CymbIoT

Making IoT Smarter

Smart Airport Solution

About CymbIoT

CymbIoT for Smart Airports

Operational Scenario

Why CymbIoT?

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Airport Management Main Threats

Crime

- Assault
- Smuggling
- Theft
- Bribes

Terrorism

- Bomb threats
- Hostage situations
- Sabotage
- Shoot-out

Disruption

- Lost commuters
- Lost luggage
- Flight delays
- Weather

The Challenge

Airport Management Unique Challenges

Accessibility

Threats emerge from both inside & outside the facility, and can involve multiple points of contact.

Change

Threats are always changing (new tech, new contraband, new threats…)

Mobility

An airport is designed to facilitate movement, making it difficult to track threats and risks.

Complexity

Threat management requires integration of human elements, technology, procedures, and Intelligence.

The CymbIoT Solution

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An **off-the-shelf IOT management product** that provides cities and enterprises with **rapid integration** of new & existing sensors and systems for **efficiency**, **security** – and **rapid ROI**.

The CymbIoT Offering

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Product, not Program

Market-available, off-the-shelf product with over 50 IoT use cases.

Immediate ROI

Immediate ROI for cities and enterprises via integration of existing systems and sensors within 14 days

Flexible

Flexible integration engine to support any sensor and system:

- 70+ formats supported
- Up to 14 days for deployment of new format

Tested & Proven

Scalable & Robust architecture supporting any kind of deployment- Cloud & on premise.

CymbIoT C&C Core Features

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Maps

Operational GIS dynamic navigation maps.

Scalability

Endless connectivity with standard COTS HW.

BI Data Fusion

Real-time data & operational fusion of all systems.

Advanced VMS

Internal VMS and 3rd party video support.

Analytics

Video, Audio & Data Analytics turn data to triggers.

Automation

Flexible process automation wizards.

Architecture

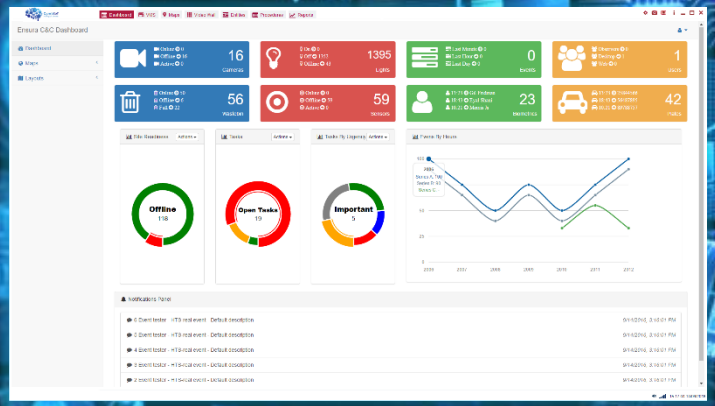
Hybrid cloud and on premise deployments.

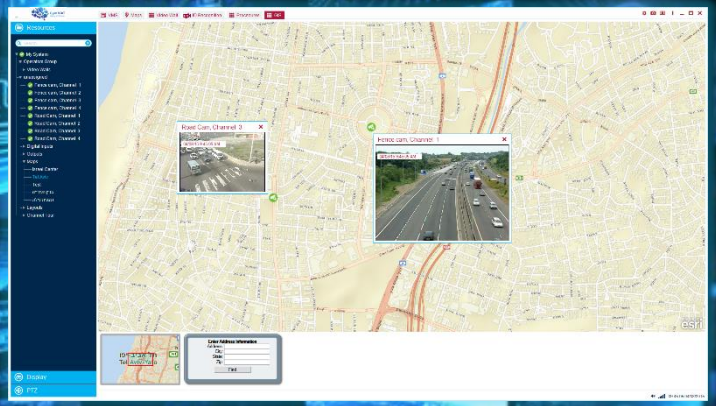
Agnostic

Integrate any 3rd party element.

