

SHAPING INTELLIGENCE

MEET AIOT.  
TOUCH THE FUTURE.

# Digital Twin Practice of the 19th Asian Games Venues



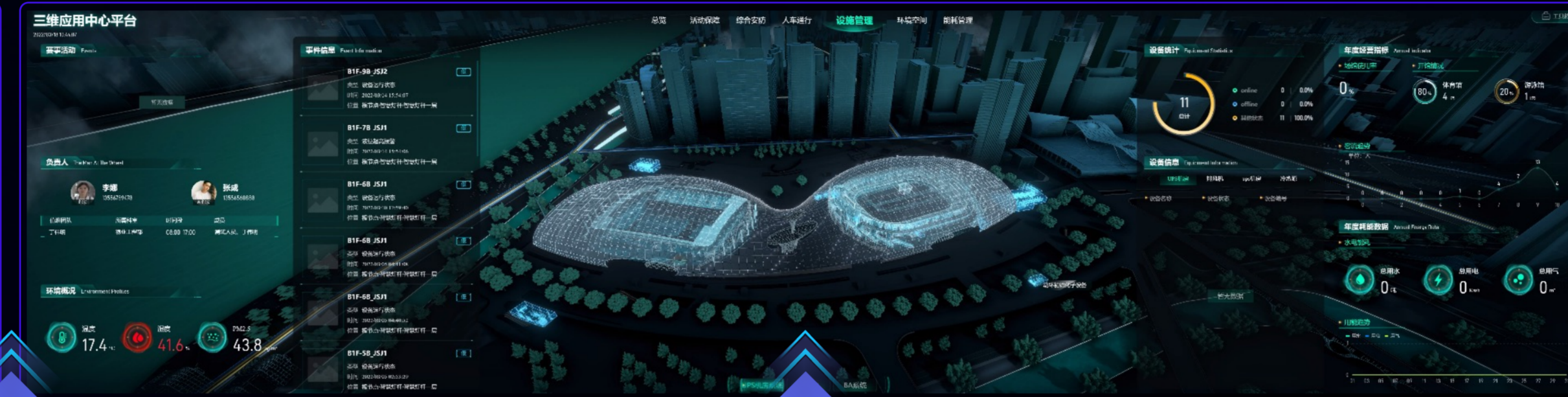
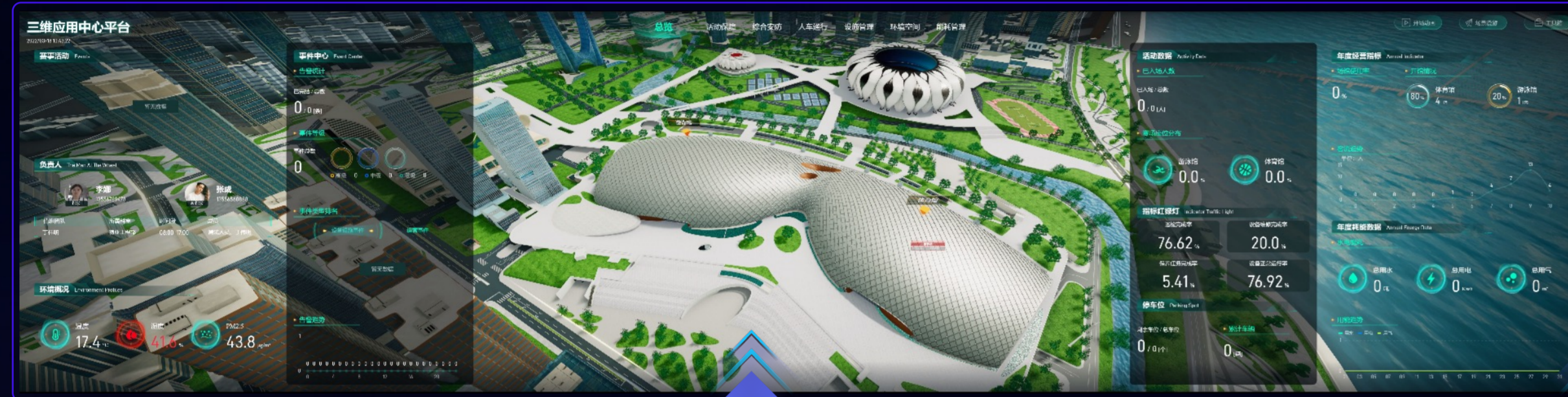
# “Better-Than-Live” Management Experience

