

# Attract Everything

# Connect Intelligently

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Big Data Middle Platform

Smart Archives Management

AI-based visual inspection system

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# Company Profile

Empowering All Industries with  
Innovative Technology, Driving a  
Smarter Future



# Corporate Introduction



Magni-AI is a technology-driven enterprise specializing in the research and development of IoT and internet technologies. With cutting-edge technology at our core, we provide comprehensive technical services and operational solutions for the digital transformation of cities and industries.

We have successfully developed several core solutions:

- ◆ **Smart Archives Management:** Enables integrated and intelligent management of physical and electronic archives.
- ◆ **Big Data Middle Platform:** Breaks down information silos, unleashes data value, and helps clients build unified, intelligent data asset management capabilities.
- ◆ **Smart Park Solution:** Integrates IoT and AI technologies to achieve intelligent operation and management of scenic areas and parks.
- ◆ **AI-based visual inspection system:** Utilizes image capture and AI to implement automated inspection across multiple application scenarios.

In addition, our capabilities extend to various other fields, including smart campuses, intelligent transportation, Smart Fire Protection Solution, smart government services, and more. Magni-AI remains committed to empowering all industries with innovative technology and driving a smarter future.

## Brand Strength

01

Magni-AI is a designated systems integrator for China Mobile and China Telecom.



02

Magni-AI is a member of the China Mobile Internet of Things Alliance.



# Company Vision

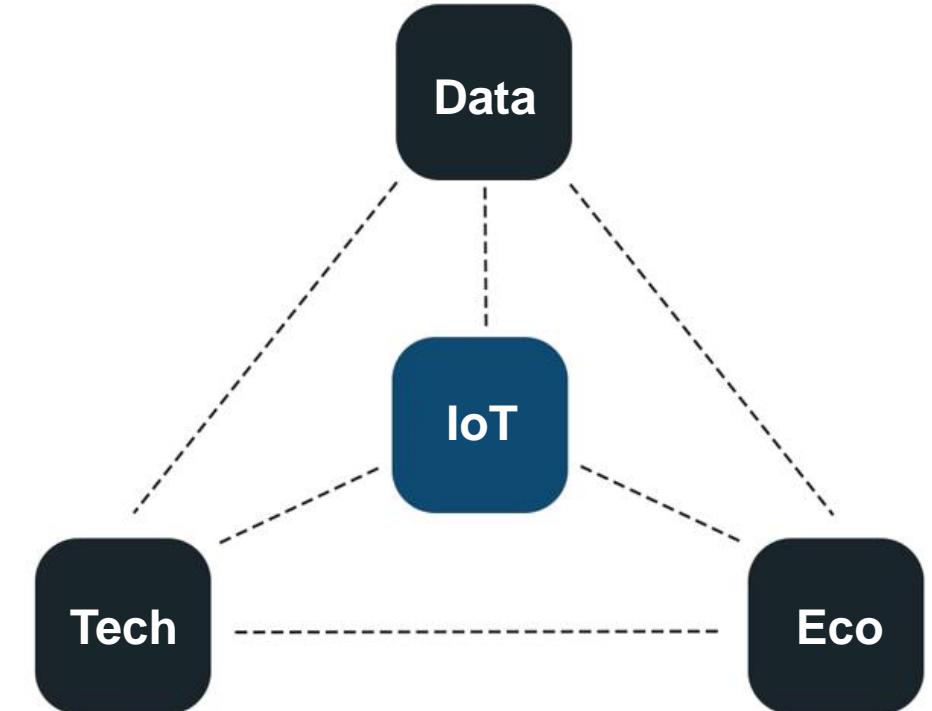
## Attract Everything, Connect Intelligently

With the power of "Magni-AI" , we aim to build a smart world where all things are interconnected and intelligently collaborative, making technology accessible and beneficial to all industries.

We are committed to acting like a magnet, attracting and integrating cutting-edge technologies, industry expertise, and high-quality partners.

We aspire to build not just a world of intelligent technology, but also an open and collaborative ecosystem for mutual success.

Here, we share resources and create shared value with all partners, working together to drive society toward a more efficient, sustainable, and brighter future.



# Business Philosophy



**Integrity**

诚信为本

**Service**

服务至上

**Quality**

品质至上

**Customer**

客户至上

# Solutions and Products

With the power of "Magni-AI", we aim to build a smart world where all things are interconnected and intelligently collaborative, making technology accessible and beneficial to all industries.



# Core Competitiveness



## Smart Archives Management

By integrating IoT and artificial intelligence technologies, it enables unified and intelligent management of both physical and electronic archives.

## Big Data Middle Platform

It breaks down information silos, unleashes the value of data, and helps clients build unified, intelligent data asset management capabilities.

## Smart Park Solution

Through the integration of IoT, big data, and AI technologies, it achieves intelligent operation and management of scenic areas and parks.

