Enriching Travel Experiences **With AI**

ZENSORS

Travel Demands for the Digital Age

Savvy passengers expect on-demand experiences and a culture of convenience. Zensors gives airports the tools they need to develop a frictionless passenger experience for the mobile first era. The Zensors platform allows Airports to collect data and automate key processes while also providing critical business intelligence to make data driven decisions.

Zensors is a one of a kind platform that is able to collect and aggregate high fidelity data from customer interactions in the physical world and provides the foundation on which businesses that manage a large physical footprint can firmly build a comprehensive data strategy.

A Tool For Tomorrow's Airports

Spun out of the world-renowned Carnegie Mellon University, the Zensors team brings deep experience in applied AI to the world of aviation.

The airports of the future will become a lot smarter and airport management will have A/B test experiences, provide real time infromation, and continually innovate to make the experience easier and more enjoyable.

Zensors is the only platform that serves to improve not only passenger experience but also Operations, Process Management and even Air Service Development.

The Zensors platform is designed to be used by various teams across an orginization with the ability to provide each of the teams with access to a unique dataset that was previously painstakingly complicated to collect.

Software Defined Sensors via Existing Cameras

Airports spend hundreds of thousands of dollars on camera infrastructure used for security. With Zensors AI software, airports can leverage that existing hardware investment to unlock huge swaths of data that would otherwise be inaccessible.

The Zensors AI-powered vision technology turns every camera into a software defined sensor by allowing you to ask questions in plain english and get meaningful metrics back in return. This allows you to create a smart airport without the need for any new hardware infrastucture.
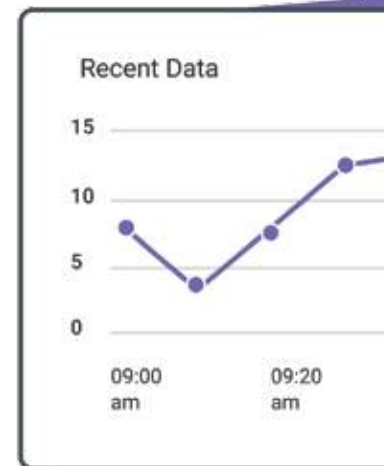
Works with Several Camera Brands

Zensors can work with a wide range of existing security camera systems. Most modern IP cameras that support ONVIF are compatible with Zensors. The platform also supports HTTPS, FTP, RTSP and several proprietary camera protocols. Zensors also has deeper integrations.
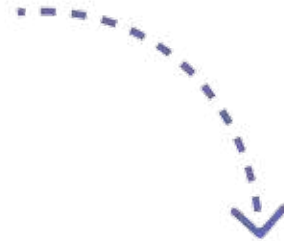
1 Pick a camera

4 Your sen

Recent Data

HIKVISION   **alhua** TECHNOLOGY   **Genetec**   **AXIS** COMMUNICATIONS

2 Ask your question

Enter your question (44/100)

How many people stop by Columbia store?

...sor is live!

- 16 people

10:47am, May 7 2019

| 09:40 am | 10:00 am | 10:20 am |

3 Additional settings

Select Answer Type

○ Count   ● Yes /No

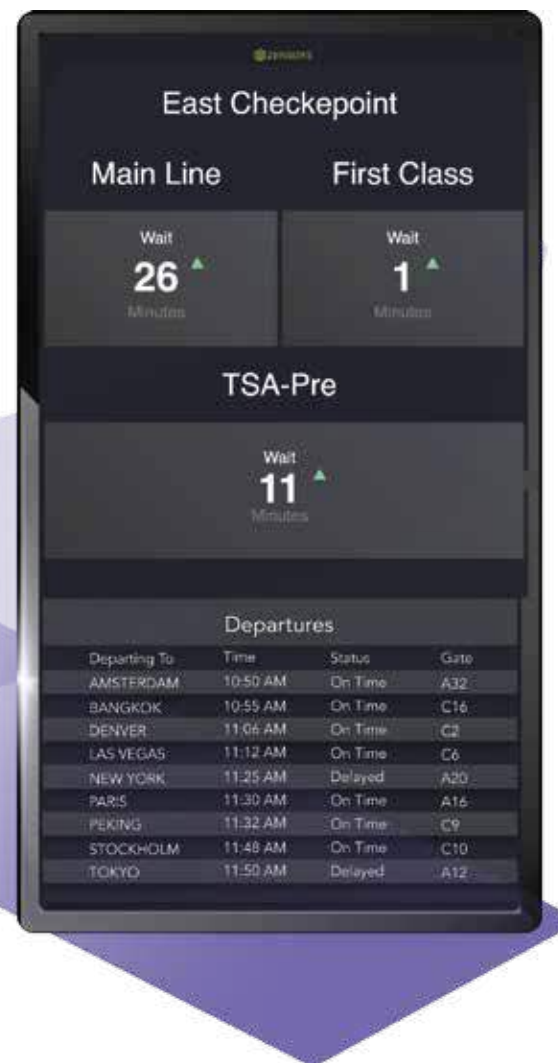Select Answer Frequency

Every 5 mins ▼

CISCO   UniFi™   LENSEC   ◆FLIR

Line Management

For better or worse, much of our time as travelers is spent waiting in a queue. Zensors line management AI can help ease the stress by delivering up to the minute data on wait times for security, concessions, ticketing and other services across the airport.