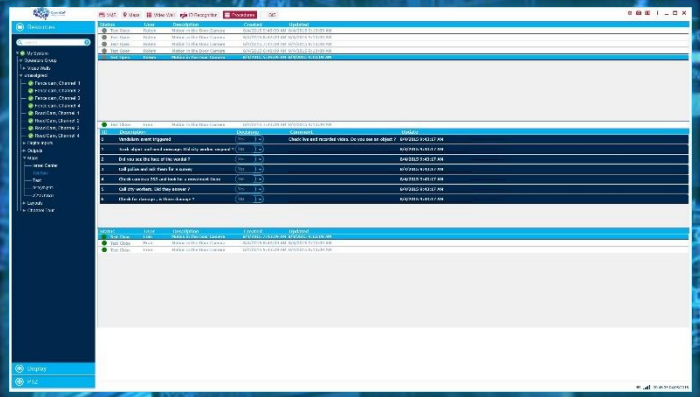
Customization

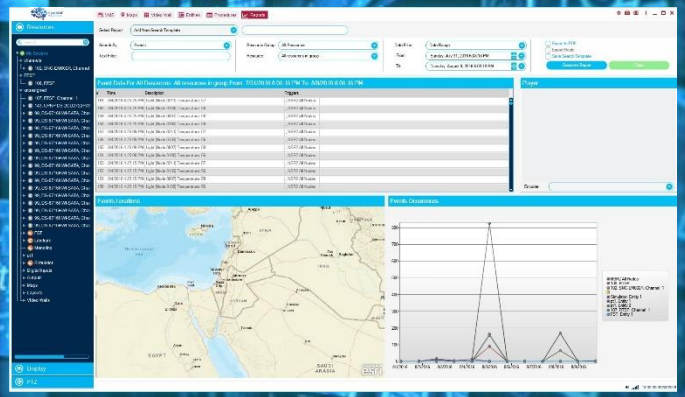
On the fly UI design per need.





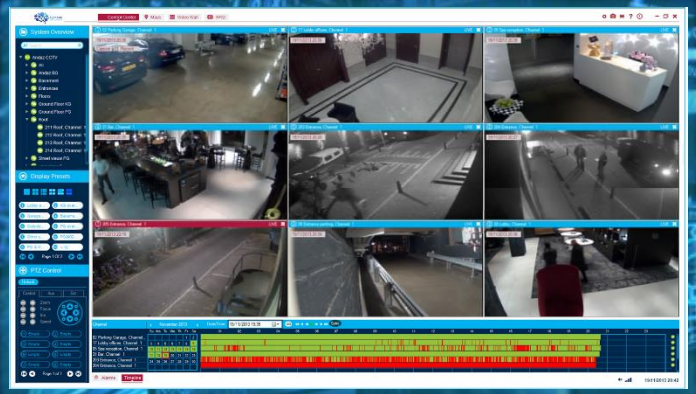
A Unified Interface for all Security & IoT Systems