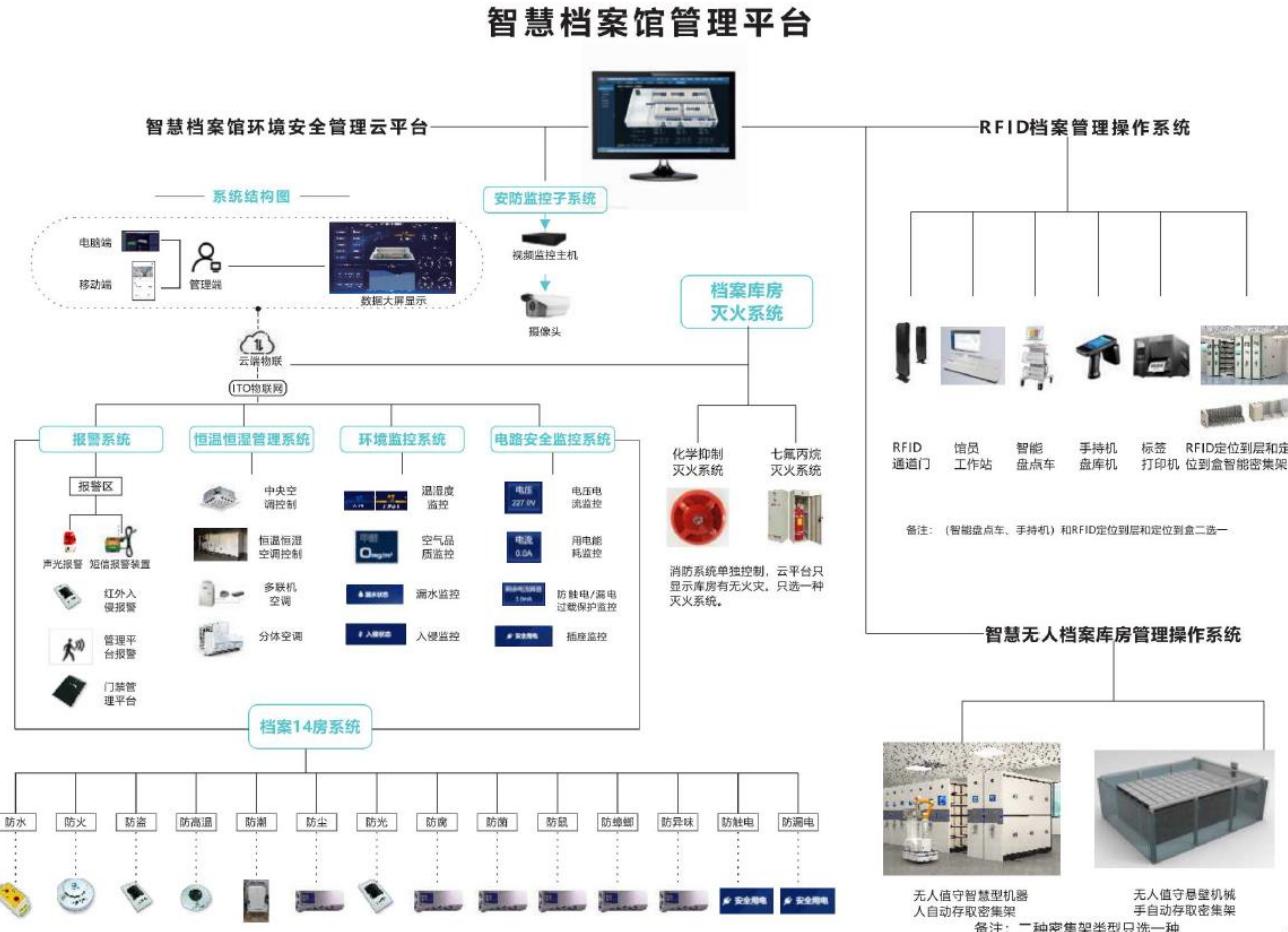
## AI-based visual inspection system

By utilizing "image capture + AI," it enables unmanned, high-precision automated inspection across multiple application scenarios.

# Smart Archives Management

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## System Architecture



# Smart Archives Management



## Implementation Steps



### 01 Archive Room Renovation

Complete the renovation of the archive room to meet the requirements for archival storage and management.



### 02 Archival Digitization and Processing

Digitize and organize existing archives to enhance the efficiency of archival retrieval and utilization.

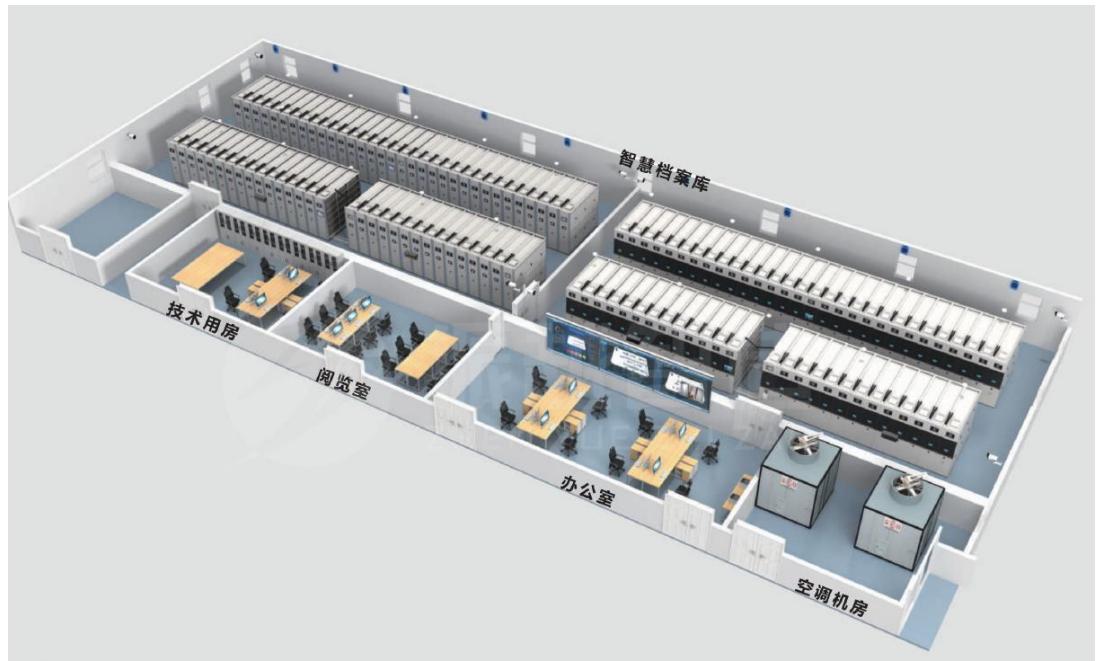


### 03 Materials Relocation and Organization

Standardize the archive room to ensure orderly and secure storage of archives.