Capabilites

- Track number of active counters that have an attendant at checkin

- Track number of people in each line even for unstructured situations

- Get accurate estimated wait times based on the rate of passenger flow and number of open counters.

- Track the numer of active lanes at a security checkpoint

- Alerts on special situations like extreme line overflow

- API to push real-time wait times to a website or mobile app

Benefits

- Improve security checkpoint staffing

- Enhance customer experience to be more stress free

- Enforce waiting performance related service KPIs

- Dynamically optimized check-in counters and operating hours.

- Provide queue & wait time data as a service to airlines as part of the counter rental

Optimizing Concessions

Concessions are a core aspect of an airports experience and profitability. Today, they can have everything from shops and restaurants to spas and exotic one of a kind attactions. The Zensors platform is a key tool in helping you understand consumer behaviour at a per store level and adapt store layout, time operation and promotions to help maximize non-aeronautical revenue per passenger.

Capabilites

• Recover underutilized amenities and terminal areas.

• Optimize real estate rental pricing based on actual customer traffic patterns

• Create the correct balance between retail, amenities, and other services

Benefits

• Get real time counts on the number of people walking in and out of each retail store

• Track the number of tables occpied at various restaurant.

• Broadcast stores that are open/closed & restaurants wait times

• Get alerts on excessive crowds gathering in unwanted locations.

This Week

200
People entered

14 min
Avg seating duration

Parking & Curbside Management

By measuring activity in landside loading zones, transport managers can proactively deploy taxis and shuttle buses before demand spikes. Zensors can unlock data to help you spot trends on a minute-by-minute basis. Passengers then enjoy the benefits of shorter lines and less idle time at the curb.

Capabilities

- Zone or individual spot level space availability for large surface parking lots.
- API connects real time parking data to apps.

Real-Time Parking Report

Zone A
10/19 Open
Zone B
17/33 Open

- Detect vehicles parked in no parking zones and curb side.
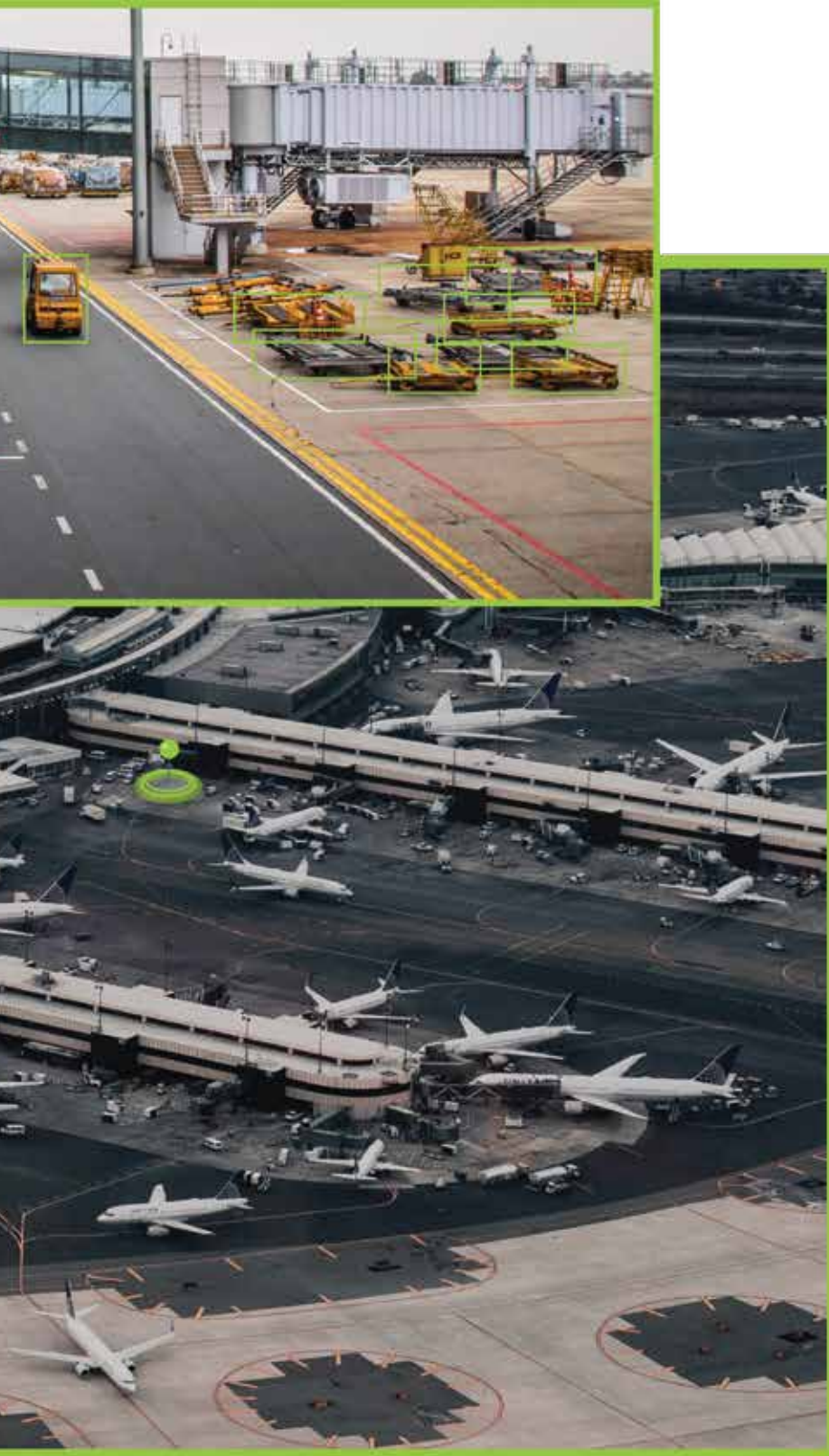- Manage taxi lines and ride share pickup and drop off zones.