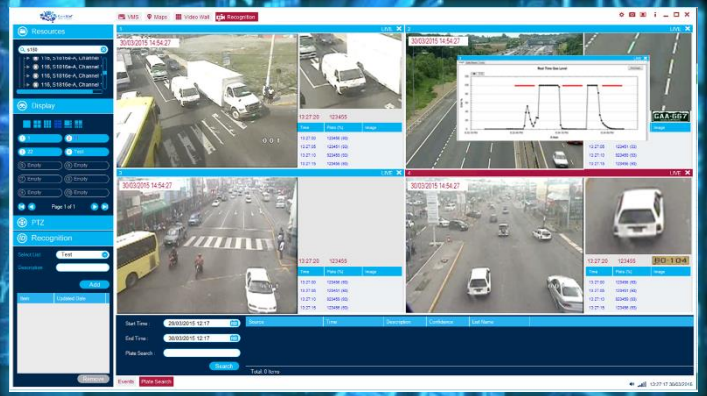




Reporting & Task Management Module for Cross-system Queries

Cloud-based & Onsite Deployments





Support for Proprietary VMS & Internal Video Analytics

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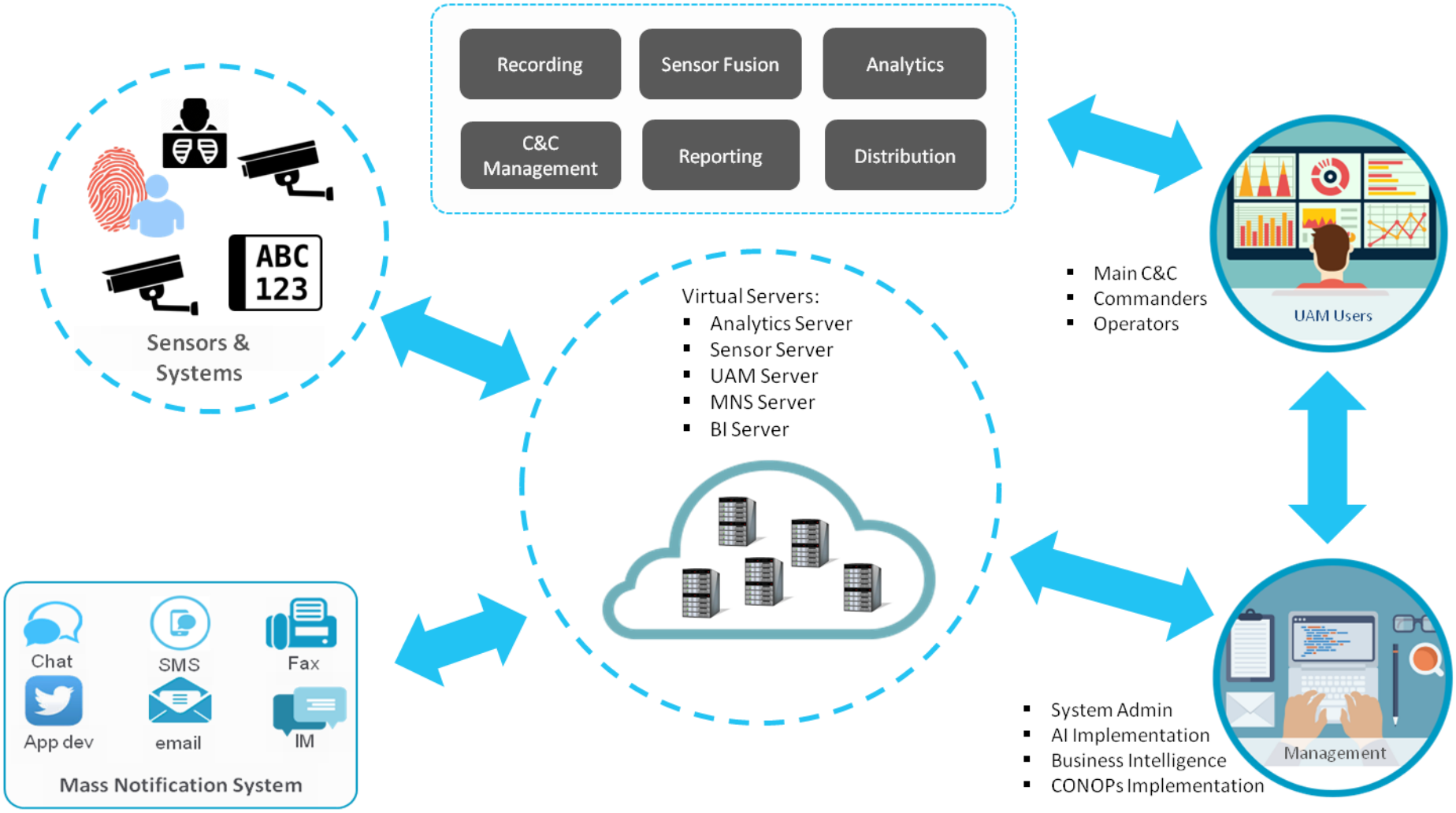
Solution Architecture



The CymbIoT Solution

- Based on our CONOPs every airport complex is divided into different types of zones.
- Each type requires different data gathering elements, based on physical and operational characteristics.
- In order to integrate the different zones, sensors, and systems into a single operational unit, data, sensors, and subsystems are all managed via a unified Command & Control system.

Closed Zones

Open Zones

Liminal Zones

Roads

Gating Zones

External Zone

The Ether

C&C Center

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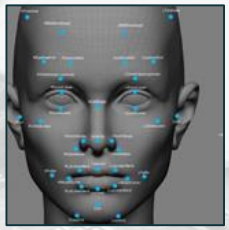
The CymbIoT Solution

Closed Zones

- Closed zones have 4 walls + ceiling
- Commuters & employees movement
- Incorporate numerous operational systems
- Controlled lighting conditions.
- Etc.

