XOVIS

Rethinking People Flow

The Art of
People Counting

March 2022 – Motor Webinar

About Xovis

+200.000 sensors

+140 employees

100 airports

250 partners

Museums

Airports

Smart Building

Retail

Transportation

Cruise Ships

Amusement Parks

Public Spaces

XOVIS
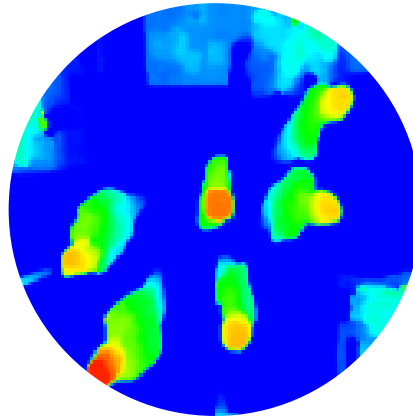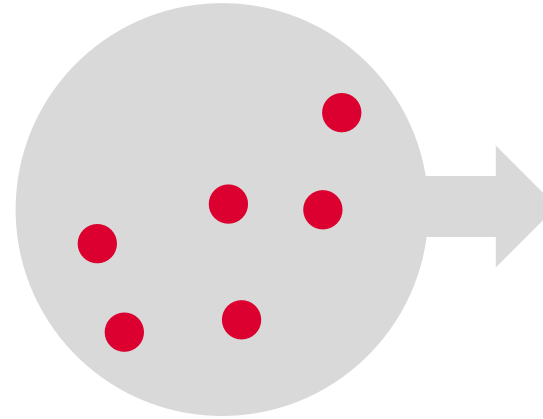
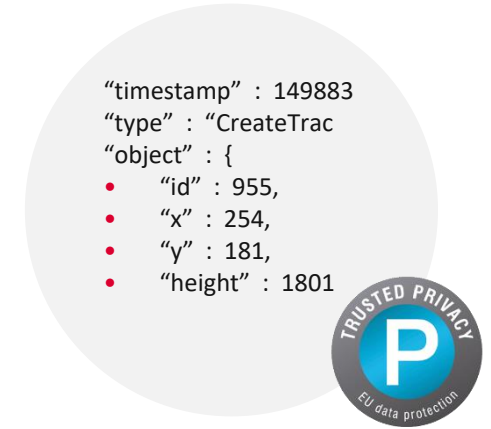# How does our technology work?

Mounted on the ceiling, the sensor captures a 3D image from up to 6 meters away

Embedded within the sensor, Xovis AI analyzes 3D shapes

The sensor's AI detects people and tracks movement with 99% accuracy

"timestamp" : 149883
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"object" : {
- "id" : 955,
- "x" : 254,
- "y" : 181,
- "height" : 1801

TRUSTED PRIVACY
P
EU data protection

Metadata is exported with guaranteed data privacy (no video stream)

Case Study

XOVIS

Museum of Opera of Saint Maria of Fiore

SITUATION

The Museo dell'Opera del Duomo in Siena needed a system to monitor the visitors present in each area of the museum complex – in real time. The ticketing and surveillance staff wanted to manage visitor flow by efficiently staggering the entrances in an orderly and planned manner.

CHALLENGES

Parts of the staffed environments have very limited capacity and counting-accuracy close to 100% accuracy is of the utmost importance. Having real-time data is an extremely important necessity as well for this use case.

SOLUTION & BENEFITS

Thanks to the information gathered with Xovis technology, the client has been able to profit from more efficient staff management and, in turn, has been able to provide a smoother and more pleasurable customer experience.

People flow management provides a tool to minimize cumbersome queues and gatherings in spaces where many art pieces are exhibited, allowing for unobstructed viewing of each delightful work of art.

Access full case study: Museum of Opera

How we can support you:

Visitor Data & insights
- <u>Control visitor flow</u>
- <u>Queue monitoring</u>
- Trend analysis
- ...

Management & marketing
- <u>Visitor demographics</u>
- <u>Campaign insights</u>
- <u>Staff optimization</u>
- <u>Cleaning on demand</u>
- <u>Optimize heating & cooling costs</u>
- <u>Digital signage solutions</u>
- ...

