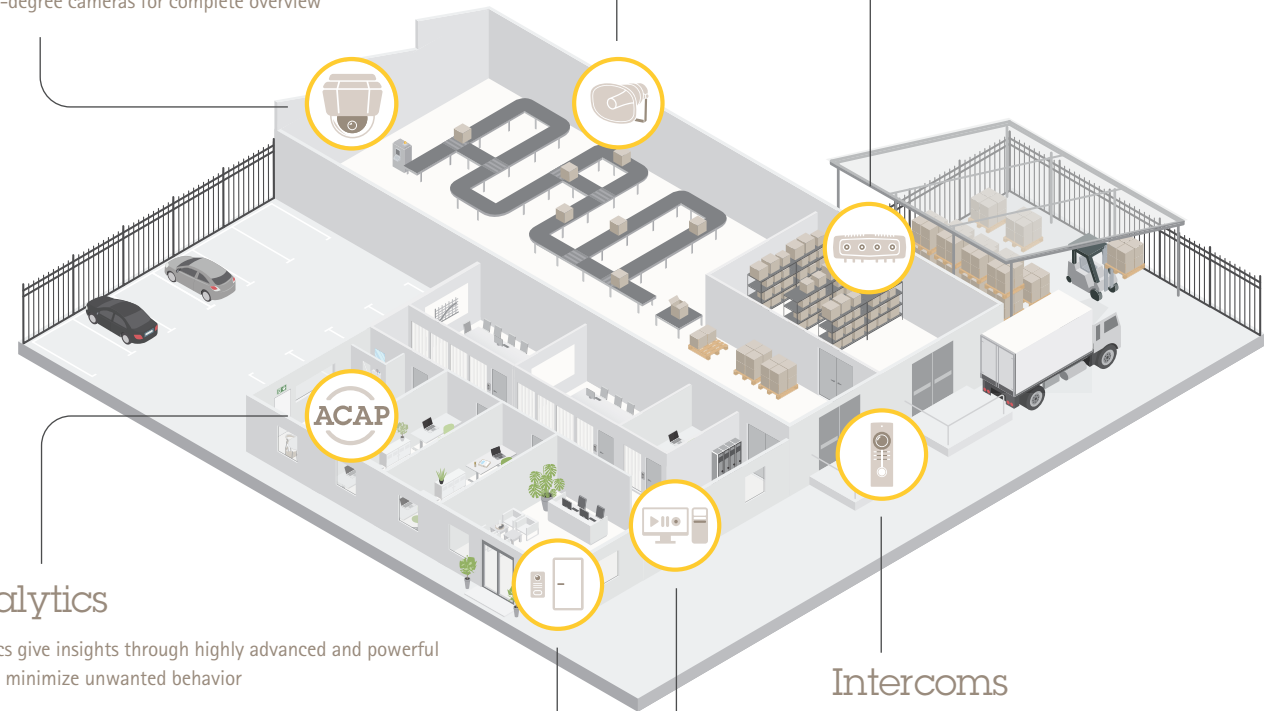
- Easy administration of access to the premises
- Validate entry by comparing live video with card-holder photo
- Investigate incidents with access control logs combined with video
- Receive alarms when a door is open for too long or forced

Network video recorders

Build your solution around our out-of-the-box network video recorders. They come with AXIS Camera Station – our powerful video management software so easy to use that anyone can manage the system, handle incidents and export high-definition evidence. You can also protect third-party privacy by masking objects before exporting your recordings.

Intercoms

- Easily manage entrances after working hours
- Remotely manage the entry of visitors
- Receive alerts if a door has been forced or held open
- Facilitate investigations through video logs with date and time



For all your retail/ warehouse needs

Modern network video cameras with embedded analytics help you combat loss through detecting and deterring shoplifting, while also ensuring a safer environment for your staff and customers.

Read more →

Network cameras

- Wide camera portfolio for high resolution video
- Discreet designs that blend in with the environment
- Height strip cameras for eye-level identification at entrances and exits
- Cameras compatible with public view monitors for deterrence
- 360-degree cameras for overview

Network speakers

Use speakers for clear, live audio or pre-recorded messages to communicate with customers and staff to enhance store operations

I/O modules

- Alarm inputs from safe doors, panic buttons, and electronic article surveillance (EAS) system can be used to trigger alerts, recordings or audio messages
- Control other equipment that turns on lights, locks doors or opens gates to make operations more efficient

Access control

- Easy administration of access to the premises
- Validate entry by comparing live video with card-holder photo
- Investigate incidents with access to control logs combined with video
- Receive alarms when a door is open for too long or forced

Intercoms

- Easily manage staff access to store and restricted areas
- Remotely manage the entry of visitors, such as delivery drivers
- Receive alerts if cameras are being tampered with or if a door has been forced open