Operation Overview

Integrated Security

Access Management

Energy and Environment Management



## Digital World

Digital-Twin simulation by 3D BIM modeling + video technology

Mirroring

Mirroring

Mirroring

Mirroring



## Physical World

AIoT system Convergence

AIoT Application Convergence

Hikvision  
Intelligent Security

3rd Party  
Energy System

3rd Party  
Environment

3rd Party  
UPS System

3rd Party  
Lighting System

3rd Party  
HVAC

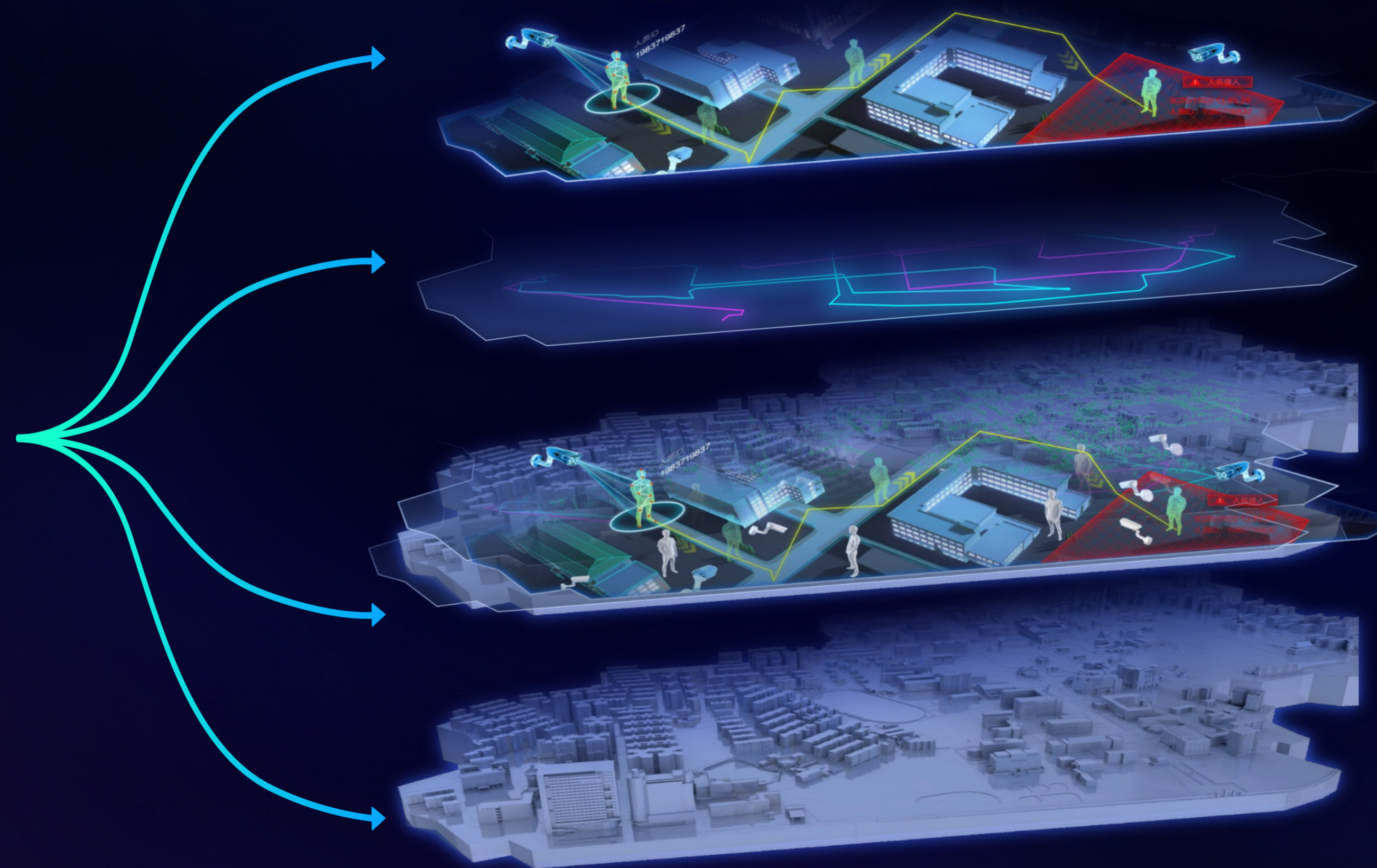
13 Subsystems

# Technology Implementation of Hikvision Digital Twin

Tiered open design with BIM & Video Technology as the core and AIoT connection as the base

## AIoT system

Devices status data  
Personnel and vehicle data  
Event data  
Energy consumption data  
Environmental data  
.....



