AXIS ANALYTICS SOLUTIONS

Improve your operational efficiency

EASY ACCESS TO
ACTIONABLE INSIGHTS

Enter >

AXIS COMMUNICATIONS

Ready for more efficient operations?

Using network surveillance analytics to optimize production, resource allocation, and visitor journeys is an exciting, rapidly expanding field with untapped potential.

Imagine boosting operational efficiency, situational awareness, and site understanding by integrating IP cameras, thermal technology, access control, IP speakers, and AI-based analytics with other systems you already have in place, such as your HVAC (Heating, Ventilation and Air Conditioning) or point-of-sales system. You'll be able to make better-informed decisions and more accurate predictions to improve resource allocation and traffic flow, use space more effectively, and manage production and infrastructure effectively.

Explore how you can get data-driven insights

This eBrochure explores how video and audio analytics, involving advanced object counting, time-in-area tracking, vehicle and license plate recognition – or a combination of one or more of them – deliver data-driven insights you can use to optimize operations and improve profits. In addition to showcasing a diverse range of use cases, it also explains the underlying technology and how best to use it.

The promise of analytics

Analytics use audio data from video and audio to create value. It can support physical security, help organizations operate efficiently, and protect the safety of employees and the public. All analytics rely on the quality of the data they receive.

What analytics can do for you

Analytics give you access to actionable insights in important areas: safety, security, operational efficiency and business intelligence while also automating processes.

This eBrochure includes diverse examples of use cases that can be addressed with analytics applications from Axis and our many partners

Analytics add value in many areas

Find what you're looking for

Find what you need faster during ongoing and forensic investigations. Video analytics based on AI accelerate investigations and enhance operations by automating and streamlining searches. With analytics, you can find what you're looking for in minutes – or even seconds. Our eBrochure FIND WHAT YOU ARE LOOKING FOR offers examples of how analytics can help you achieve just that.

Improve your operational efficiency

This eBrochure focuses on how to use analytics to optimize operational efficiency. Throughout this document you will learn how to improve customer experiences, make better use of resources, enhance and automate processes, and reduce downtime.

Stay in the loop and respond instantly

Get situational awareness for a timely and informed response. You'll be able to rapidly detect, verify, and evaluate events, so they can be handled effectively and efficiently. This is valuable whether you're looking to protect people and places or to improve productivity, efficiency, and cost-effectiveness.

Before you dive in

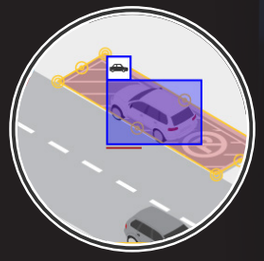
If you want to know more about analytics, check out our Axis analytics eBrochure, which includes the technologies that power Axis analytics.

BROWSE AXIS ANALYTICS eBROCHURE

Enhance **decision-making** and efficiency

Click an image to explore how various types of AI-powered analytics can help you make smarter decisions, automate tasks, and work more efficiently.

The power of object-counting analytics



Unlocking the potential of time-in-area analytics

Taking advantage of license plate recognition and vehicle recognition analytics

The power of object-counting

Analytics focused on object counting typically counts people and vehicles entering or exiting a specific area or passing through a specific point. It provides data on foot traffic, vehicle flow, and the like, but doesn't measure the length of time spent in an area.

By providing precise, real-time data gathered by cameras or other devices, object-counting analytics help businesses and organizations make informed decisions, optimize resource allocation, enhance visitor experiences, and generally improve operational efficiency.

The use cases on the following pages highlight just a few examples of what object counting analytics can do for you. While the list doesn't include every potential use case, it's a fairly comprehensive sample of what you can achieve. As AI and sensor technologies continue to advance, even more possibilities will emerge, offering exciting new opportunities in the future.

Actionable insights that add up

Here are some examples of how you can use object-counting analytics to improve operations, visitor experiences and profits.

Increase sales and enhance visitor experience

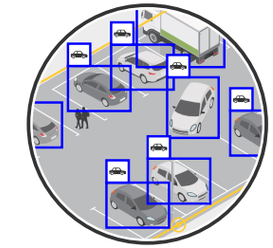
Count people at entrances and exits in real-time. For instance, to help you make decisions about adding or subtracting resources in real time or to adhere to capacity limits.