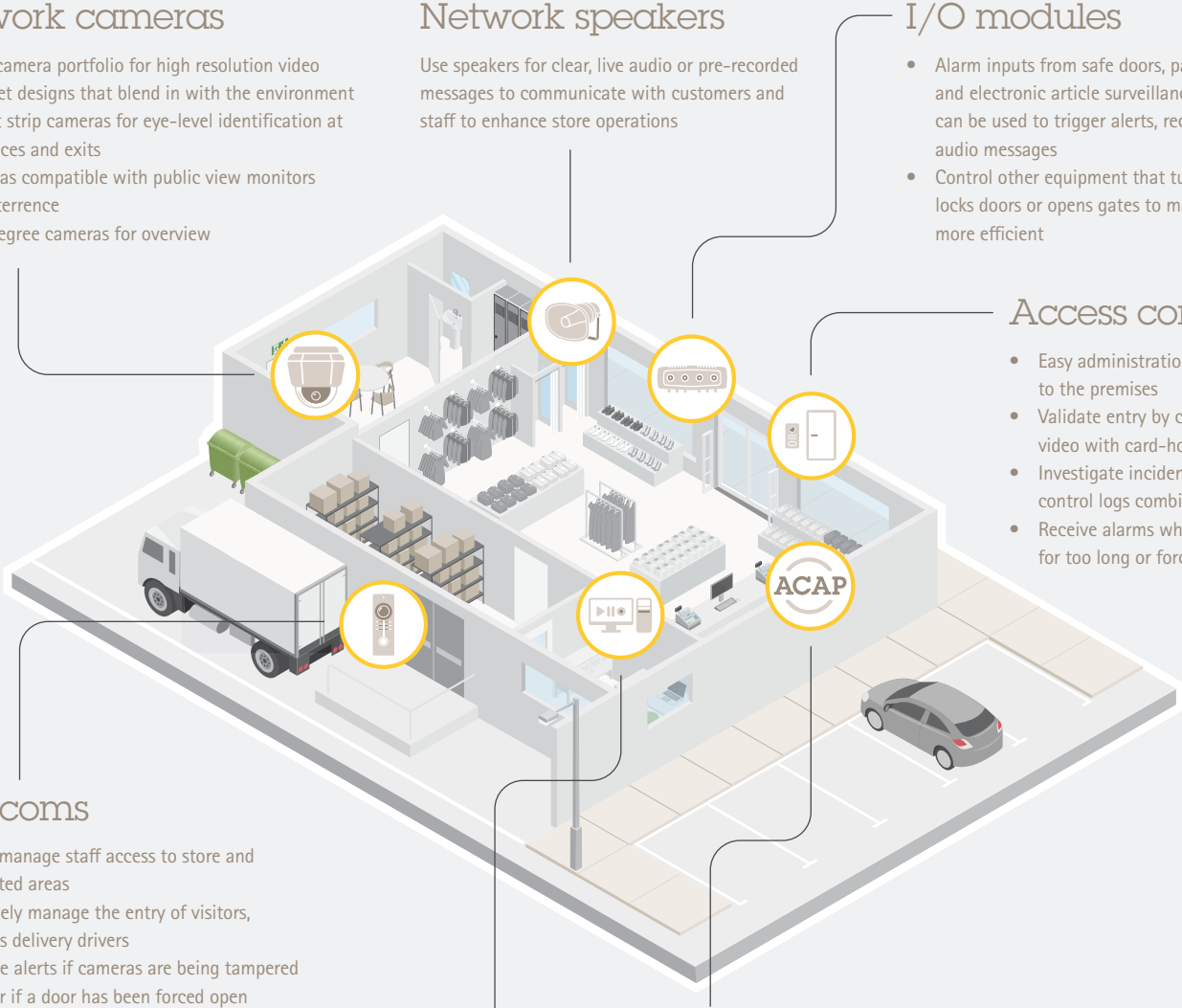
Network video recorders

Build your solution around our out-of-the-box network video recorders. They come with AXIS Camera Station – our powerful video management software so easy to use that anyone can manage the system, handle incidents and export high-definition evidence. You can also protect third-party privacy by masking objects before exporting your recordings.

Analytics

Analytics give insights through highly advanced and powerful tools to minimize suspicious behavior and prevent loss