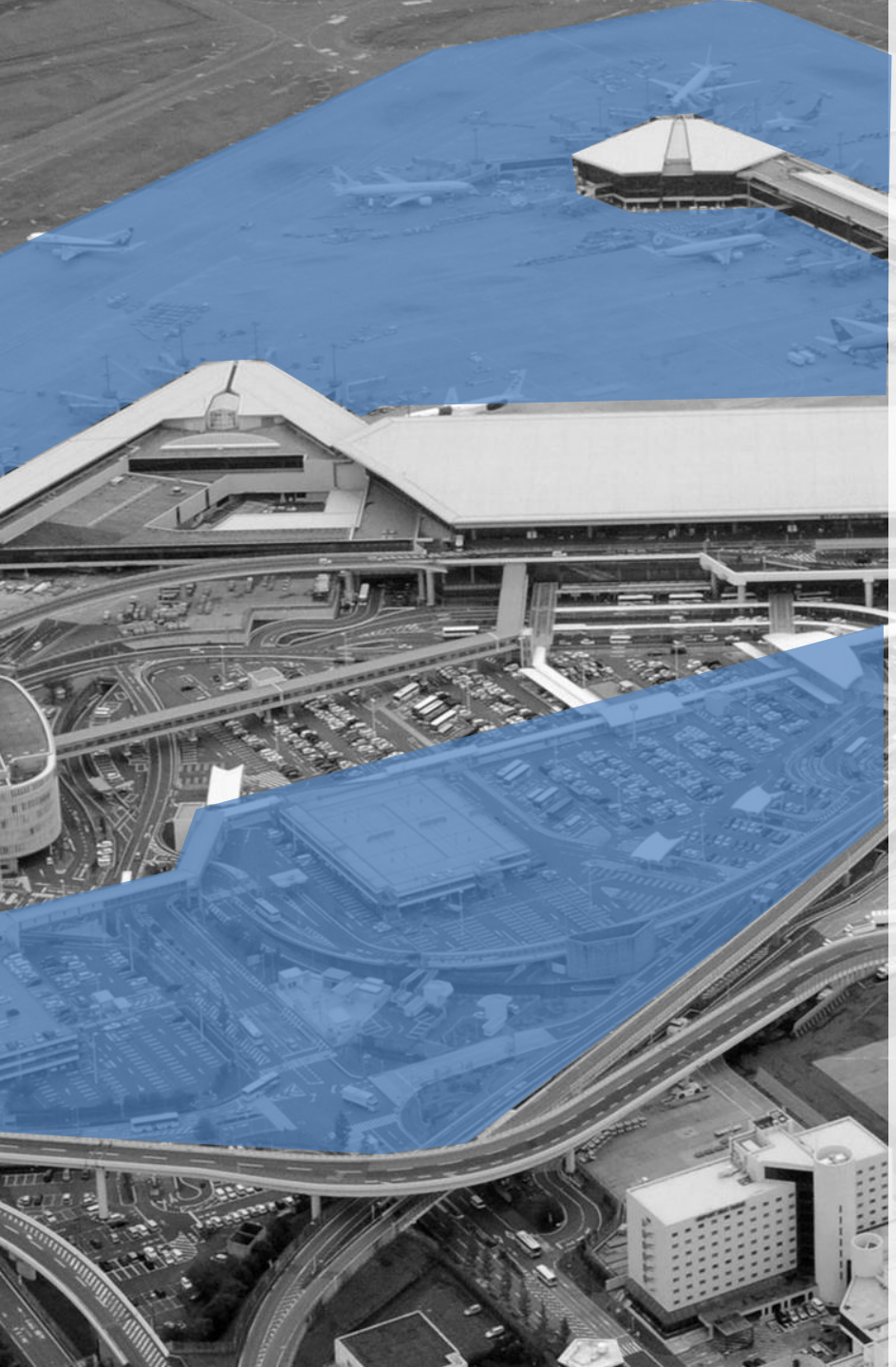


Face Recognition

CCTV Cameras

Access Control

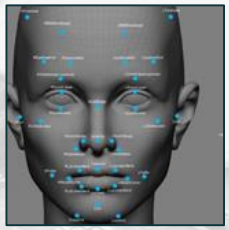
Audio Recorders



The CymbIoT Solution

Open Zones

- Controlled spaces (passageways, parking lots) that have no ceiling and 3 walls or less.
- Movement of vehicles + people
- High ambient noise
- Uncontrolled lighting
- Etc.



Face Recognition

CCTV Cameras

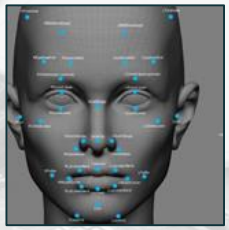
Covert Video & Audio

Cellular Interception

The CymbIoT Solution

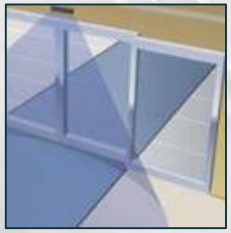
Liminal Zones

- Separating zones (walls, fences) – not crossing and opening (unlike gates/windows).
- No-approach zones
- Not to be crossed
- People should not loiter
- Etc.



Face Recognition

CCTV Cameras



Motion Detectors

Perimeter Protection

The CymbIoT Solution

Roads

- Internal roads & external roads
- Vehicle traffic
- Speed limit
- Ambient lighting & noise
- Etc.

Video Content Analysis

CCTV Cameras

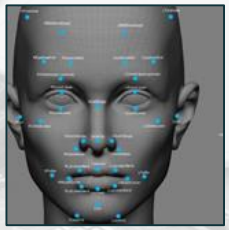
License Plate Recognition

Speed Cameras

The CymbIoT Solution

Gating Zones

- Any barrier that has open/closed modes
- People/goods movement
- Access control
- Etc.



Face Recognition

Access Control

Biometrics

Scanning: Cars, People, Cargo

The CymbIoT Solution

External Zone

- Anything outside the airport complex
- Uncontrolled
- Source of supplies
- Source of personnel
- Commuters & cars
- Etc.

External Databases

SIGINT, OSINT, VISINT

Social Media Monitoring

Early Drone Notification

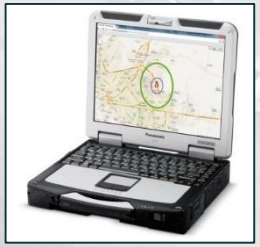
The CymbIoT Solution

Ether

- Data/virtual environment: wifi transmissions, radio, data, cellular, etc.
- Covers and connects all zones
- Difficult to monitor
- Etc.

