Introducing Eviden

Expanding the Possibilities of
Next-Generation Stadiums and Arenas

> **Get Started**

an atos business

EVIDEN

At Eviden, we see a future of safe and secure digital stadiums maximizing their revenue potential by unlocking crowd intelligence and leveraging digital solutions.

With over three decades at the forefront of supporting the world's biggest sports competitions, we know a lot about the opportunity that lies in data. With the right approach and partnership, stadium operators can drive end-to-end value creation right across their grounds – from transportation links through to retail points, and all the way to the edge of the playing field!

We provide solutions that allow fans to enjoy all the excitement that live sports and entertainment have to offer, safer and more comfortable than ever, and fully focused on what matters the most – building unforgettable experiences.

A snapshot

57,000 problem-solvers in 45 countries | **€5 billion** revenue | **Trusted partner** for live events and entertainment venues

Protected 6.5K fans and 7K devices for **SuperBowl LIV** at Hard Rock Stadium

Supported **70 million guest experiences** to a world leading attraction

Secured the biggest sports competition on the planet against **4.4m cybersecurity events**

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Our vision for next-generation stadiums

Supporting end-to-end value creation and safety

Value Creation ➕ Safety and Security

At Eviden, we're expanding the possibilities of next-generation stadiums and arenas. We see a future of safe and secure digital stadiums maximizing their revenue potential by unlocking crowd intelligence in combination with digital solutions.

Our digital solutions across the full value chain of stadiums and arenas include:

Retail and E-Commerce	Building Automation and IoT	AI, Data and Analytics	Crowd Intelligence	Safety and Security
Infrastructure, Transport and Logistics	Sustainability	Support, Maintenance and Digital Twins	Cybersecurity	Content Management and Fan Engagement

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Our vision for next-generation stadiums

Personalizing, accelerating and simplifying fan engagement with AI

The challenge:

- Fan experience and communications are often disconnected, leading to lost marketing and sales opportunities, irrelevant upsells and low visitor satisfaction

How our Fan360 AI solution can help:

- **Cross-selling** along the fan journey, including tickets and merchandise
- Increasing fan **upsells** in hospitality and experiences
- Creating new triggers and attributes for more **targeted campaigns**
- **Speeding up** data preparation for campaigns, while scaling easily

Benefits:

- Faster new data use cases (cross-sell, data monetization, etc.)
- Operation within existing cloud: solution built on **Databricks Lakehouse** and open-source technologies
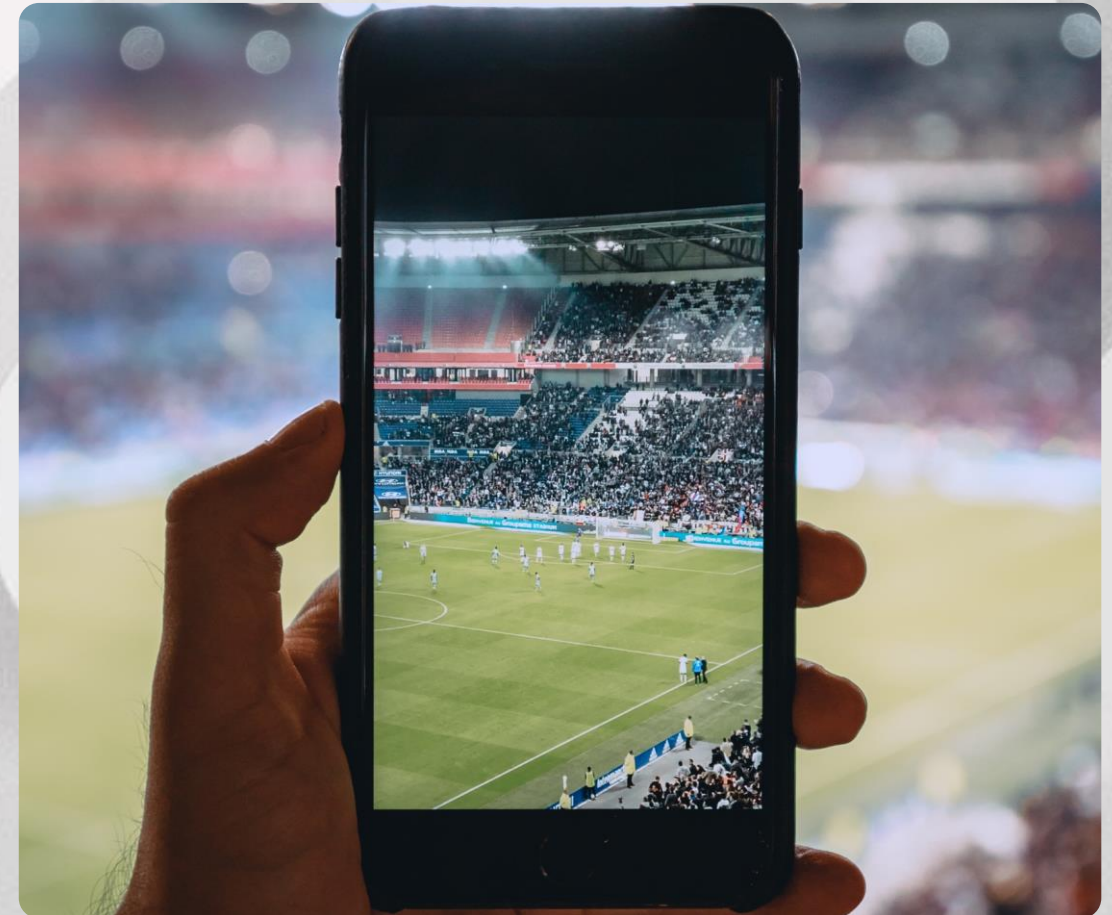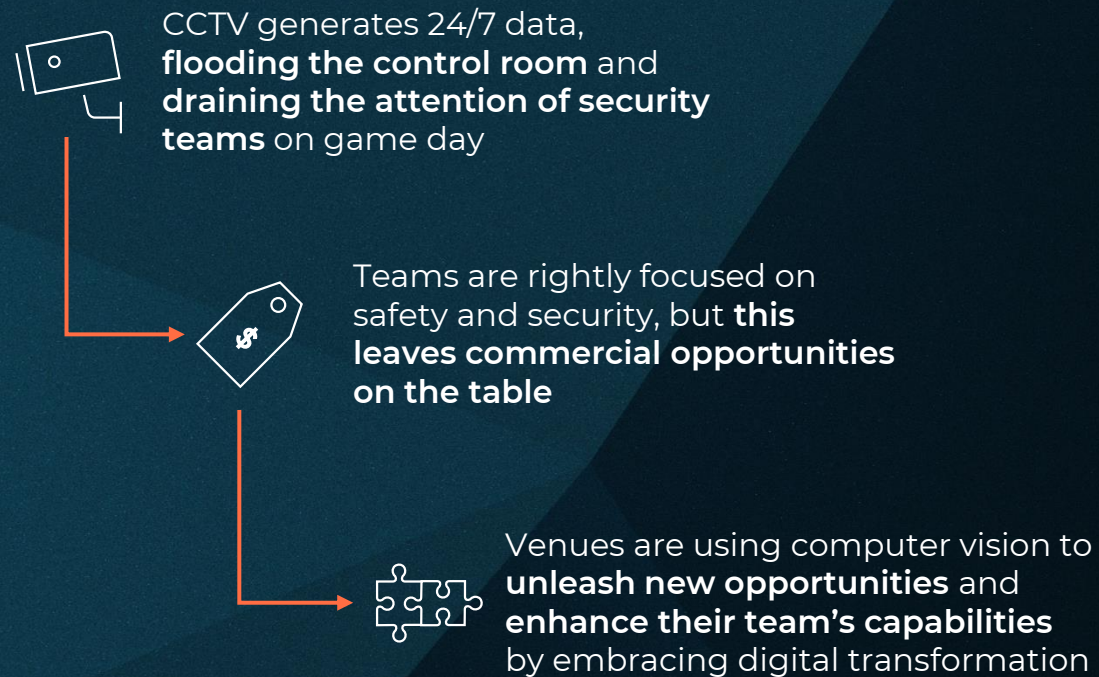