**L4 Application Integration :** Security Patrol, Vehicles Tendency management , energy management...

**L3 Effect Simulation:** Visual effect, video AR, video VR

**L2 Elements Tagging:** AIoT devices, human-vehicle objects, data ...

**L1 Fundamental Modeling:** Key zone, internal structure ...



Partner



Hikvision



Hikvision



Hikvision/Partner

# Operations Overview - From Big Picture to Details, from Virtual to Real

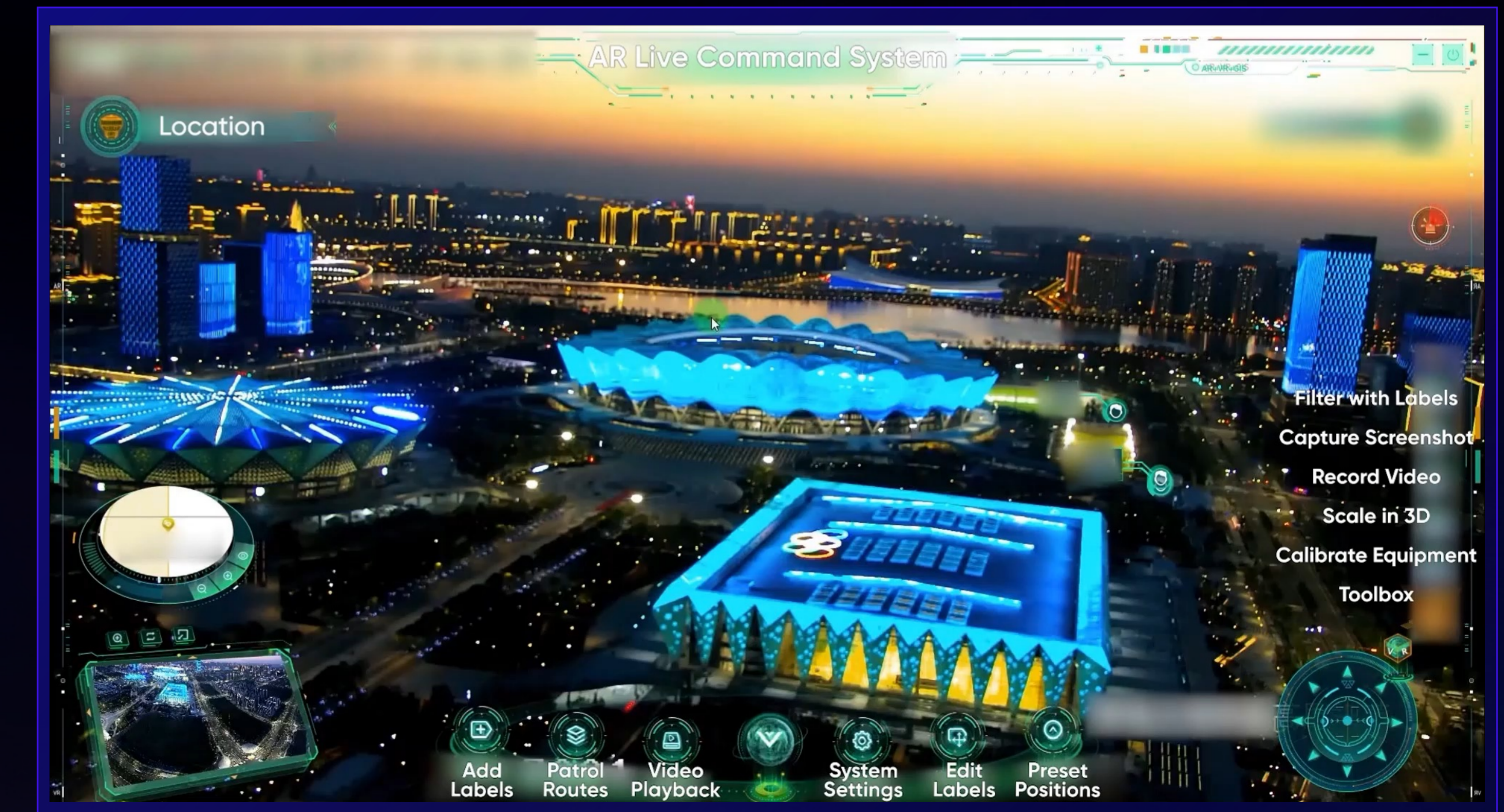
Physical World → Digital World

Intuitive display of daily data and operation KPI

**Daily data monitoring :** Alarm event environment status, car parking information, audience admission etc.  
**Operation KPI Tracking:** water and electricity consumption, venue patrol rate, abnormal devices rate, etc.

Digital World → Physical World

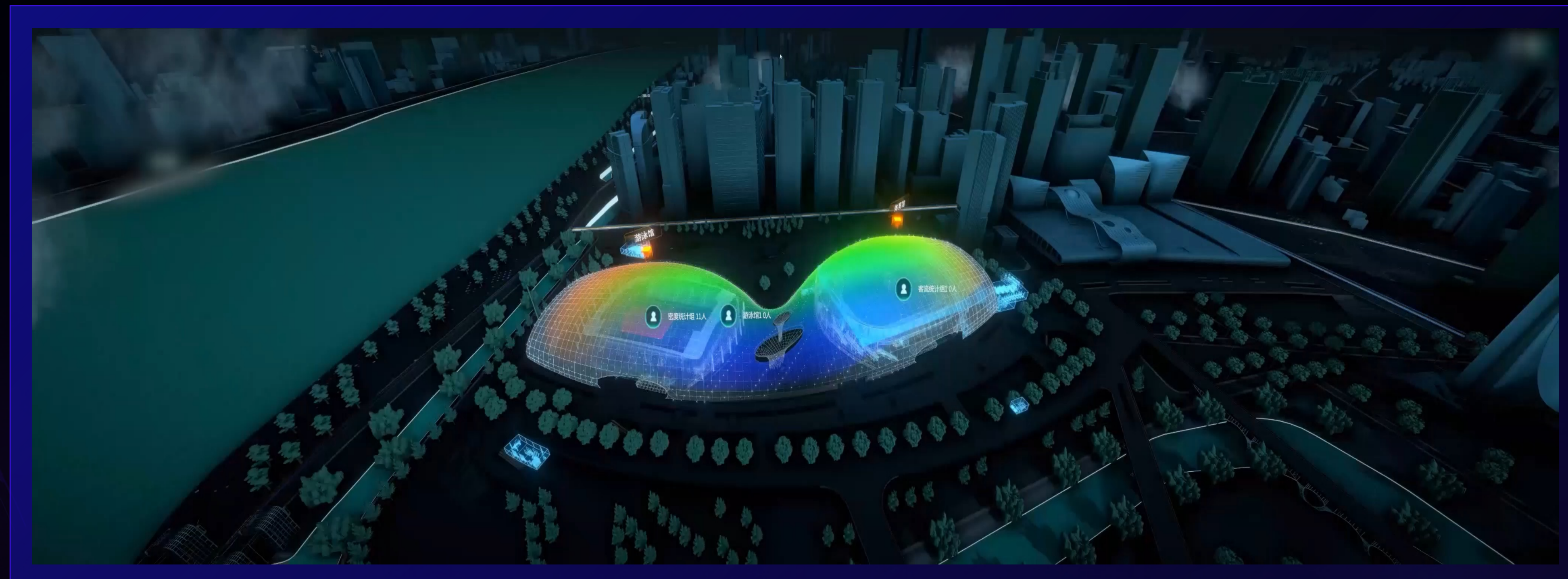
AR technology: overall-to-detail  
virtual-to-reality interaction