## Introduction of Smart Archive Cabinets

- The introduction of smart archive cabinets is a key initiative in archive room upgrades, significantly enhancing management efficiency and security. Utilizing advanced automation and intelligent control systems, these cabinets integrate high-density storage, fast retrieval, and intelligent management while optimizing space utilization.
- Featuring an intelligent search mode that combines manual and automated controls, the cabinets are equipped with 3D visual positioning and LED guidance to pinpoint exact sections and layers, streamlining document retrieval. Voice recognition further enables hands-free operation, boosting productivity.
- With built-in environmental controls such as temperature and humidity monitoring and automatic ventilation, the cabinets maintain a stable, dry, and odor-free storage environment to ensure long-term preservation of archives.



# Smart Archives Management



## Smart Archive Cabinet Reference



35

## Smart Archive Cabinet Reference

### Product Features



#### 1. 语音打开

用户可在库房内有效距离3米直接用语音命令词（小麦小麦和小芳小芳）唤醒密集架左右移动、关闭、通风、停止操作，

#### 2. 灯光标牌

采用PVC或玻璃材质的面板可自定义LOGO，大小为标准A4尺寸 (210mm×297mm)

#### 3. 指纹和密码

具备固定列指纹和密码锁定、解锁功能，用户可通过指纹解锁进入管理员设置界面。关

#### 4. 无刷直流电机驱动

移动列采用≤150W的低压无刷直流电机驱动。▲采用快速启动、高速运行、轻柔合拢的柔性曲线运行方式。架体运行的最高速度、最低速度、提速及降速斜率用户可自由调整，标准80cm通道开启时间≤12秒

#### 5. 急停

具备架内急停按钮和脚踢开关的机械紧急停止方式。

#### 6. 安全保护

能准确检测两侧通道内架内人员数量信息，在架内有人时，自动锁定并禁止外面的人手摇及电动操作，架内无人时，自动解锁。架内有人时，液晶屏有图形化信息。架内人员检测应计数准确可靠，用户缓慢进入及快步进入等方式均能可靠计数。

#### 7. 侧板灯光

侧板中间安装二条LED灯，让产品更时尚美观

#### 8. 手动模式

停电情况下配置手摇打开。带电情况下，无论手摇还是电动，架体打开的距离均在当前列液晶屏上能显示。

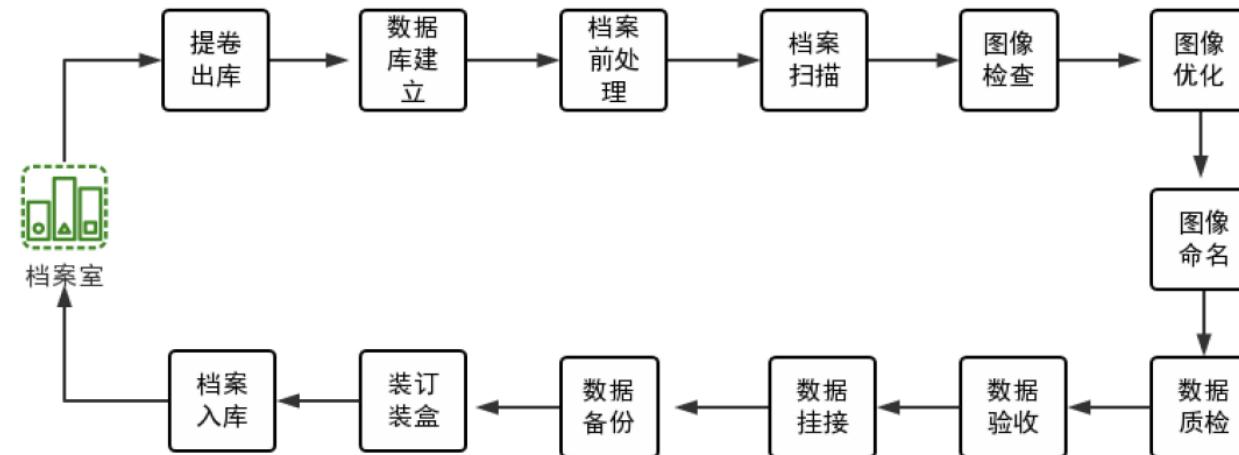
#### 9. 架体运行

用户可通过液晶屏上的按键、全屏手指滑动（手指左滑，该列左移；手指右滑，该列右移；手指下滑，整个团体关闭；手指上滑，整个团体进入到通风状态。操作应灵敏可靠）

## Digital Archiving and Processing

- The preliminary work of archive digitization involves archive sorting, in which classification, numbering, and cataloging are the components requiring specialized digital processing support.
- The workflow of archive digitization includes the following steps: Retrieval of archives from storage—Database creation—Pre-processing of archives—Archive scanning—Image inspection—Image optimization—Image naming and data quality check—Data acceptance—Data linking—Data backup—Binding and boxing—Archival return to storage

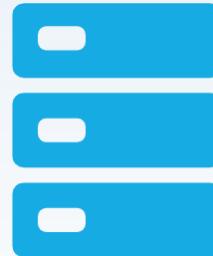
The workflow diagram for archive digitization is as follows:



## Digital Archiving and Processing

### Data Cataloging

Import catalog files generated during the archive sorting process into the digital archive management system through batch import or individual entry.



### Electronic Archive Data Linking

Batch link folders named according to archive codes (created during scanning) to establish one-to-one associations between cataloged data and electronic archives.



### Physical Archive Linking

Within the digital archive management system, link the cataloged archive data to the physical storage locations of the archives, creating associations between electronic and paper archives.

Once successfully linked, during physical archive retrieval, the corresponding storage cabinet can be directly opened for integrated operations.