Count the number of people arriving over time and visualize the aggregated data in dashboards or spreadsheets. This data can help you make informed decisions about resource allocation, optimize visitor flow, manage congestion, develop pricing strategies, assess the impact of marketing campaigns, and evaluate opening hours.

Analyze occupancy rates over time and visualize the data in dashboards or spreadsheets. This information can be used to optimize pricing, staffing, and foot traffic strategies, as well as guide visitors toward less crowded times or areas.

Measure occupancy in different parts of a building over time and visualize the aggregated data in dashboards or spreadsheets to optimize space allocation. This can help improve planning for conference facilities, resource allocation, and temperature control, reducing costs while ensuring visitor comfort.

Count the number of passengers getting on and off transportation. For instance, to optimize routes and schedules to improve customer experience.



Optimize traffic and parking

Monitor pedestrian numbers at crosswalks and intersections at various times and visualize aggregated data over time. For instance, to improve traffic signal timing.

Count vehicles at intersections at various times. For instance, to improve traffic signal timing.

Integrate digital signage software with real-time vehicle occupancy data in designated areas. This can help reduce pollution and improve visitor experiences by making it easier to find available parking spots.

Unlocking the potential of time-in-area

Time-in-area tracks how long objects such as people, vehicles, or animals remain in a designated area. It's useful in industries as diverse as retail for analyzing customer behavior, security for monitoring activity in restricted areas, and wildlife research for studying animal behavior.

Many time-in-area use cases revolve around improving business processes and helping organizations make data-driven decisions that reduce costs and enhance productivity and operational efficiency. The coming pages explore some of the most common possibilities. It's a detailed, but not completely exhaustive, list of how analytics can be used today. Thanks to continuous advancements in AI and sensor technologies, future possibilities are virtually endless. Explore the benefits of using time-in-area analytics to gain insights about: people, vehicles, other objects and animals.

People

Vehicles

Inanimate objects

Actionable insights about people

Here are some examples of how you can use time-in-area analytics focusing on people to improve operations, visitor experience, and increase profits.

Increase sales and enhance visitor experience

Use time-in-area analytics to monitor queues and wait time to improve service and visitor satisfaction. For instance, by opening new checkout lines, or sending personnel to busy areas or to visitors who seem to need assistance.

Monitor visitor dwell time and use the insights to optimize merchandising, product placement, and store layout based on where visitors spend the most time throughout the day. Additionally, live or recorded audio messages can direct visitors to other areas within your facility.

Track the time visitors spend in designated areas to minimize crowding at events, concerts, public gatherings, or exhibitions. By analyzing this data, you can adjust staffing levels, redirect people using audio messages and manage entry or exit points to prevent congestion and ensure a smoother experience for attendees.

Improve patient care and resource allocation

Use time-in-area analytics to manage patient waiting time. For instance, by allocating staff according to peak times to reduce waiting time in hospitals, clinics, emergency departments, and waiting rooms.

Improve logistics, production efficiency, and supply chain management

Use time-in-area analytics to analyze the amount of time workers spend at various stages of the supply chain. This can help you detect bottlenecks and adjust staffing in workstations, or in production lines.

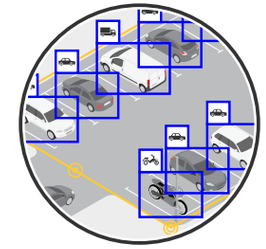
Actionable insights about vehicles

Here are some examples of how you can use time-in-area analytics focusing on vehicles to improve visitor experience, operations, and your bottom line.

Improve traffic management and urban mobility

Use time-in-area analytics to analyze vehicle flow by tracking the duration vehicles spend in specific areas. This data can help optimize traffic signal timing and enhance overall traffic flow.

Identify stationary traffic to address parking violations, congestion, and accidents, or alert drivers to road closures, construction, and other disruptions using audio announcements, flashing lights or similar methods.



Boost parking efficiency and revenue

Use time-in-area analytics to analyze how long vehicles remain parked in restricted areas, such as delivery zones and emergency exits. This helps support the enforcement of time limits and ensures compliance.