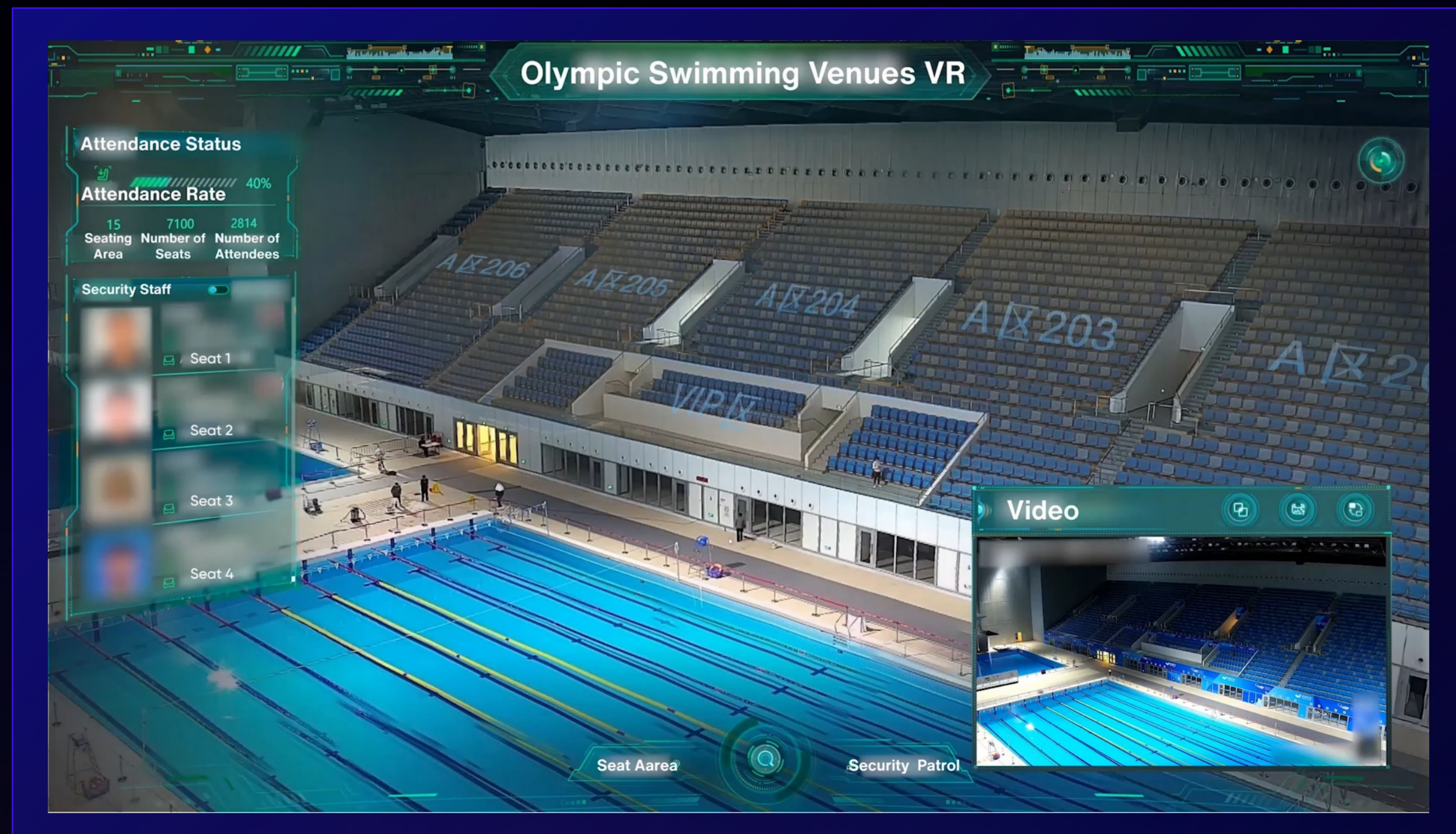
# Access Management – Closing the Loop from Potential Risks Detection to Remote Commanding