# Smart Archives Management

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## System Interface

信创档案管理系统

首页 档案检索 目录检索 档案著录 目录著录 借阅管理

档案管理 借阅管理 审批管理 公告管理 档案设置 系统设置 档案统计 档案鉴定 数据备份 设置管理 扫描采集 页面搭建 档案著录 回收站

档案号: 请输入档案号 借阅人: 请输入借阅人 借阅时间: 选择开始日期 至 选择结束日期 状态: 请选择 密级: 请选择 身份证号: 请输入身份证号 联系方式: 请输入联系方式 借阅经办人: 请输入借阅经办人

搜索 重置

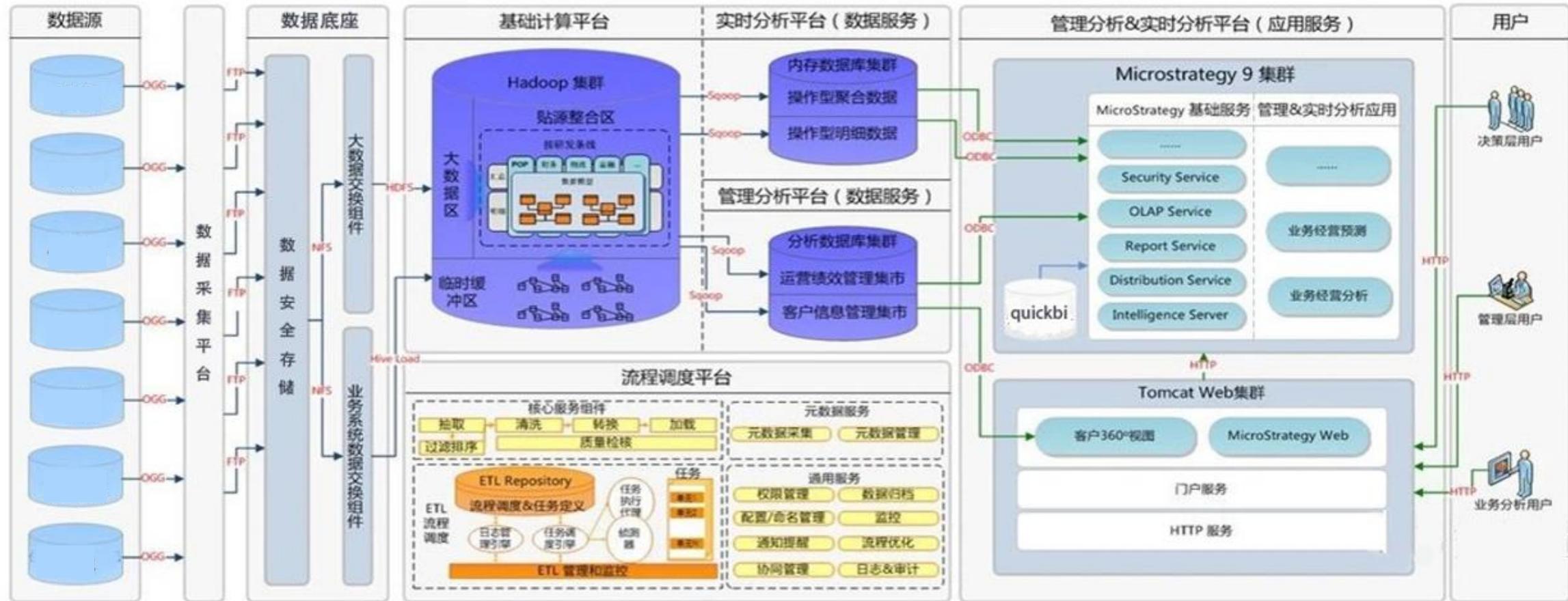
档案号	状态	密级	借阅人	归还人	身份证号	联系方式	预计归还	借阅经办人	借阅时间	归还经办人	操作
001-WS-2024-D10-004	借阅中	公开	tom		45072120001003685X	18977712345	2025-01-03	admin	2025-01-03 10:19:10		归还 删除