Mobile Satellite Phone Interceptor

Mass Cellular Interception GSM & UMTS & IDEN (2G, 3G)



Global Location (GSM & UMTS)

Cellular Jammers

The CymbIoT Solution

Command & Control

- The C&C integrates the data and operational capabilities of different sensors and systems.
- The C&C ensures smooth “handover” between monitoring elements (tracking an object across multiple sensors), and between operational systems (door closing triggers light switch).
- The C&C receives, integrates, analyzes, and releases information to users across the airport complex management organization.

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Security Scenario Example

1. X-ray scanning identifies suspicious substance on luggage about to be stowed.

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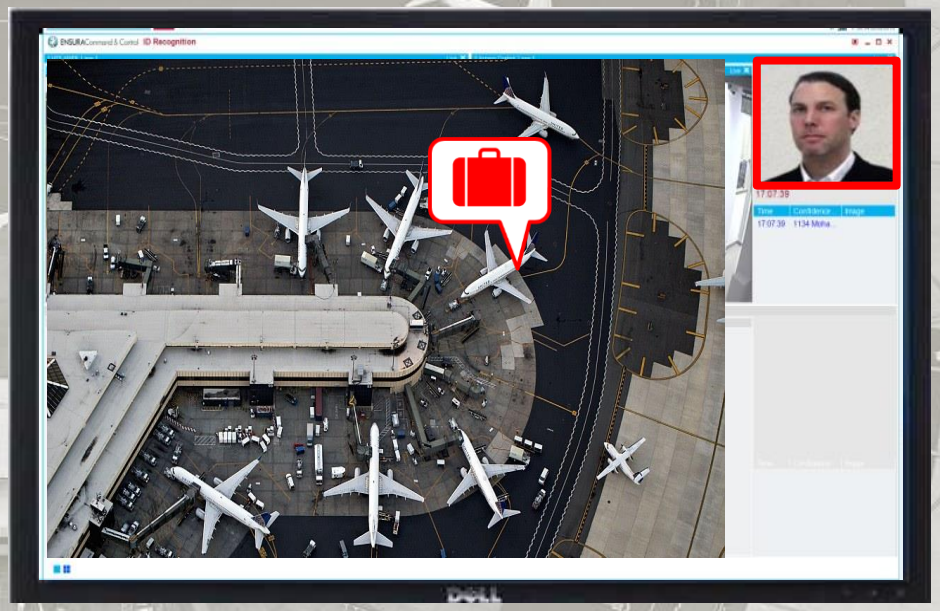

Security Scenario Example

1. X-ray scanning identifies suspicious substance on luggage about to be stowed.
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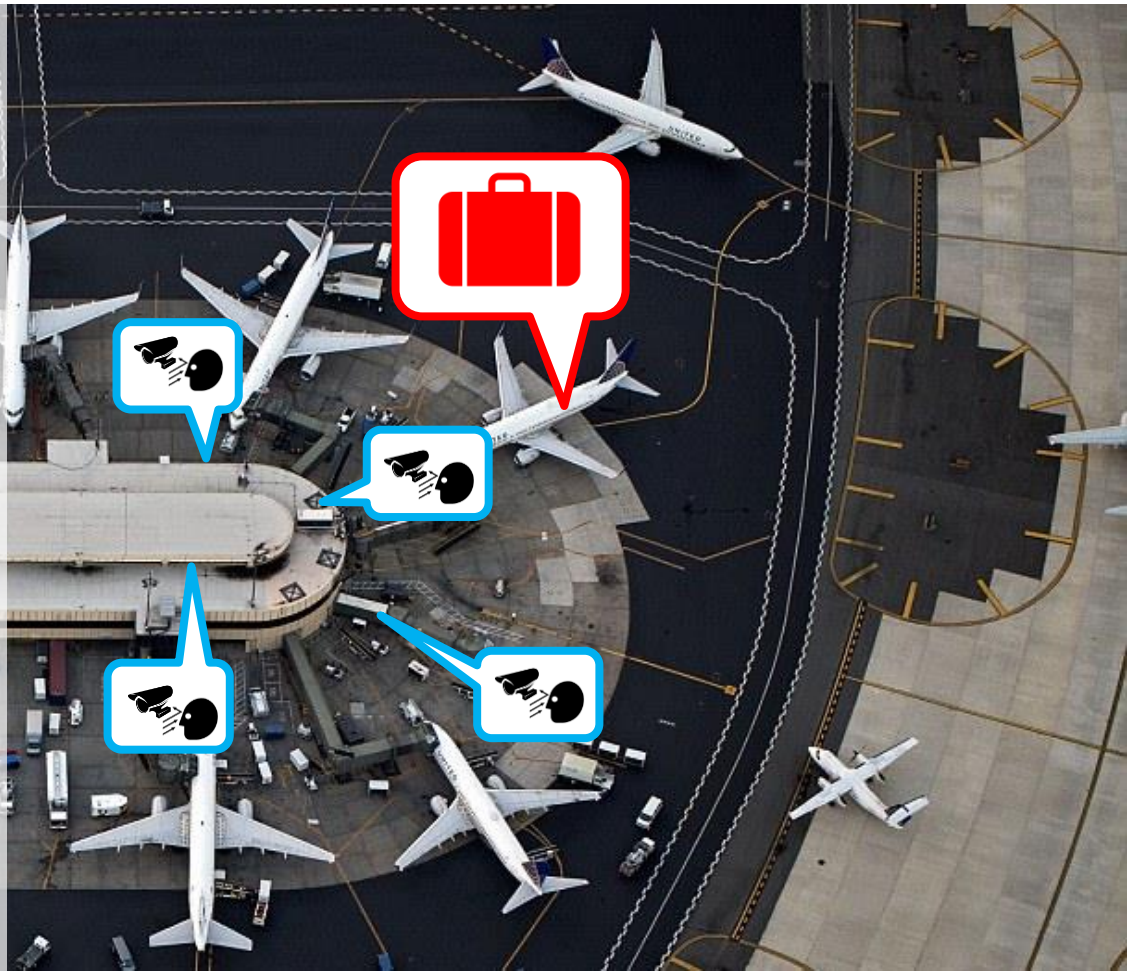
3. Cameras & VCA triggered to search for passenger.