Safety & security
- <u>Live Occupancy for staff and visitor safety</u>
- <u>Crowd management</u>
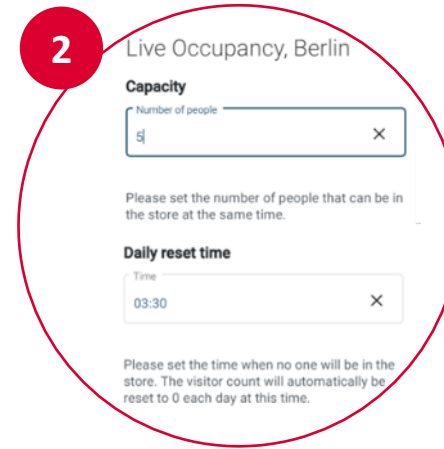- ...

Live Occupancy for staff and visitor safety

Government regulations **dictate the number of people allowed per square meter**. Noncompliance risks high penalties and the health of visitors. Manual counting is costly and prone to errors.

Our people counting solutions support you in:

1

2

Live Occupancy, Berlin

Capacity

Number of people
5

Please set the number of people that can be in the store at the same time.

Daily reset time

Time
03:30

Please set the time when no one will be in the store. The visitor count will automatically be reset to 0 each day at this time.

3

Tracking people in real time with highly accurate sensors

Setting **individual capacities per hall** to reflect a museum's capacity

Displaying **live occupancy** in any language

Control visitor flow across your museum

Museums offer **exhibitions across multiple floors and buildings**. It is not possible to guide visitor flow in real time and distribute visitors evenly across all exhibition rooms unless you have **accurate – and live – visitor data**.

Our people counting solutions support you in:

1

2

3

Collecting accurate **user data per exhibition room**
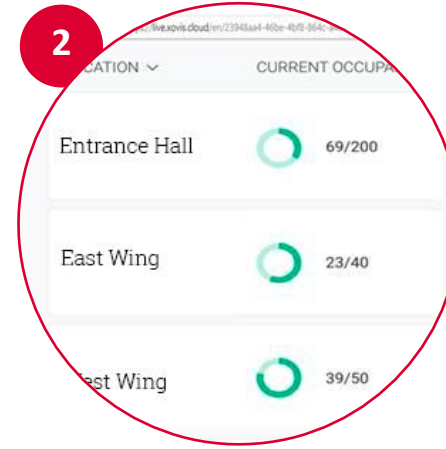
Providing real-time occupancy levels of all exhibition rooms

Providing **online access** to current exhibition room occupancy levels

Know – and predict – your queues

Having enough staff available does not help serve the customer if you don't know when and where to put them. **Allocate the optimal number of staff** to the right checkout **at the right time.**

Our people counting solutions support you in:

1

Measuring queues in real-time

2

Predicting queues based on historical data to plan operations better

3
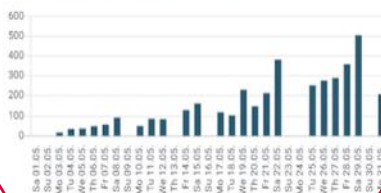
Make sure to **not lose customers** queuing

Track marketing success

Benchmark the success of your marketing campaigns and exhibitions **with visitor numbers and conversion rates.**
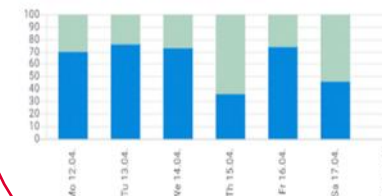
Our people counting solutions support you in:

1 Visitors- Timeline

2 Gender - Timeline

3 Conversion
28%

Tracking the changes in **visitor data** to validate your campaigns

Understanding **gender dynamics** related to campaign types

Improving **conversion rates** with effective marketing campaigns

Digital signage solutions for visitor communications

Digital signage solutions are flexible and can show any content. **It is, however, difficult to personalize messages to the viewer of the screen**. By personalizing engagement, the visitor experience can be enhanced.