共 1 条 10 条/页 1 前往 1 页



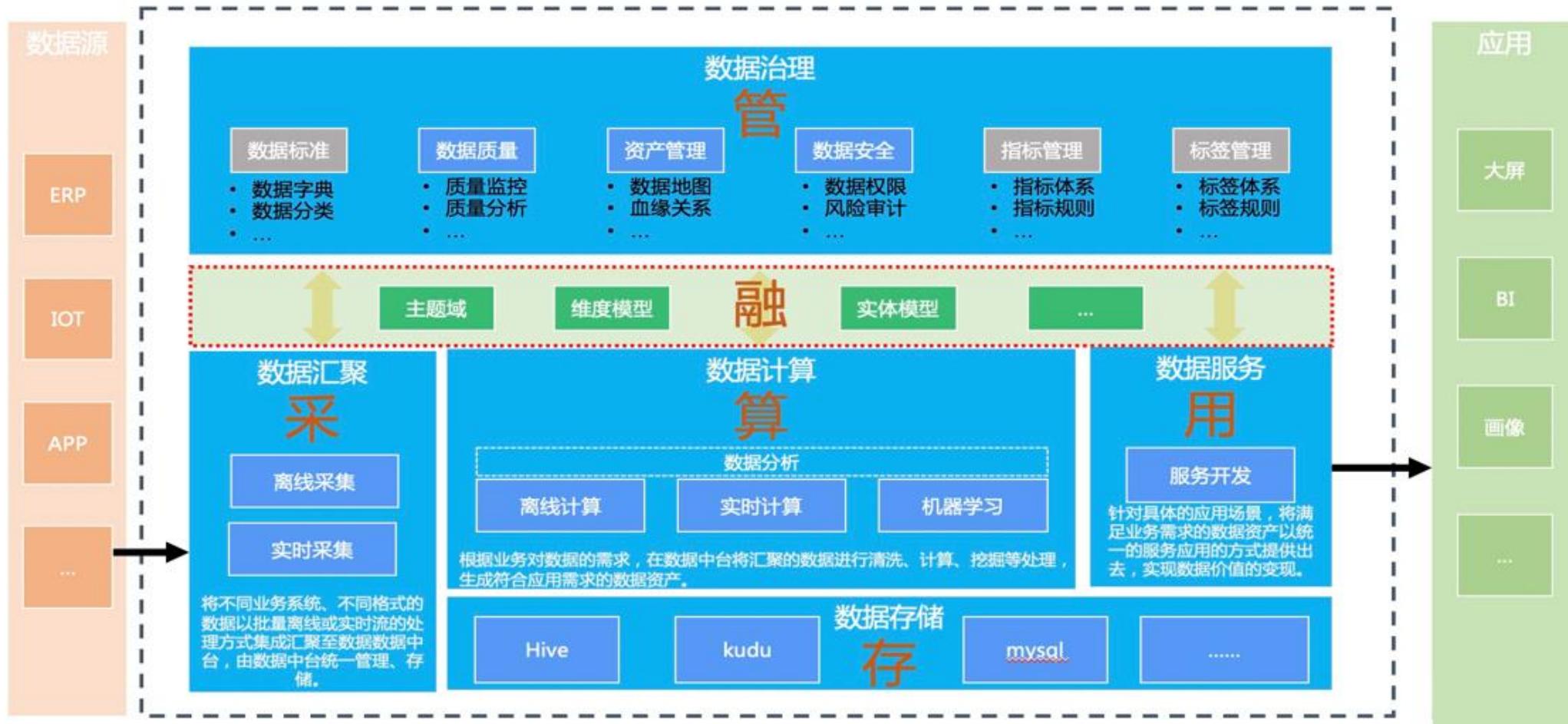
# Big Data Middle Platform

## System Architecture



# Big Data Middle Platform

## Product Architecture



# Big Data Middle Platform



## Product Components



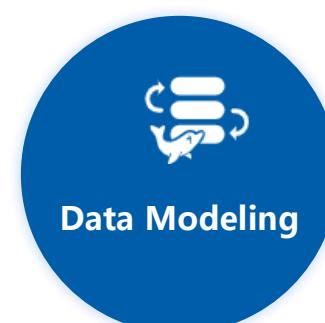
Data Collection



Data Ingestion  
into Lake



Data  
Development



Data Modeling



Data Services



Business  
Intelligence

# Big Data Middle Platform

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## System Interface

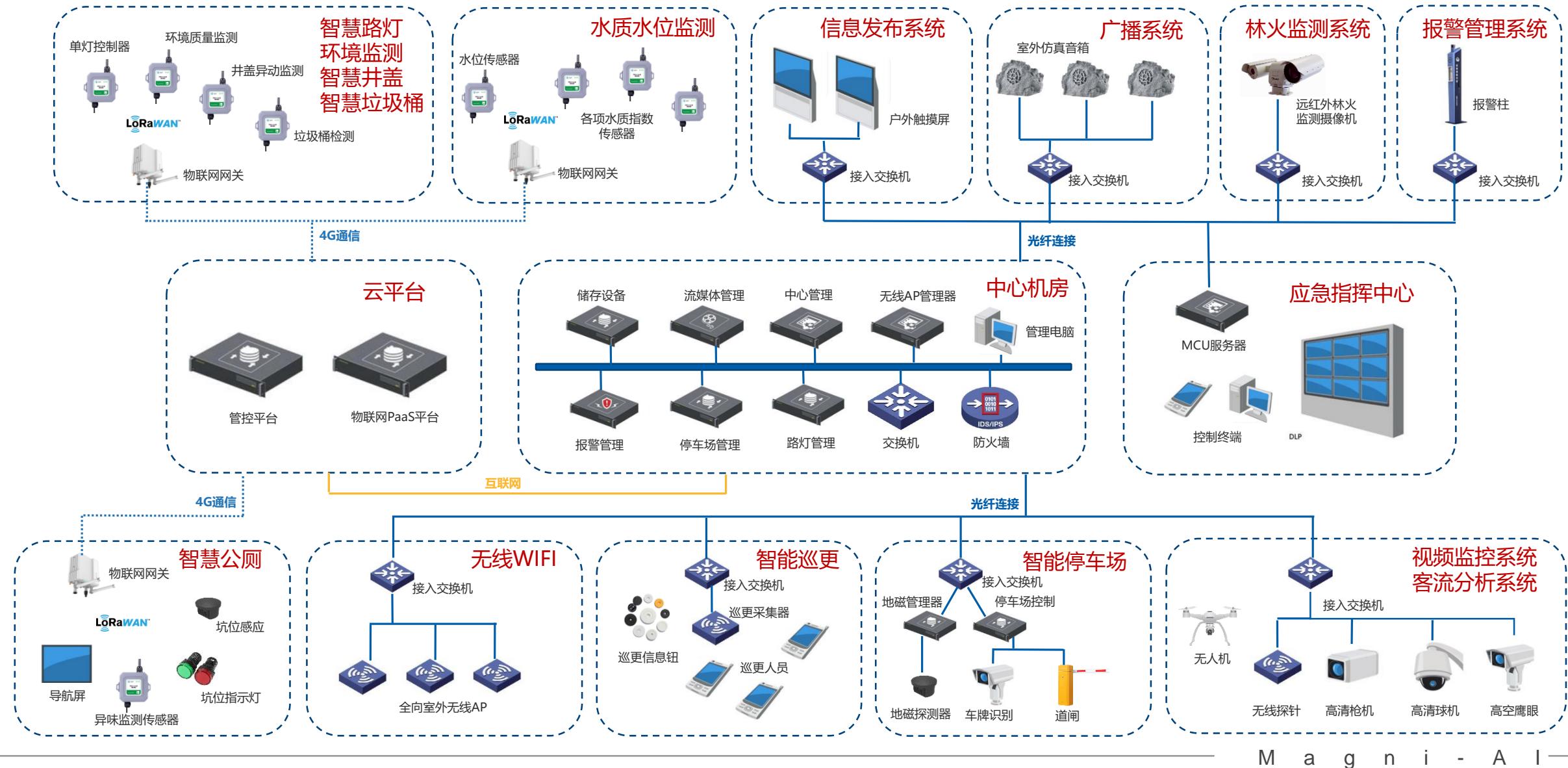
The screenshot displays the main interface of the Big Data Middle Platform. The left sidebar contains a navigation menu with items such as 首页, 应用系统, 数据源管理, 采集表配置, 数据处理, 数据补录, 运维监控, 运维配置, and 消息管理. The main content area shows a summary of data collection tasks: 33 total tasks, with 32 successful (green checkmark), 1 failed (red X), and 0 in progress (orange bell). Below this, a detailed table provides statistics for four application systems: 物业系统, 百川工单系统, 停车场, and 租赁系统. The table includes columns for 采集任务 (Collection Tasks), 采集成功 (Collection Success), 采集失败 (Collection Failure), 入湖任务 (Entry Task), 入湖成功 (Entry Success), and 入湖失败 (Entry Failure). The data is as follows:

应用系统	采集任务	采集成功	采集失败	入湖任务	入湖成功	入湖失败
物业系统	16	16	0	0	0	0
百川工单系统	0	0	0	0	0	0
停车场	0	0	0	0	0	0
租赁系统	17	16	1	0	0	0

The right sidebar features a '配套工具' (Auxiliary Tools) section with links to XXL (任务调度), 工作流跟踪, 入湖查询, and 数据服务. It also includes a '帮助文档' (Help Document) section with links to 用户操作手册 and 常见问题解答.

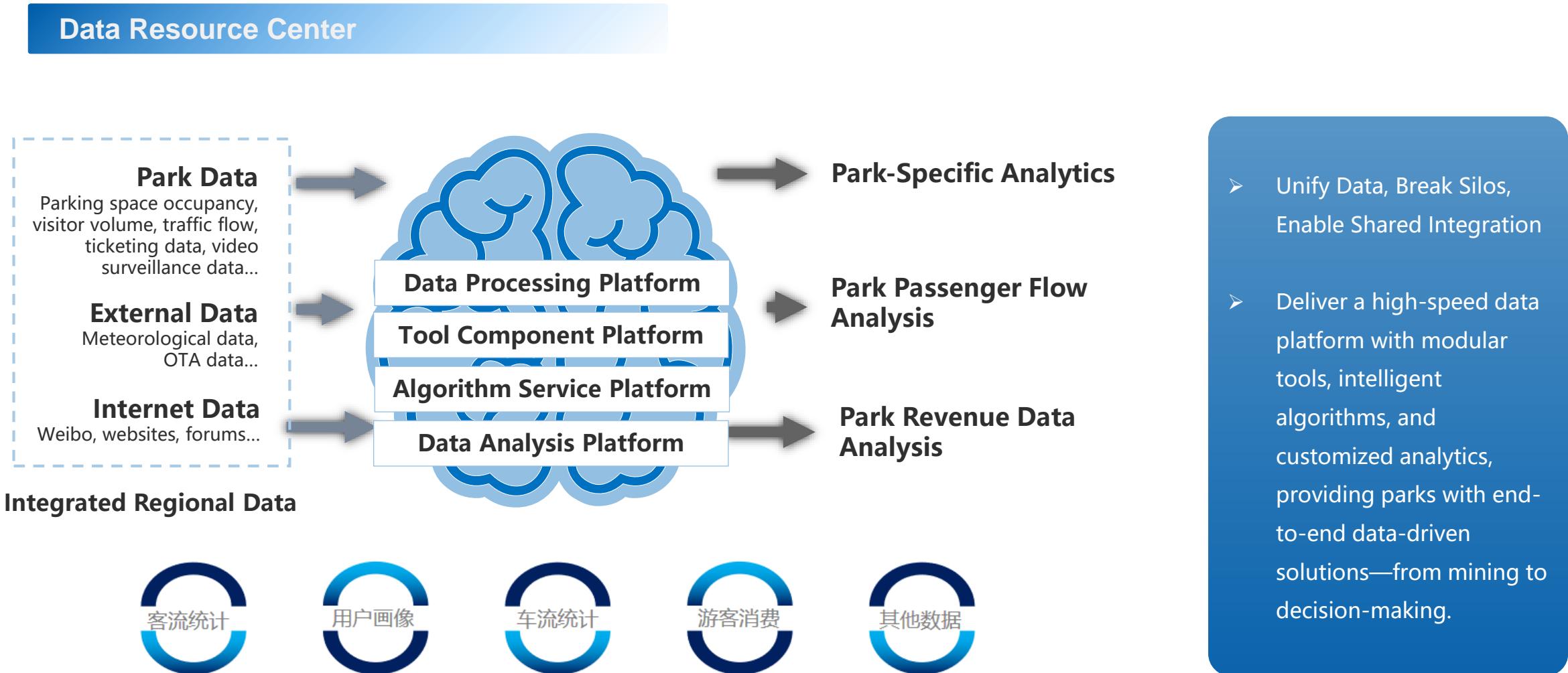
# Smart Park Solution

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M a g n i - A I

# Smart Park Solution



## Big Data Analytics



### Integrated Control System

Unified GIS platform for centralized management of resources, devices, and operations.



### Visitor Flow Analysis

Real-time analysis combining ticketing, surveillance, and monitoring data.



### Vehicle Flow Analysis

Real-time parking and traffic monitoring to prevent congestion.



### Ticketing Analysis

Comprehensive insights from OTA, manual, and self-service sales data.