Security Scenario Example

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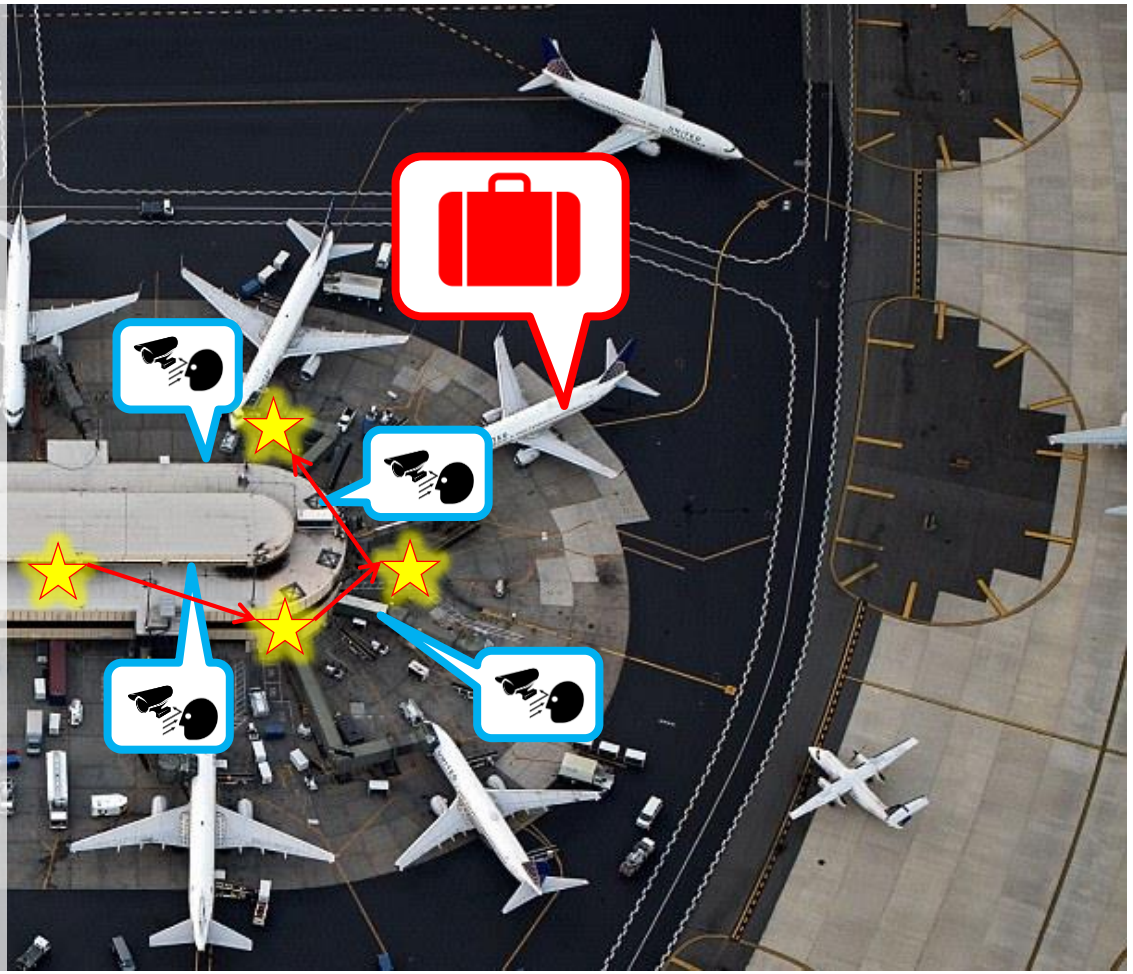