Human and vehicles flow analysis



Remote command and control through VR technology

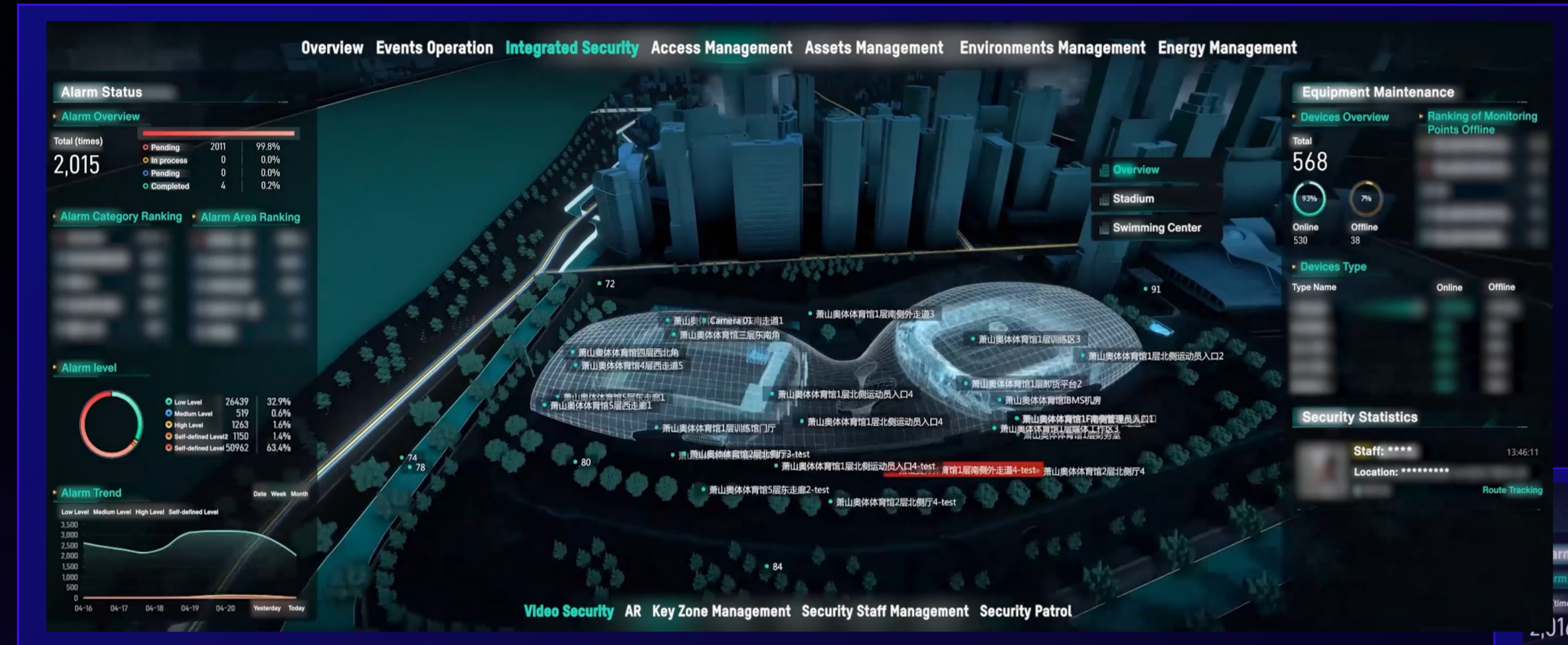


# Security Management –from Whole Venue to Critical Area, from Reactive to Proactive

## General Overview

### Security Overview

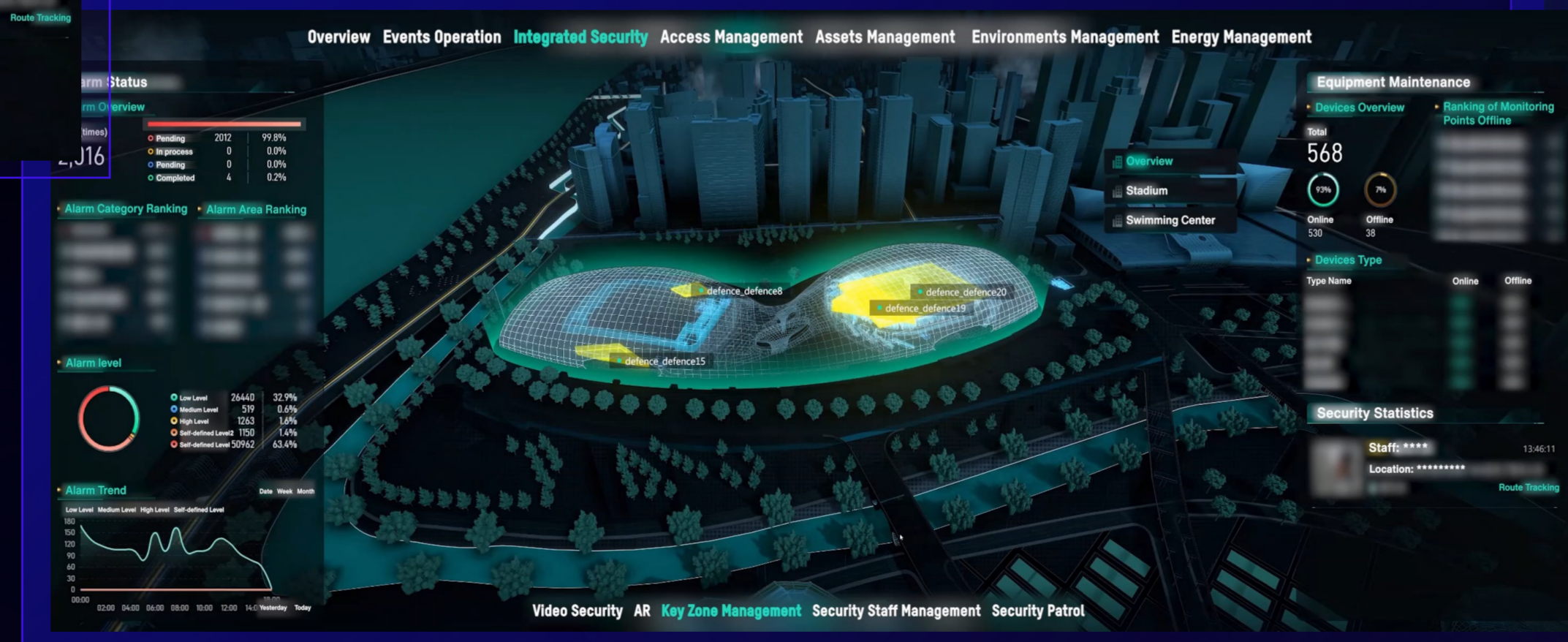
Security Statistics, Security alarm , video inspection.....