Live Asset Localization

A variety of large and small assets are constanly needed and being moved across the airport. Tagging or digitizing large assets is an expensive proposition but Zensors can use your camera system to find and relay the location in real time of individual assets across various parts of the airport to speed up operaitons.

Capabilities

• Real time location of all parked luggage tugs.

• Locate stray luggage carts in the airport and parking terminal.

• Automatically adapts to work outdoors in varying lighting conditions.

• Safety enforcement, around apron safety lines.

• Real time tracking of airside operations at boarding gate.

• Easysily locate wheelchairs / scooters or other equipment inside the terminal building from a mobile device

"We're constantly looking for ways to improve the passenger experience, especially with the use of emerging technologies. We know security can be a frustration for travelers, and having wait estimates can help set expectations and aid in planning trips."

Pittsburgh International Airport CEO Christina Cassotis

Pittsburgh International Airport

The Problem

How can the airport provide passengers with accurate wait time estimates for the main, alternate, business-class, and TSA-Pre-Check security checkpoints?

Zensors Solution

Using existing camera infrastructure and new, off-the-shelf cameras, our AI was able to easily measure the flow of passengers through the security line and calculate a wait estimate, all in real time.

End Outcome

Now passengers and the airport management have up to the minute data available 24/7 on-the-go via the airport website and landslide on FIDS displays.

Deployment Time

Zensors deployment is quick and painless and took just 3 weeks to go from the initial proposal to a running AI system.

Zensors Airport Brain

On the web, collecting data is as easy as pasting a few lines of code. Getting these types of analytics for physical spaces is much more challenging.

Collecting information is only one half of the equation. Zensors makes it simple to get that data to where it needs to go.

The Zensors dashboard builder allows you to create code-free displays of live information. From security to concessions, dashboards give passengers the heads-up they need to have a stress free experience.

For more sophisticated experiences, our API allows for the creation of mobile experiences enriched with real-time data.

Our REST based API connects Zensors data to your BI, Data Viz, or other web based tools. CSV downloads ensure seamless imports.

Executive-ready weekly reports keep stakeholders in the know. Deeper insights shed light on peak times, days, and utilization statistics.
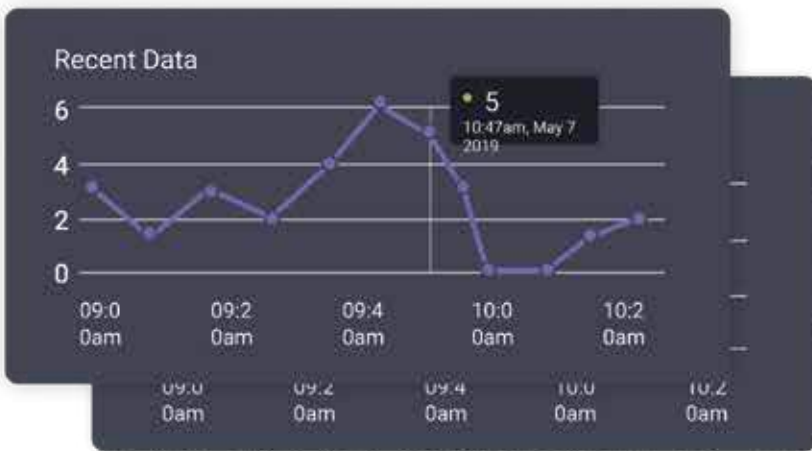
The Zensors brain platform allows executives to access critical real time airport operations information from a browser on desktop, mobile phone or tablet

Our web based dashboard builder allows you to display real-time data on displays, websites, and more. No code required.

Built-in charts & analytics engine

Recent Data

Set up custom real-time notifications based on sensor data to give teams a heads-up the moment they need it.

ZENSORS
8/24/2019

Alert: Gate A75
At 5:30 PM EST. Flight boarded. Gate empty and ready for cleaning.

Details   **Ignore**

Notes

Notes

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