### Complaint Management

Track and analyze complaints by volume, resolution, category, and trends.



### Online Review Analysis

Evaluate feedback from OTAs and social media to guide service improvements.



### WiFi Analytics

Analyze visitor movement and behavior via connection data.



### Holiday Monitoring

Monitor peak-season operations and identify management gaps through complaint analysis.

# Smart Park Solution

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## System Interface



# Smart Park Solution

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## System Interface



## Technical Principle

### AI-based visual inspection system Closed Loop

#### Part 1

#### Image Acquisition

High-resolution industrial cameras (megapixel to ten-megapixel range) paired with telecentric/industrial lenses and customized lighting systems to meet imaging requirements for industrial parts of varying materials and structures.

#### Part 2

#### Image Preprocessing

Algorithms for noise reduction and grayscale conversion to eliminate environmental interference and enhance image quality.

#### Part 3

#### Feature Extraction and Analysis

CNN-based convolutional neural networks extract dimensional features and convert them into actual dimensional data.

#### Part 4

#### Result Output and Integration

Real-time output of inspection results, synchronized with MES systems to enable automated sorting and parameter adjustments.

## Application Scenarios

### Surface Defect Inspection

#### Consumer Electronics



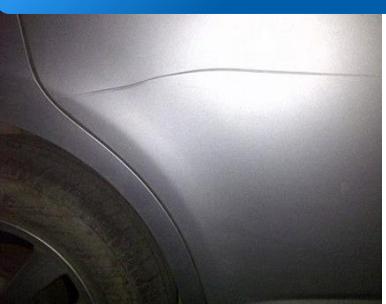
Accurately identify scratches, dents, spots, stains, oxidation, and discoloration on metal casings.

#### Textile Industry



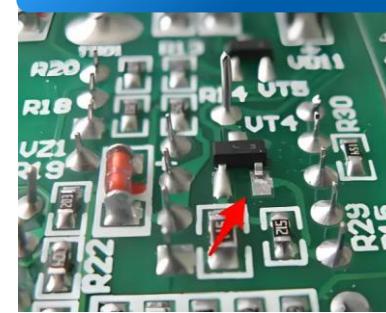
Inspect fabric for broken warp/weft threads, stains, and color inconsistencies.

#### Automotive Industry



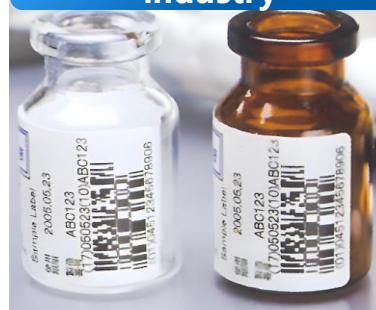
Detect paint defects and scratches on vehicle bodies and components.

#### Semi/PCB



Inspect chip cracks, pin deformations, and solder joint quality.

#### Pharmaceutical industry



Detect packaging defects in medicine bottles and label errors.

#### Food industry



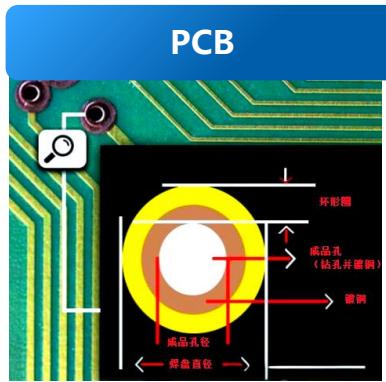
Detect mold spots and surface damage on fruits.

# AI-based visual inspection system



## Application Scenarios

### Automated Geometric Dimension Measurement



Measures circuit line width, spacing, pad dimensions, and hole positions.



#### Connectors

Measures pin coplanarity, spacing, and length.



Measures product length, width, height, aperture size, etc.



#### Automotive Industry

Measures piston diameter, crankshaft journal diameter, and gear module.



#### Medical Devices

Measures surgical instrument blade angles, cannula diameter, and dimensions of microstructures.

# AI-based visual inspection system



## Application Scenarios

### Assembly Integrity Inspection

#### Consumer Electronics Assembly



##### Internal Component Presence Check

Detects missing or misplacement of chips, capacitors, resistors, connectors, etc.



##### Connector and Cable Assembly

Inspects whether FPC cables are fully inserted, clasps are securely fastened, and interface covers are properly installed.



##### Screw Fastening Check

Verifies if screws are tightened properly, checks for missing screws, thread stripping, or incorrect models.



##### Labels and Insulation Materials

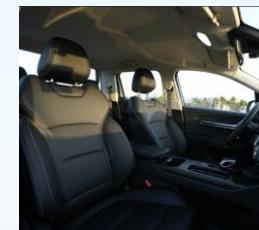
Checks if IMEI labels, network access labels, insulating sheets, and thermal silicone pads are correctly applied without wrinkles or omissions.

#### Automotive Parts Assembly



##### Engine/Transmission Assembly

Inspects whether sensors, wiring harness connectors, vacuum tubes, and bolts are fully and correctly installed.



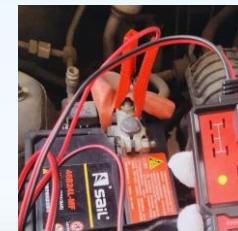
##### Door/Seat Interior

Verifies whether audio speakers, armrests, control panels, safety buckles, etc., are properly installed without missing parts.



##### Airbag Module

Checks the assembly completeness and correctness of the airbag body, mounting brackets, and initiators.



##### Electronic Control Unit

Inspects whether relays, fuses, and connectors on the circuit board are correctly installed.

## Application Scenarios

### Optical Performance Testing

#### Display/Screen Optical Testing



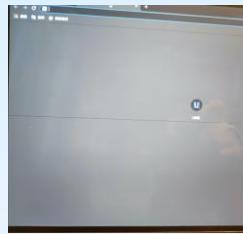
##### Mura Defect Detection

Identifies uneven brightness or chromaticity under solid-color screens (e.g., clouding, edge dimming, yellow spots).