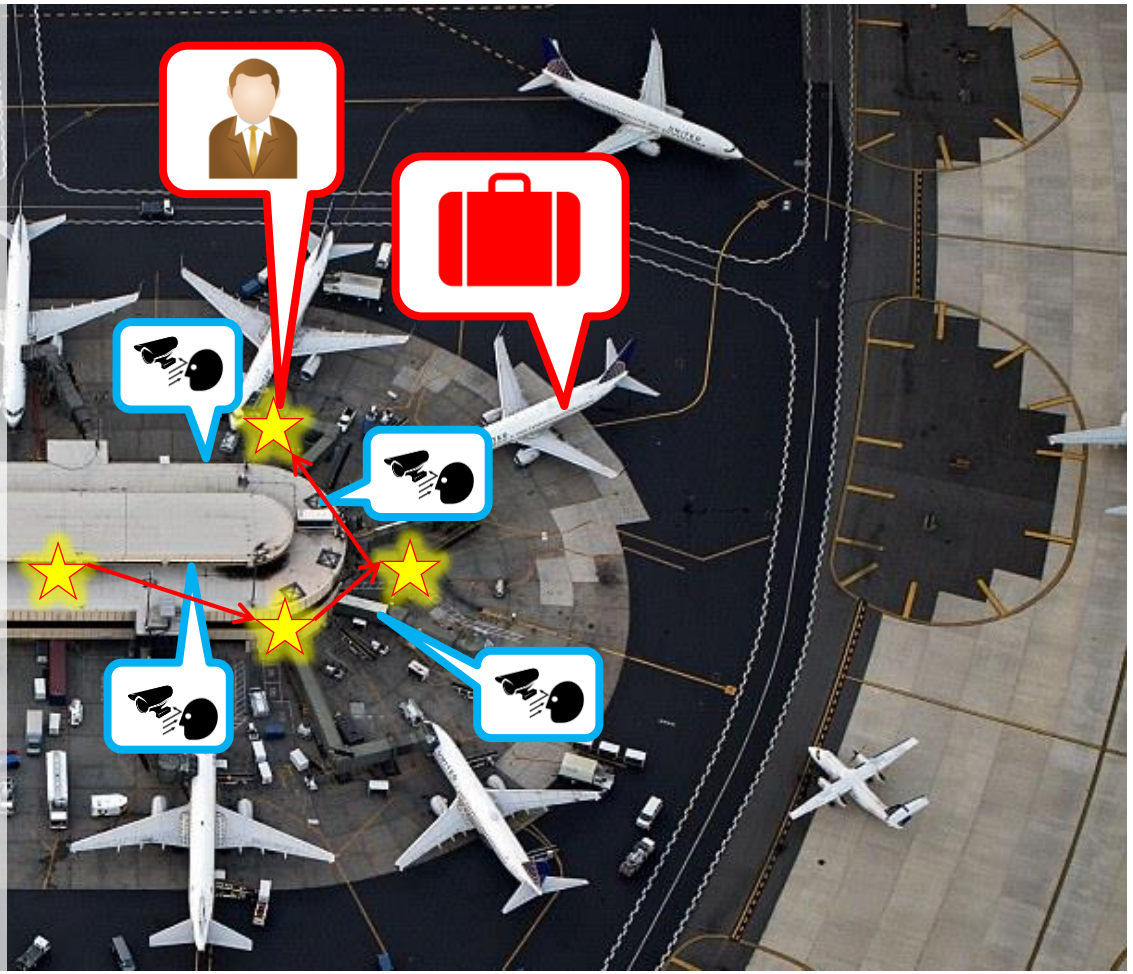
4. Access control tracks passenger movement over past hour.