## Critical Area

### Key Area Protection

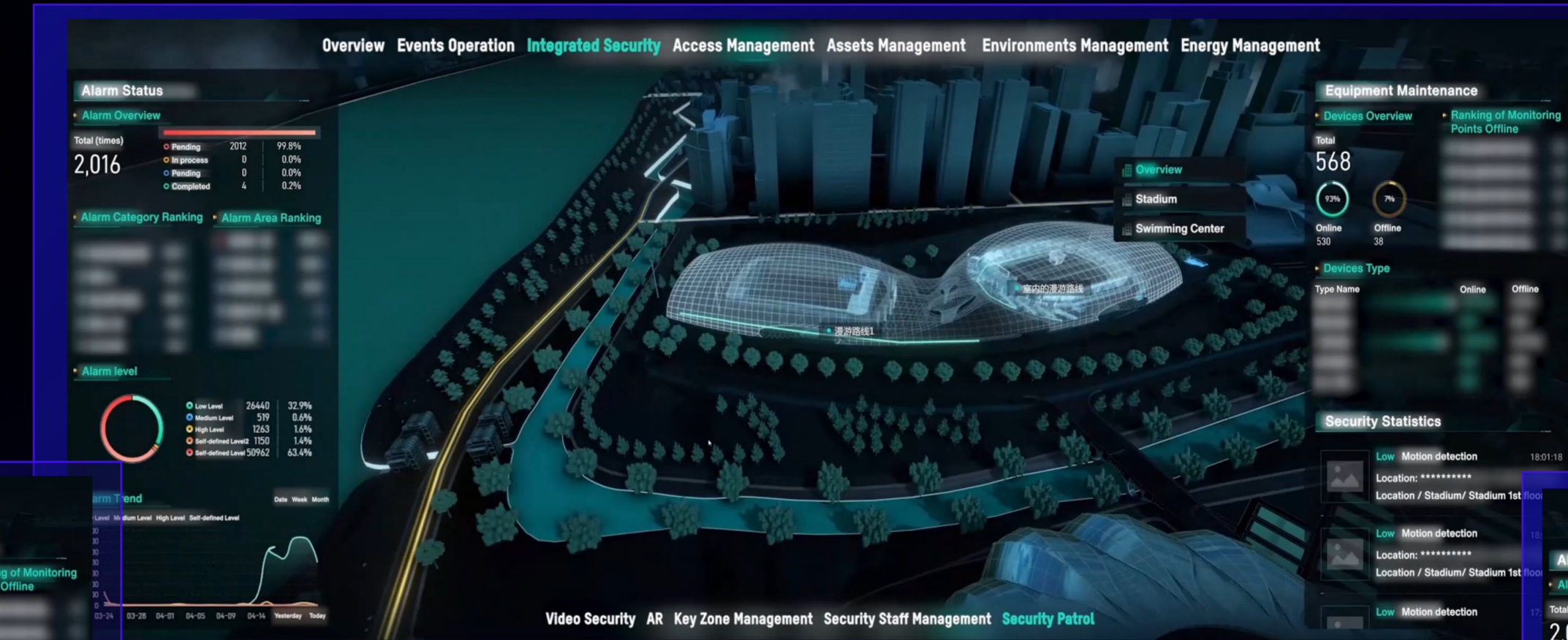
Perimeter Protection, Security staff Management , Alarm SOP