Detect vehicles parked in restricted or prohibited areas, enabling the removal and ticketing of those blocking emergency exits, bicycle lanes, or spaces reserved for buses, and the alike.

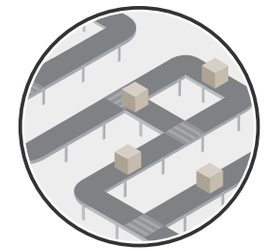
Optimize loading and unloading time

Use time-in-area analytics to monitor the time spent in loading zones. This helps identify issues with loading procedures, resource allocation, or ineffective equipment and bays. This can be valuable for streamlining operations, reducing turnaround time, and mitigating congestion.

Monitor time spent in loading zones to enforce time limits. For instance, to ensure loading zones remain available for their intended purpose.

Actionable insights about inanimate objects

Here are examples of using time-in-area analytics to enhance operations and boost profitability by focusing on objects beyond people, animals, and vehicles.



Improve warehouse operations and production efficiency

Use time-in-area analytics to monitor time spent in various production stages. For instance, to identify delays, improve processes and achieve faster time-to-value, cycle time, and more.

Monitor areas such as emergency exits that need to be kept clear. For instance, to alert staff to objects that should be moved.

Intelligent license plate recognition

License plate recognition (LPR) technology has evolved beyond traditional safety and security applications, now offering data-driven insights to optimize operations like traffic management, parking enforcement, toll collection, and fleet management.

Parking facilities often use a combination of license plate recognition, time-in-area, and object counting analytics for seamless entry and exit, and automated payments. These solutions can also optimize space usage, reduce endless circling, and ensure a smoother overall visitor experience. Additionally, license plate recognition can improve operations beyond parking facilities by helping to locate missing or stolen vehicles, identifying speeding vehicles, and assisting in road toll management. These are just a few examples of its potential uses; there are many other applications as well.

Actionable insights for parking management

Here are some examples of how you can use license plate recognition to improve operations, visitor experience, and profits in parking facilities.

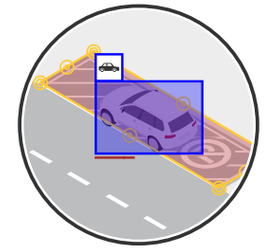
Streamline entry, exit, and payment

Use license plate recognition to optimize entry, exit, and payment processes and increase visitor satisfaction. For instance, by capturing and analyzing license plate information in real-time and using automatic barriers to provide seamless, touch-free access control.

Efficiently manage fleet operations. For instance, by ensuring only authorized vehicles can access parking areas designated for vehicles in the fleet.

Manage reserved parking, valet services, and priority lanes

Use license plate recognition to offer personalized services in high-end facilities. For example, it can help control access to restricted areas, manage priority lanes, assist with valet services for VIP customers, and reserve parking spaces for specific vehicles.

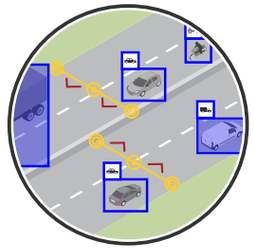


Regulate parking

Combine license plate recognition with time-in-area technology to enhance parking regulation enforcement and enable real-time monitoring of violations. For example, the system can automatically alert parking enforcement personnel when a vehicle exceeds its allotted time. It can also integrate with automated ticketing solutions to streamline the issuance of fines.

Actionable insights beyond parking

Here are some examples of how you can use license plate recognition to improve operations and increase profits in ways that go beyond parking management



Automate toll collection

Use license plate recognition to streamline toll payment. For instance, by integrating license plate recognition with a roadpricing payment system to facilitate traffic flow and reduce congestion at toll plazas.

Manage fleets

Use license plate recognition to simplify vehicle check-in and check-out at harbors, logistics centers, and service areas. It can automatically grant entry to authorized vehicles and prepare goods as soon as a truck arrives.

Ensure logistics schedule adherence by automatically logging each vehicle's entry and exit times.

Track the movement of rental vehicles. For instance, by monitoring their entry and exit times.

Ensure compliance with regulations

Use license plate recognition to identify vehicles not in compliance with regulations. For instance, to assist with prompt enforcement of registration, inspection, and emissions requirements.