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Our AI-powered video analytics solution

Managing stadiums and their multiple video feeds can be complex and time-intensive

Computer vision empowers your teams to enhance productivity and unlock new commercial opportunities

CCTV generates 24/7 data, **flooding the control room** and **draining the attention of security teams** on game day

Teams are rightly focused on safety and security, but **this leaves commercial opportunities on the table**

Venues are using computer vision to **unleash new opportunities** and **enhance their team's capabilities** by embracing digital transformation

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Our computer vision solution provides end-to-end, customized and scalable answers to your problems

Enable your security teams to prioritize critical matters – while maximizing your existing infrastructure

- We provide a **scalable, end-to-end hardware and software platform** which makes monitoring tasks easier for your teams, freeing up time to **respond to issues on the ground**

- Our solution benefits from over 25 years of active development – enabling us to deploy **solution bundles out-of-the-box** and accelerate time to value

- By leveraging our pre-trained & **customizable AI models**, your teams can excel in their roles – with added **bandwidth for new ideas**

## Scale customer experience and new commercial use cases

- Our approach combines **business and technology expertise** to accelerate new ideas to implementation

- In addition to our range of existing use cases, we work with clients to co-create **tailored solutions to their unique challenges** – benefitting from fresh insights from our **global expert labs**

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We are ready to deliver impact
Boosted by our network of channel partners, we work together with you to customize our models, define new use cases and drive operational efficiencies

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The more you can see, the more you can do: clearing your team's path to success
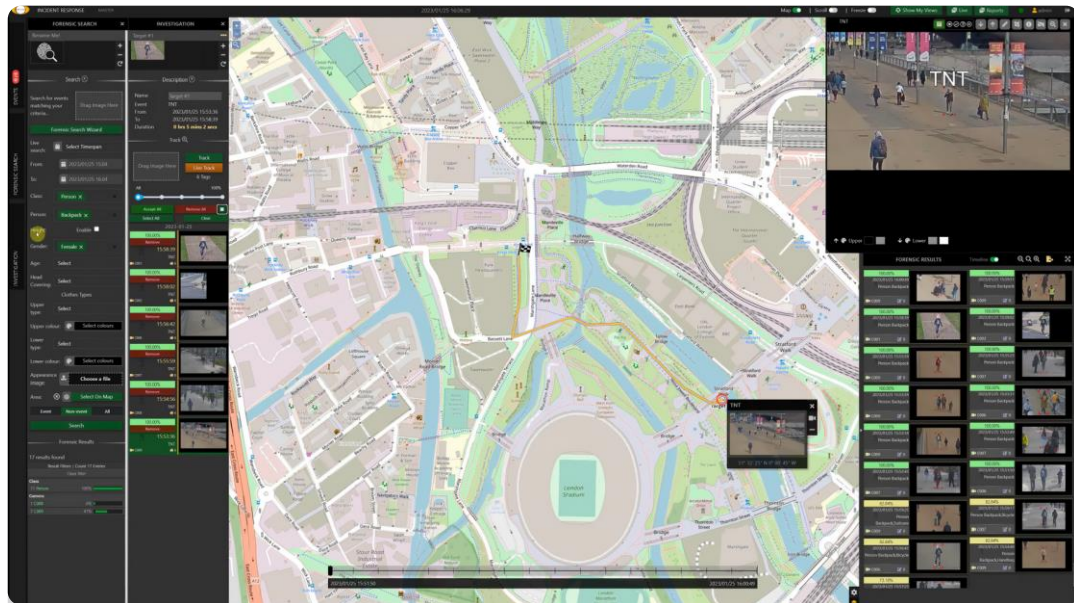
Forensics pane
Search by location, time, type, face, ANPR, or appearance

Investigation pane
Link results across multiple cameras

Map pane
See alarms, search results and tracks on a GIS map

Results pane
Review forensics results in seconds

Incident Response

What is our solution?