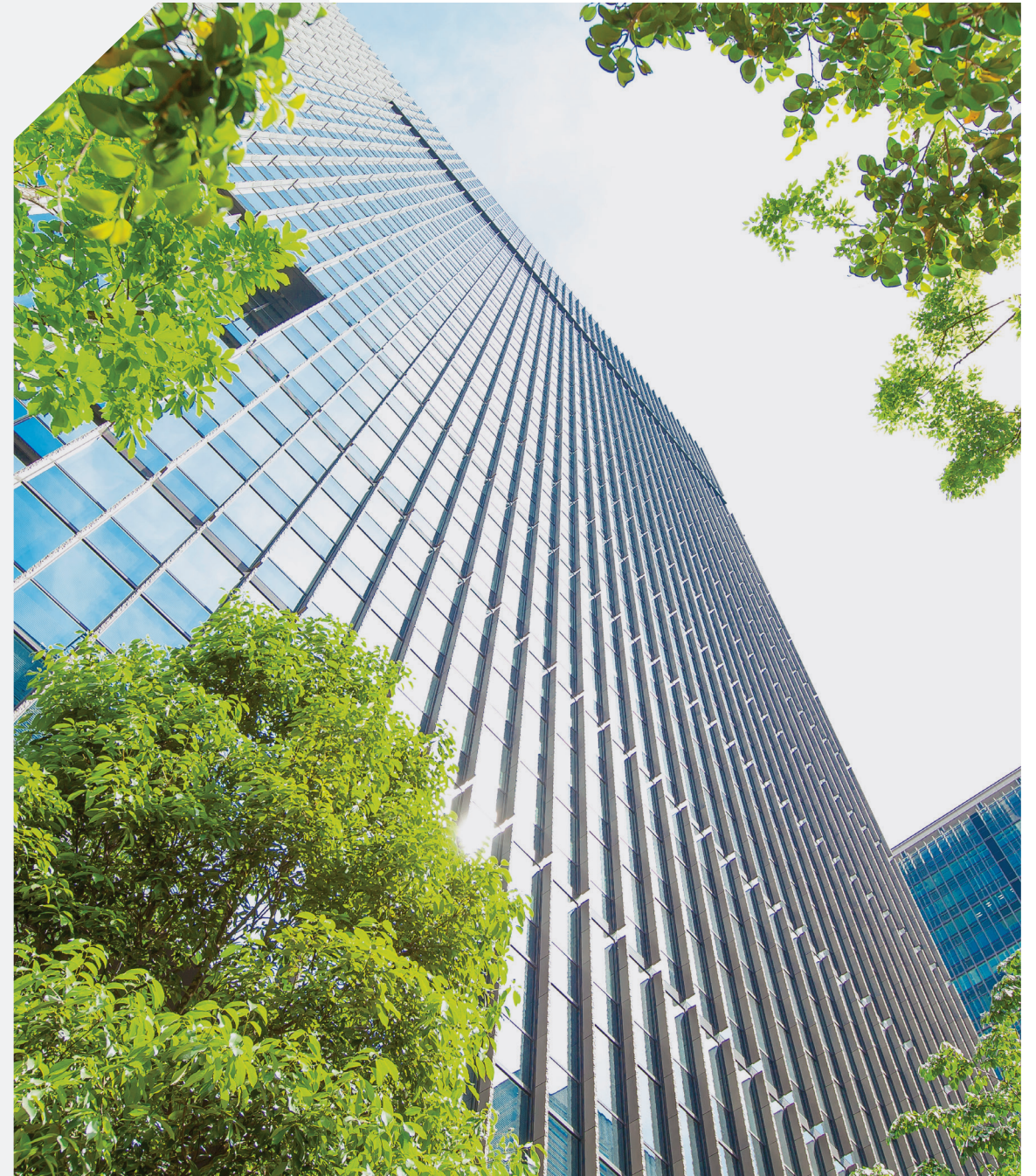
- AXIS Direction Detector – alerts when someone enters or exits in the wrong direction
- AXIS Random Selector – performs random checks without profiling
- AXIS Tailgating Detector – detects tailgating at your entrances when someone follows behind an authorized individual onto your premises. Immediate possible triggers include audio warnings, sending an alert or setting off an alarm



Smart buildings – a huge opportunity to serve **sustainability**

With buildings consuming a large portion of global energy, there is a great drive to lessen their impact, even while the sector continues to expand. Higher standards and tougher legal pressure fuel cost savings and operation efficiency, along with the use of more sustainable materials. In fact, it's becoming the norm and not the exception that green solutions are put to work. The COVID-19 pandemic has also been pivotal in speeding up the health and safety trend towards buildings being more suitably built and operated.

Read more about
commercial buildings



Axis products smarter, more efficient



Zipstream

Smart and sustainable storage. It ensures you keep the resolution and frame rate, but manage to store a whole lot less. So you save space and money without sacrificing valuable information.

Read more



Lightfinder

Energy saving and effective. Lightfinder delivers high-resolution, full color video with a minimum of motion blur even in near darkness. By reducing noise, Lightfinder makes dark areas in a scene visible, capturing great detail in very low light. The result is excellent image quality without the need for external light sources.

Read more



Edge analytics

Enables us to 'teach' our cameras to be far more intuitive about what they are filming and analyzing in real-time. These insights reduce the burden on the human input needed to analyze data and take decisions. Ultimately, it can speed up response times—potentially saving lives.

Read more



A perfect time to smarten up the place

There has never been a better time to start utilizing existing technologies to support changing physical and environmental needs in public and commercial buildings. Axis can help from entry and exit point, to every area in between that needs considered strategy concerning physical safety. And today, knowing those crucial safety measures are in place contribute to mental wellbeing. That, along with more intuitive and efficient processes thanks to smart building technology, your productivity will flow with greater ease.

Get started by adding dimension

Looking to make designing your security system the easy way? Try **Autodesk® Revit®**, the plugin for designers wanting to choose any specific Axis device and place it in their 3D projects.

Start planning →



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, intercom and audio systems. Axis has more than 3,800 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



©2021 Axis Communications AB. AXIS COMMUNICATIONS, AXIS, ARTPEC and VAPIX are registered trademarks of Axis AB in various jurisdictions. All other trademarks are the property of their respective owners.