Provide special treatment for VIPs

Use license plate recognition to identify VIPs. For instance, to facilitate swift entry and offer other special services that enhance their experience.

Unlock the power of metadata

Harness the potential of superior image quality, advanced processing, and AI for accurate and actionable metadata. But what exactly is metadata? Metadata refers to the detailed information extracted from video content, encompassing scene descriptions, object classifications, and much more.

Transforming video into valuable insights

Metadata goes beyond basic video content by providing rich, descriptive data about what's happening in a scene. Object classifications, for instance, let you differentiate and label key elements – such as distinguishing people and vehicles and their characteristics within the footage.

The Axis advantage

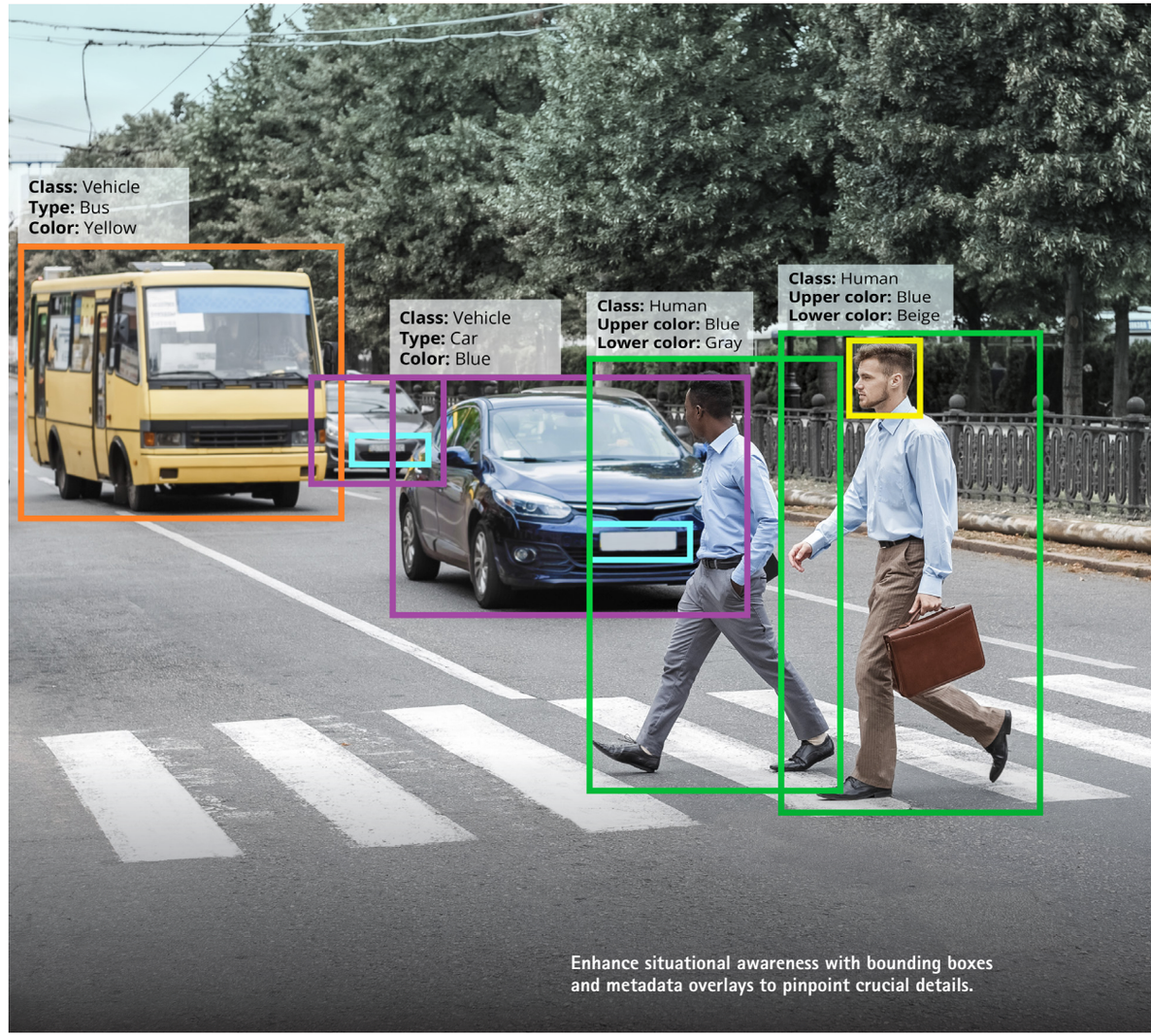
Axis devices, renowned for their outstanding image quality, leverage Axis Scene Intelligence technology to deliver precise, detailed metadata. This high-quality metadata enhances the accuracy and effectiveness of applications, video management systems (VMS), IoT platforms, and dashboards.