- **VISuite monitors large networks of cameras** and tracks objects in real-time

- The AI solution provides **highly customized object classification, detection and tracking** capabilities for projects including niche requirements

- It uses your **existing infrastructure** and team to enhance their effectiveness and create new opportunities for **value creation**

How does it work?

- Advanced trackers and AI detectors follow **every individual, vehicle or object**, generating rich metadata unique to each element in the scene

- This data provides a feed to VISuite's engines, which decide on whether to **alert an operator to an incident** based on pre-defined rules

- These include our patented **Scenario-Based Rule Engine**, used for tailoring solutions where specific scenarios are needed

- Operators harness advanced **investigation and forensics** tools, defining search criteria based on all captured metadata live or post-event

Computer vision in action
Our computer vision solution can unleash value across the stadium perimeter

We work closely with clients to identify operational needs and unlock commercial opportunities with novel use cases – the sky is the limit!

Stadium perimeter
Intrusion detection
Pan, Tilt & Zoom tracking
Geographical alerts

Stadium entrances
Face recognition
Watchlist/access control

Stadium and VIP areas
Watchlist
Crowd monitoring
 proximity
Alerts and reports

Lobbies, hallways and ticketing
People count in area
People ingress/
 egress reports
Heatmaps
Overcrowding alerts
Queue monitoring
Crowd panic
Restricted area intrusion

Bridges and visitor access
Pinch point people counting
Heatmaps
Proximity monitoring

Entrances
Face recognition watchlist
Facemask detection

Stadium approach
People counting
Overcrowding queue
Monitoring
Crowd panic

Transportation links
People counting
Queue monitoring
Abandoned object
Face recognition watchlist
Forensic search and tracking

Retail units
Customer counting
Passing trade conversion reports
Heatmaps

Roadways and vehicle access
Vehicle intrusion
Congestion
Illegal stopping/parking
Taxi bay monitoring
Vehicle type reports

Parking
Congestion
Parking bay occupancy
Illegal parking
Illegal turn/direction
Parking vehicle type
Counting license plates' time in area
 & overstay watchlist

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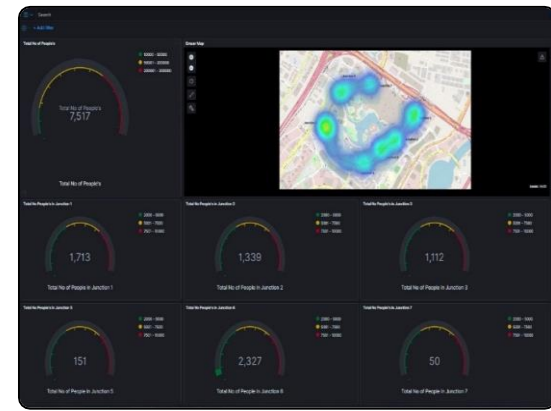
Computer vision in action

Venue management

Computer vision can unlock critical insights into customer journey, venue occupancy and queue management – with substantial impact on customer experience and revenue.

Data analytics has proven to be a rich source of business insight. The rate different sites are visited by customers, the timings and scale of peak times, and the overall footfall of visitors, are all examples of data that can be collected and displayed in a clear and understandable format.
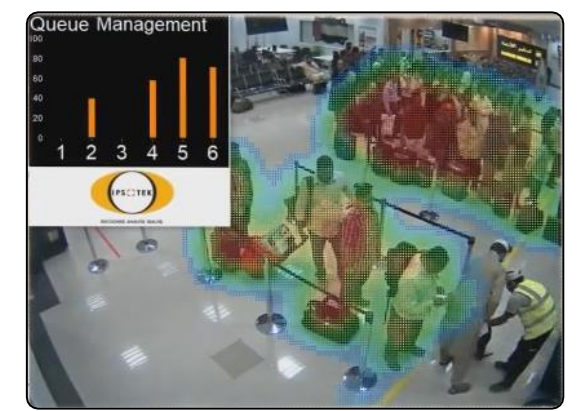
This level of insight can prove critical to aid decision-making on staff management, stock cycles, and even the placement of advertisements – leading to optimized daily operations and enhanced fan experience.