## Proactive:

### Virtual Patrol

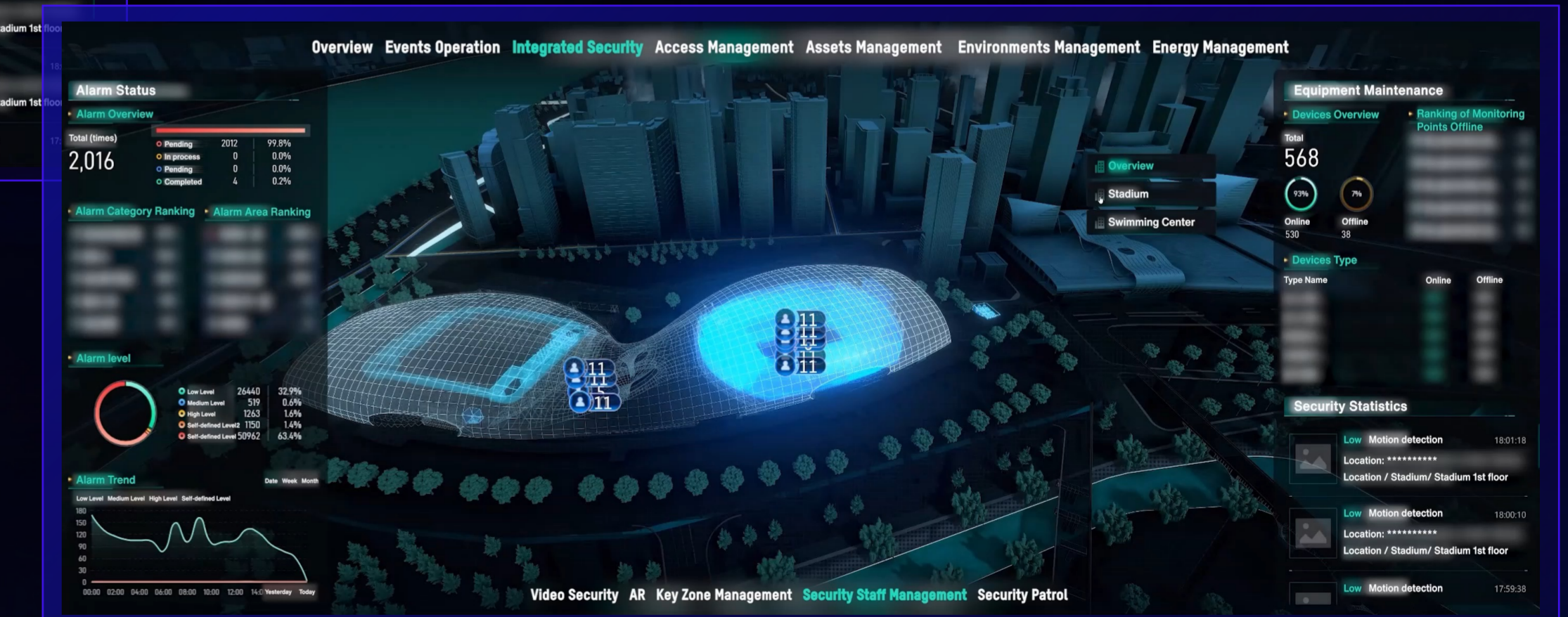
Security virtual patrol proactively finds problems



## Execution:

### Security Deployment

Security personnel distribution and scheduling



# Energy and Environment Management – Contribute to Comfortable and Green Asian Games

## HVAC Management

Air conditioning status  
Area temperature and humidity status



## Smart Sanitation Management

Occupation rate statistics for toilet  
Temperature and humidity management

## Intelligent Lighting Management

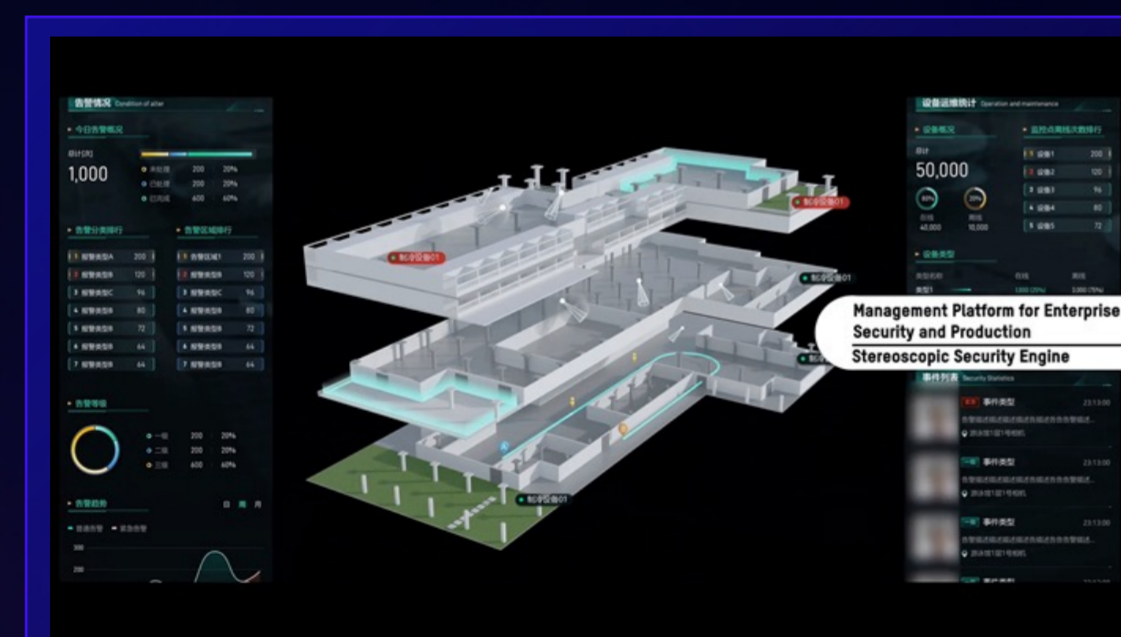
Lighting equipment status  
Switching light statistics  
Remote on/off control