Amplifying value through integration

The true power of metadata emerges when it's combined with data from other sensors and cloud services. By integrating information from many sources, organizations can achieve a holistic view of their environments, enabling smarter decisions and more efficient operations.

Explore the Axis metadata monitor

Capture and visualize the metadata stream produced by an AXIS DEVICE HERE.



Enhance situational awareness with bounding boxes and metadata overlays to pinpoint crucial details.

Where is metadata used?

Using metadata to understand the characteristics and content of a scene offers many benefits, especially when there are large quantities of data. The main users of analytics metadata are:

1.Edge applications

Cameras with embedded analytics analyze data at the edge (on the camera). These analytics use filters and rules to process relevant metadata. Automated actions can then be triggered based on predefined thresholds or behaviors. For example, an audio message can play when a person crosses a virtual line set by an operator.

2. Video management systems (VMS)

Video Management Systems uses metadata for object search based on characteristics like color and shape, reducing manual review. In addition, aggregated metadata can be shown in dashboards to reveal trends and patterns.

3. IoT platforms

Aggregated metadata can be combined with data from other sources in the cloud for deeper insights, enabling IoT platforms to visualize trends and patterns through comprehensive dashboards.

4. Second-layer analytics

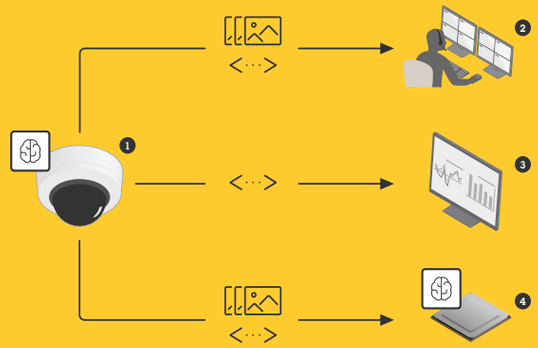
Advanced systems use a hybrid approach, combining edge-based and server-based analysis. Cameras first process and analyze raw data on-site to extract key details. They then send only the relevant metadata to the server for further analysis. This method enables more granular object classifications and reduces bandwidth costs.

Read more about different architectures in the analytics eBrochure.

Creating value in various parts of the system

Scene metadata can be used and refined across various parts of the system to deliver deeper insights to decision-makers and other stakeholders.

1. Edge applications
2. Video management systems
3. IoT platforms
4. Second-layer analytics



LEARN MORE ABOUT AXIS SCENE METADATA

Offering market-leading expertise from decades of experience with AI-based edge processing to work.
Learn more

The impact of quality

Combining superior image quality from purpose-built cameras with AI-powered analysis unlocks rich and precise metadata, revealing critical scene details and driving deeper insights.

Ensuring consistent performance

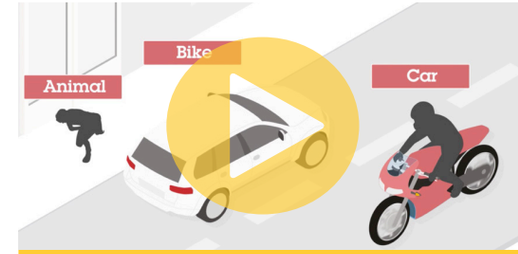
Axis Scene Intelligence technology puts market-leading expertise from decades of experience with edge processing to work. By combining superior image quality and deep learning, crucial details – metadata – can be extracted from video and audio streams. The result is consistent analytics performance with fewer false alarms, even in challenging conditions like low light and busy scenes.