Crowd density heat maps and
crowd counts per location

Queue management heatmaps
and count per queue

Heatmaps in retail stores
identifying busy zones and aisles
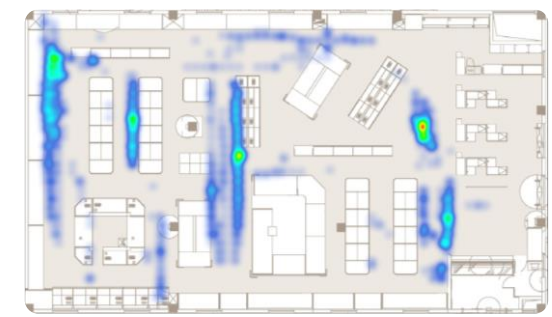
Case study: Major tourist attraction

Project
Intrusion detection covering water and land sides including challenges from transparent structure and large tide variations

Solution
Advanced video analytics combined with thermal imaging cameras, placed at 75 meters above ground level

Benefits
• Reduced man guarding costs
• Reliable intrusion detection with low level of false alerts

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Computer vision in action

Threat analysis

AI video analytics has the power to boost the functionality of CCTV, both from security and operational standpoints. It enables event management and security staff to benefit from automatic early notifications of threats, challenges and incidents, making monitoring and responding to events easier, quicker and more cost-effective.

A few of the scenarios available to video analytics:

- Intrusion and loitering detection
- Tailgating at entrances
- Abandoned vehicle detection
- Accident detection
- Forensics and investigation for missing person
- Smoke detection
- Tag and track
- Aggression detection
- Panic detection
- Abandoned bag / object detection

Tag and track

Aggression detection

Panic detection

Abandoned bag / object detection

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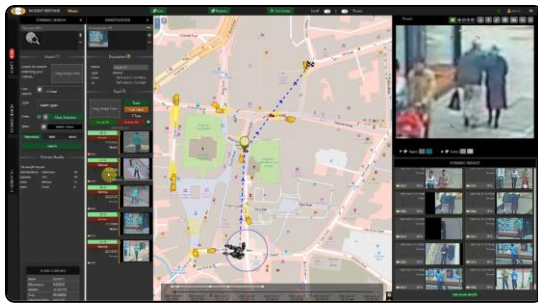
Computer vision in action

Crowd management

Modern crowd counting algorithms demonstrate impressive accuracy in both open and pinch-point areas. Our solution relies on an AI detector capable of identifying and classifying objects within scenes. These overview cameras, equipped with a wide field-of-view, excel in densely populated open areas. Additionally, the neural network of the AI detector can be trained to recognize scene-specific objects, ensuring they don't interfere with the people count.

Real-time metrics are vital for assessing crowd density, aiding staff in identifying overcrowded areas. These metrics can also be used retrospectively to inform decision and **improve visitor experience**. Commercial benefits include optimizing rental rates for cafes, restaurants and shops. In this example, AI detectors accurately track specific objects, like people (green), backpacks (blue), and handbags (purple), ensuring accurate crowd counts, even in busy areas.