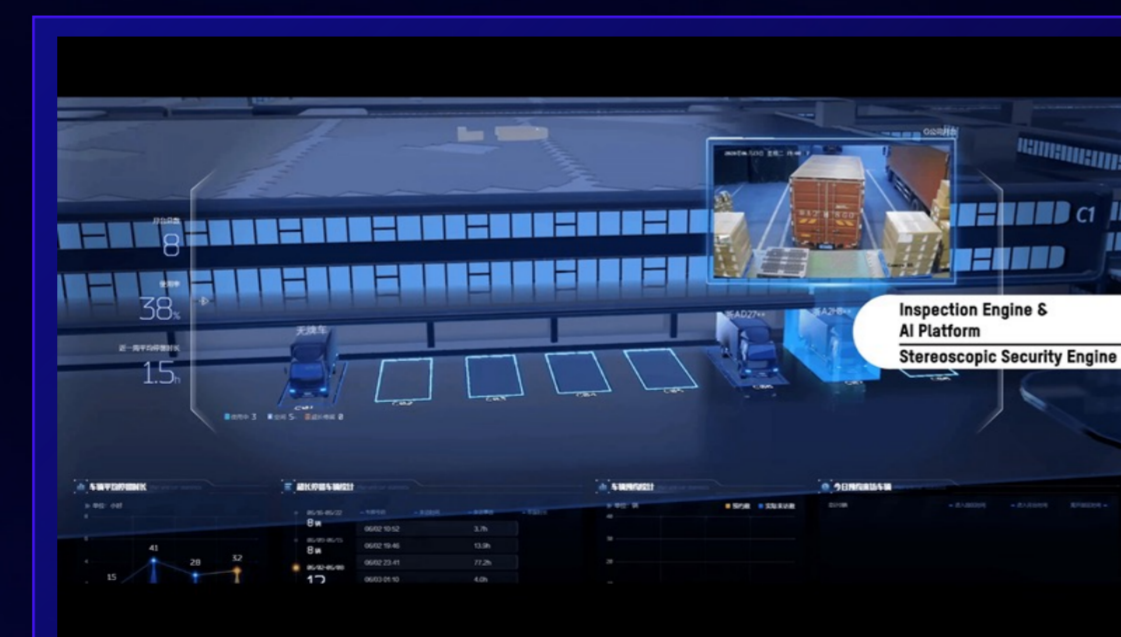
## Energy Consumption Management

Usage situation, trend analysis and abnormal analysis for the water, electricity and gas of the venue

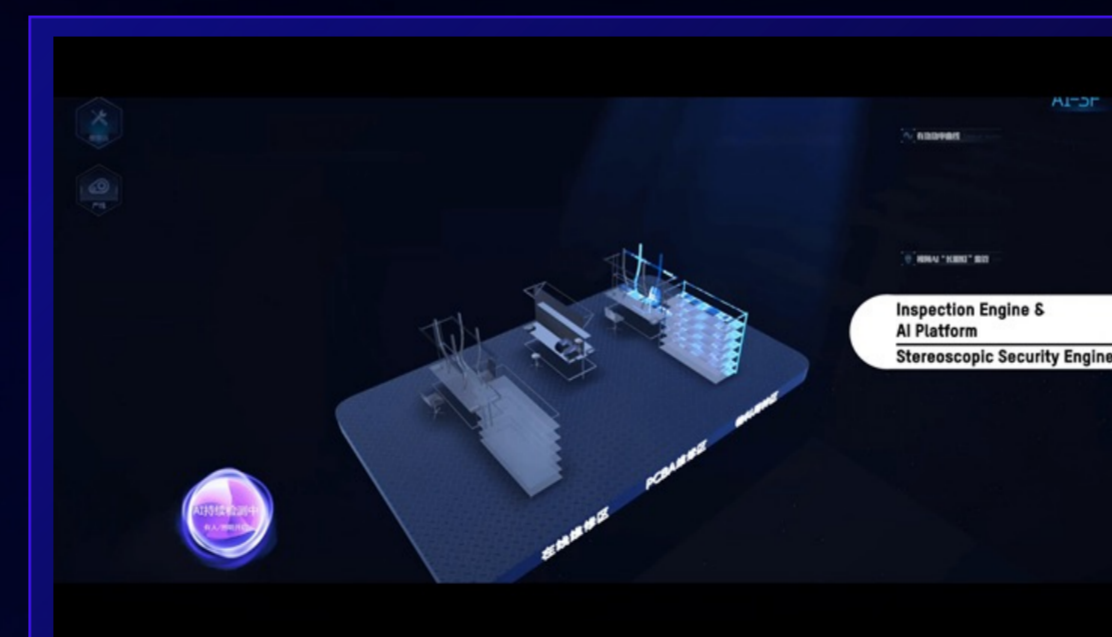
# Empowering Ecosystems Together to Create a "Better-Than-Live" Experience for All



Security Management



Logistics Management



Virtual Patrol



Industrial Simulation



Building Management





THANK YOU