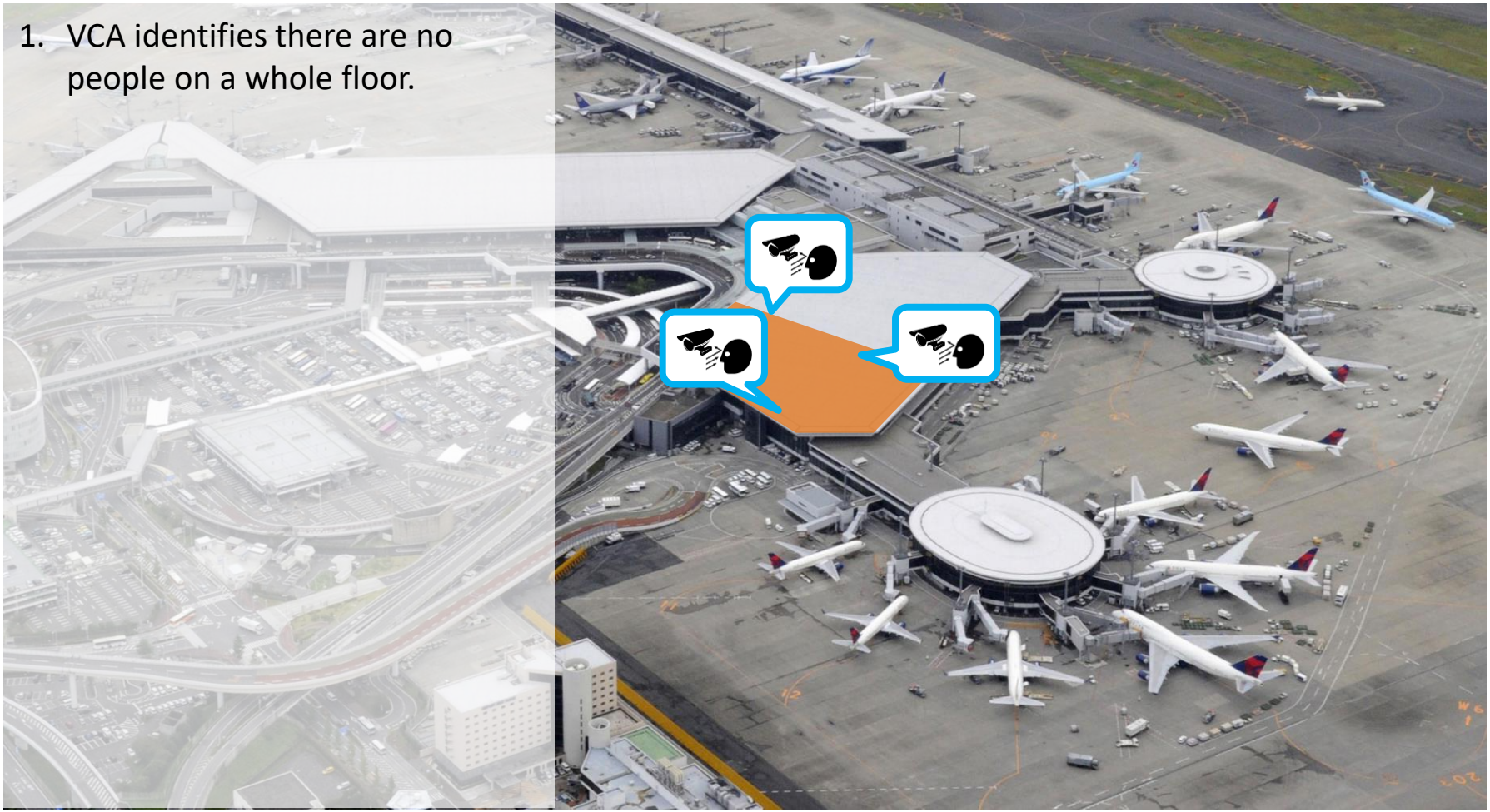
Security Scenario Example

1. X-ray scanning identifies suspicious substance on luggage about to be stowed.
2. BI engine connects passenger with luggage item.
3. Cameras & VCA triggered to search for passenger.
4. Access control tracks passenger movement over past hour.
5. Passenger is located
6. **Guards are dispatched to apprehend passenger for further investigation.**



Operational Scenario Example

1. VCA identifies there are no people on a whole floor.



Operational Scenario Example

1. VCA identifies there are no people on a whole floor.
2. Motion sensors are triggered to confirm that there is no movement on the floor

Operational Scenario Example

1. VCA identifies there are no people on a whole floor.
2. Motion sensors are triggered to confirm that there is no movement on the floor
3. **System automatically switches off A/C, dims light, stops escalators, etc.**

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Why Choose CymbIoT C&C?

A single Command & Control interface for all existing and new sensors, systems, and subsystems, providing:

- **Rapid, out-of-the box integration.**
- **Immediate ROI from Day One**
- **Interface between all data & systems.**
- **UX for operational & executive levels.**

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Some Global References…

NETHERLANDS
Hyatt Hotel Chain
Management & Security

ISRAEL
4 Smart City Programs

MEXICO
Federal Jail Management
& Security

JAMAICA
Kingston Safe City

NEPAL
International Airport
Management & Security

NETHERLANDS
Private port Management
& Security

SINGAPORE
Safe Transit Program

INDIA
Petrol Station
Management & Security

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