AXIS SCENE INTELLIGENCE

Proactive image monitoring

Axis Image Health Analytics automates the task of image quality monitoring. You will receive notifications when changes occur or quality degrades. It helps you oversee and manage image health across multiple cameras and sites at ease.

AXIS IMAGE HEALTH ANALYTICS



Learn more about AXIS Scene Intelligence here

Privacy in focus

Protecting privacy is a key consideration in any data collection or surveillance system. Ensuring compliance with local regulations and maintaining transparency about data use are essential for building trust and safeguarding individuals' rights.

Safeguarding privacy

Effective solutions should address restrictions on collecting identifiable personal data while adhering to local legislation. It's essential to ensure clear consent for data collection and storage, limiting it to what's necessary for the intended purpose. Measures to anonymize or de-identify personal information should be implemented whenever possible, along with clear communication about the use of surveillance technologies and how personal data is collected, processed, and stored in compliance with relevant laws and regulations.

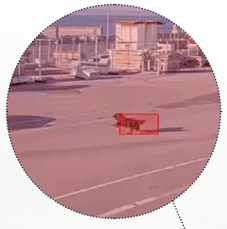
Dynamic masking

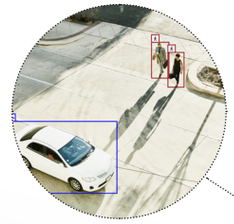
AI-powered dynamic masking can be applied to both moving and static objects, such as humans, license plates, and backgrounds, to help enhance privacy protection. This approach reduces the visibility of sensitive information, supporting compliance with strict privacy regulations.

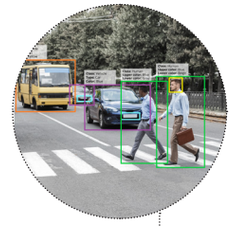
READ MORE HERE

A history of innovation

In 1996, Axis launched the world's first network video camera and changed the landscapeof video forever. Since then, we've been a technology leader, introducing many industry firsts and continuing to drive innovation for a smarter, safer world.







1996 World's 1st **NETWORK CAMERA**

1998 World's 1st **VIDEO ENCODER**

1999 World's 1st network video **SYSTEM-ON-CHIP**

2000 World's 1st edge analytics **VIDEO MOTION DETECTION**

2007 Signing the **UN GLOBAL COMPACT** agreement

2009 1st network cameras with **HDTV, REMOTE FOCUS** and **ZOOM**

2010 World's 1st **THERMAL NETWORK CAMERA**

2011 1st generation **AXIS CAMERA APPLICATION PLATFORM** (ACAP)

2013 Introducing physical **ACCESS CONTROL**

2015 **AXIS ZIPSTREAM** technology

2015 1st **HORN SPEAKER**

2016 **PANT-TILT-ROLL-ZOOM** and **LASER FOCUS** technologies

2017 World's 1st open **NETWORK RADAR**

2018 Axis 7th **ARTPEC** system-on-chip

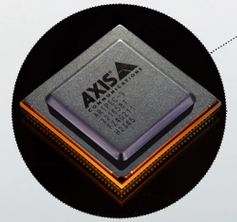
2020 Axis1st deep learning camera with **AXIS OBJECT ANALYTICS**

2021 1st truly open **BODY WORN CAMERA**

2021 Axis 8th **ARTPEC** system-on-chip

2023 World's 1st **RADAR VIDEO FUSION CAMERA**

2024 **AXIS SCENE METADATA**



2024 Axis 9th **ARTPEC** system-on-chip

What's right for you?

Together with our partners, we offer a wide range of flexible and scalable analytics, including:

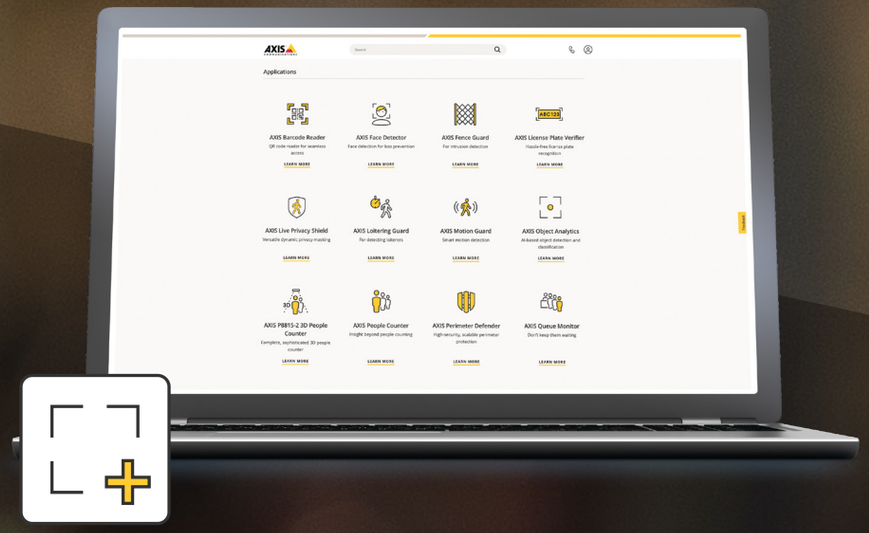
- > **Axis AI-based edge analytics**
- > Partner analytics built on our **AXIS Camera Application Platform (ACAP)**
- > **Partner analytics** built on cloud platforms
- > Fully custom or tailored analytics provided with the support of **Axis Professional Services**

You can browse for analytics solutions from our many partners using the **technology partner finder tool**.

Find the analytics you need

Explore Axis's scalable, AI-powered edge analytics and scene metadata to boost your operational efficiency. Our solutions seamlessly integrate with major video management systems and can be used in hybrid setups with partner applications to meet your precise needs.

Contact your local Axis office to discuss the best solution for your needs.

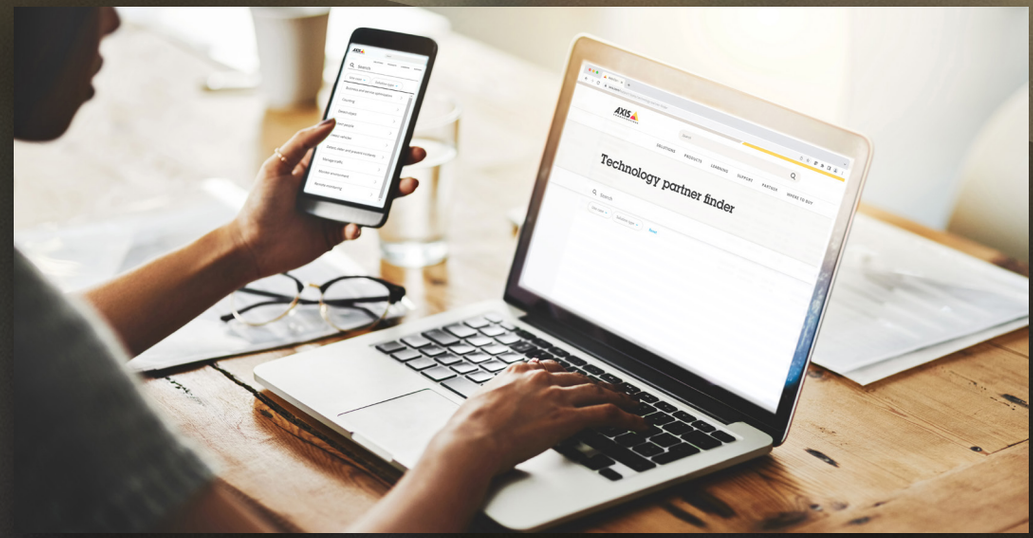


Axis analytics **portfolio**

> See the entire **Axis analytics portfolio**
> **Get in touch** with your local sales office

Technology partner **finder tool**

> Browse for analytics solutions from our many partners using the **technology partner finder tool**



About Axis Communications

Axis enables a smarter and safer world by improving security, safety, operational efficiency, and business intelligence. As a network technology company and industry leader, Axis offers solutions in video surveillance, access control, intercom, and audio systems. These are enhanced by intelligent analytics applications and supported by high-quality training.

Axis has around 5,000 dedicated employees in over 50 countries and collaborates with technology and system integration partners worldwide to deliver customer solutions. Axis was founded in 1984, and the headquarters are in Lund, Sweden.