Case study: Major entertainment arena

Project
Accurate people counting particularly when sudden influxes are experienced during events

Solution
A flexible database tool allowing the client to determine peak periods and total occupancy figures

Benefits
- 99% counting accuracy
- Efficient queue management based on footfall data
- Strict health and safety regulations maintained based on total occupancy figures
- Manual counts eliminated, resulting in decreased operational time and cost saving

To gauge area **occupancy**, we use pinch-point crowd counting at all entrances and exits. This method tracks individuals as they enter and exit, providing data for both area occupancy and traffic flow assessment between transition areas.
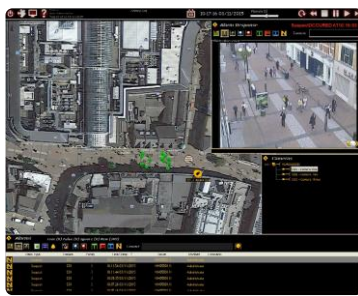
Early alerts of **overcrowding** can help operators address any risk of crushing or an unruly crowd developing. Our solution offers precise crowd flow data and issues warnings when crowding reaches a predefined threshold. This real-time monitoring is invaluable for places like train platforms, ticket gates and queues.

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Computer vision in action
Commercial opportunities

Discover the wealth of commercial benefits unlocked by our computer vision solution. These include:

- Enhanced gate line flow to keep customers on-site longer
- Reduced waiting times, leading to enhanced merchandizing and refreshment sales
- Optimized staffing for increased point-of-sale throughput and capacity planning
- Live data for real-time management of concession stands, diverting customers as needed
- Data analytics for store planning and product placement
- Data analytics for insights into footfall and demographics
- Reduction and faster investigation of loss, theft, and damage, freeing up staff to enhance the retail experience
- Aids in potential reduction to insurance and service costs (fire, policing and health)

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Our end-to-end capability for stadiums and arenas

Complex challenges require solutions yet to be imagined

It takes imagination and inventiveness to make hard things seem easy for our clients and their clients.

Crowd intelligence

We enable you to understand crowd behaviors in real time, actively managing them towards revenue opportunities and understanding threats.

#computervision

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Our end-to-end capability for stadiums and arenas

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Securing your events from cyber threats

We are a trusted partner in digital security for some of the world's biggest sporting events. We know what it takes to help you secure your value creation and guest experiences.

#digitalsecurity

Our end-to-end capability for stadiums and arenas

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Guest engagement

We help you engage with your guests. Securing your value creation with personalized renewals, up-sales, subscriptions and memberships and giving you the opportunity to personalize guest experiences.

#guestexperience

Our end-to-end capability for stadiums and arenas

Complex challenges require solutions yet to be imagined

It takes imagination and inventiveness to make hard things seem easy for our clients and their clients.

Threat detection and response

We help your team see the threats to safety and security they may miss. Making your response quicker, easier and more cost effective.

#transformation

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Our end-to-end capability for stadiums and arenas

Complex challenges require solutions yet to be imagined

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Predictive maintenance and support

We help you ensure your venue is always at its revenue generating potential by proactive monitoring of key infrastructure and using AI for predictive maintenance

#AI

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Ready for kick-off?

Our team of qualified data experts is ready to talk through your business needs and develop tailored digital use cases to drive business value and visitor satisfaction for your venue.

Take the first step and **contact us**[1]. Our friendly AI and Business Computing representatives will be in touch without delay!

Connect with us

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About Eviden[1]

Eviden is a next-gen technology leader in data-driven, trusted and sustainable digital transformation with a strong portfolio of patented technologies. With worldwide leading positions in advanced computing, security, AI, cloud and digital platforms, it provides deep expertise for all industries in more than 47 countries. Bringing together 55,000 world-class talents, Eviden expands the possibilities of data and technology across the digital continuum, now and for generations to come. Eviden is an Atos Group company with an annual revenue of c. € 5 billion.

About Atos

Atos is a global leader in digital transformation with 107,000 employees and annual revenue of c. € 11 billion. European number one in cybersecurity, cloud and high-performance computing, the Group provides tailored end-to-end solutions for all industries in 69 countries. A pioneer in decarbonization services and products, Atos is committed to a secure and decarbonized digital for its clients. Atos is a SE (Societas Europaea) and listed on Euronext Paris.

The purpose of Atos is to help design the future of the information space. Its expertise and services support the development of knowledge, education and research in a multicultural approach and contribute to the development of scientific and technological excellence. Across the world, the Group enables its customers and employees, and members of societies at large to live, work and develop sustainably, in a safe and secure information space.