Our people counting solutions support you in:

1

2

3

Recognizing the demographics of the visitor in real-time

Displaying content according to **gender and group size**

Enhance visitor experience by displaying group and gender specific information

Base cleaning schedules on actual usage

Cleaning sanitary infrastructure such as toilets and showers **incurs considerable costs**. **Reduce overhead** with an effective way of checking **whether these facilities were used or not** prior to a cleaning team's arrival and their initial assessment.
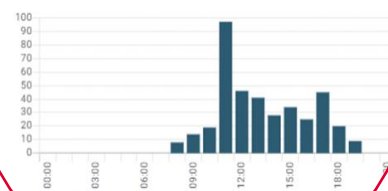
Our people counting solutions support you in:

1

Reviewing actual use of the toilets/showers with 99% accuracy

2

Visitors - Timeline

Empowering managers to reduce costs by cleaning only when necessary

3

Improving visitor satisfaction by keeping batchrooms clean

Plan campaigns based on demographics

Museums advertise their exhibitions. However, they usually lack **extensive visitor data**, making **targeted marketing campaign**s difficult.

Our people counting solutions support you in:

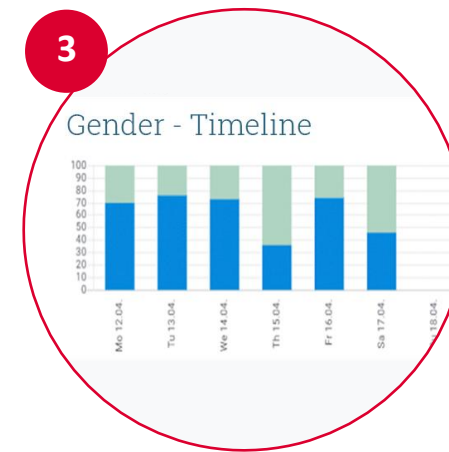**1**

Tracking visitor numbers reliably and in real time

2

Visitors- Timeline

Tracking the changes in **visitor data** to validate your campaigns

3

Gender - Timeline

Understanding which **gender** is more attracted by your exhibition

Optimize heating & cooling costs

Heating and/or cooling space that isn't used not only results in higher-than-necessary costs but is also bad for the environment. **Know where people are at**, when and for how long in order **to heat and cool in alignment with actual needs**.

Our people counting solutions support you in:

Measuring how many people are in a certain area of the building

Integrating the data into the **building mgt system** to adapt cooling/heating
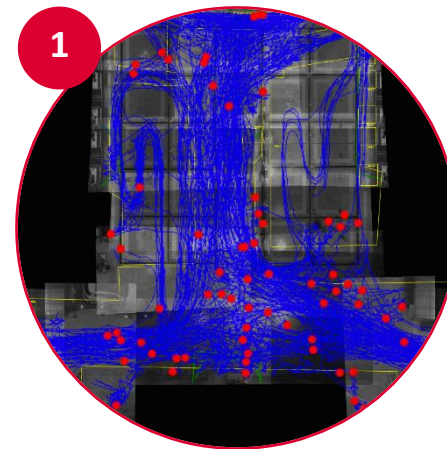

Reducing infrastructure costs with data-driven insights

Crowd control and emergency planning

The number of people at exhibitions, events or openings is often limited via regulations to avoid overcrowding and dangerous situations.

Our people counting solutions support you in:

1

Ensuring the safety of visitors through real-time data access

2

Basing emergency evacuation protocols on **real-time data**

3

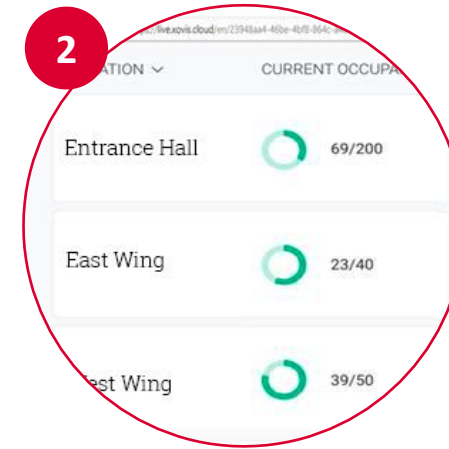**Improving the venue layout** for the coming years to reduce costs

Simplify shift planning

Shift planning is demanding, and there are few insights available to simplify the planning process. Make sure you have **insights based on accurate visitor data** and not assumptions.

Our people counting solutions support you in:

1

Visitors- Timeline

2

CURRENT OCCUPA

Entrance Hall   69/200

East Wing   23/40

ast Wing   39/50

3

Understanding **visitor numbers** throughout the week & day

Organize staff based **on live occupancy** and **expected visitors**

Reducing costs and **improving visitor satisfaction**

Thank you!