##### Color Accuracy Testing

Measures chromaticity coordinates, color temperature, and color gamut coverage, comparing results with standard values.



##### Point/Line Defect Detection

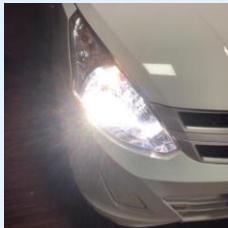
Detects dead pixels, bright spots, dark spots, short-circuit lines, etc.



##### Flicker and Response Time Testing

Analyzes screen flicker and pixel switching speed via high-frequency image capture.

#### Automotive Lighting Optical Testing



##### Light Distribution Performance Testing

Evaluates the clarity and regulatory compliance of cut-off lines (low beam, high beam, DRL) and light pattern distribution.



##### Brightness and Uniformity Testing

Measures brightness distribution across the entire light strip or surface to ensure no over-bright or dark spots.



##### Color Consistency Testing

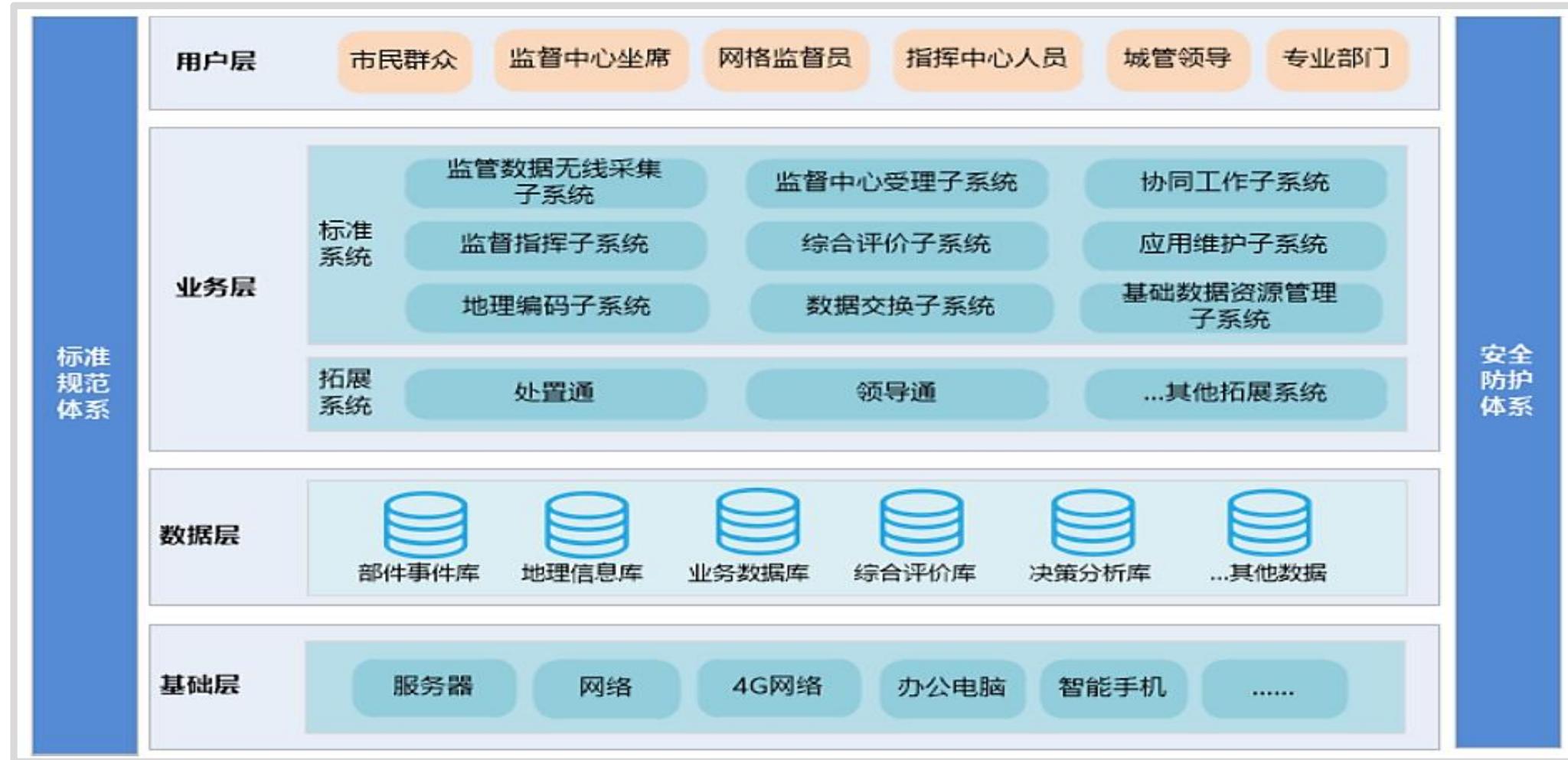
Ensures uniform color across all LED sources (e.g., DRL white without blue/yellow deviation).



**Others**

**Solutions and Products**

## System Architecture



## Core Functions



### Grid Collaboration Subsystem

Assigns issues received by the unified service platform to relevant responsible units based on designated grids, accountability, and issue types.

### Case Acceptance Subsystem

Cleanses cases from different sources and channels, completes case information, and submits them to the unified service platform for processing.

### Mobile Application Subsystem

Enables reporting of various urban management issues via mobile apps and facilitates handling and feedback through the same platform.

### Supervision, Command & Dispatch Subsystem

Unifies and visualizes data from all systems (IT, dispatch, video) on a single map interface. Automatically links incidents to field teams for informed command decisions, with tools for real-time dispatch and resource visualization.

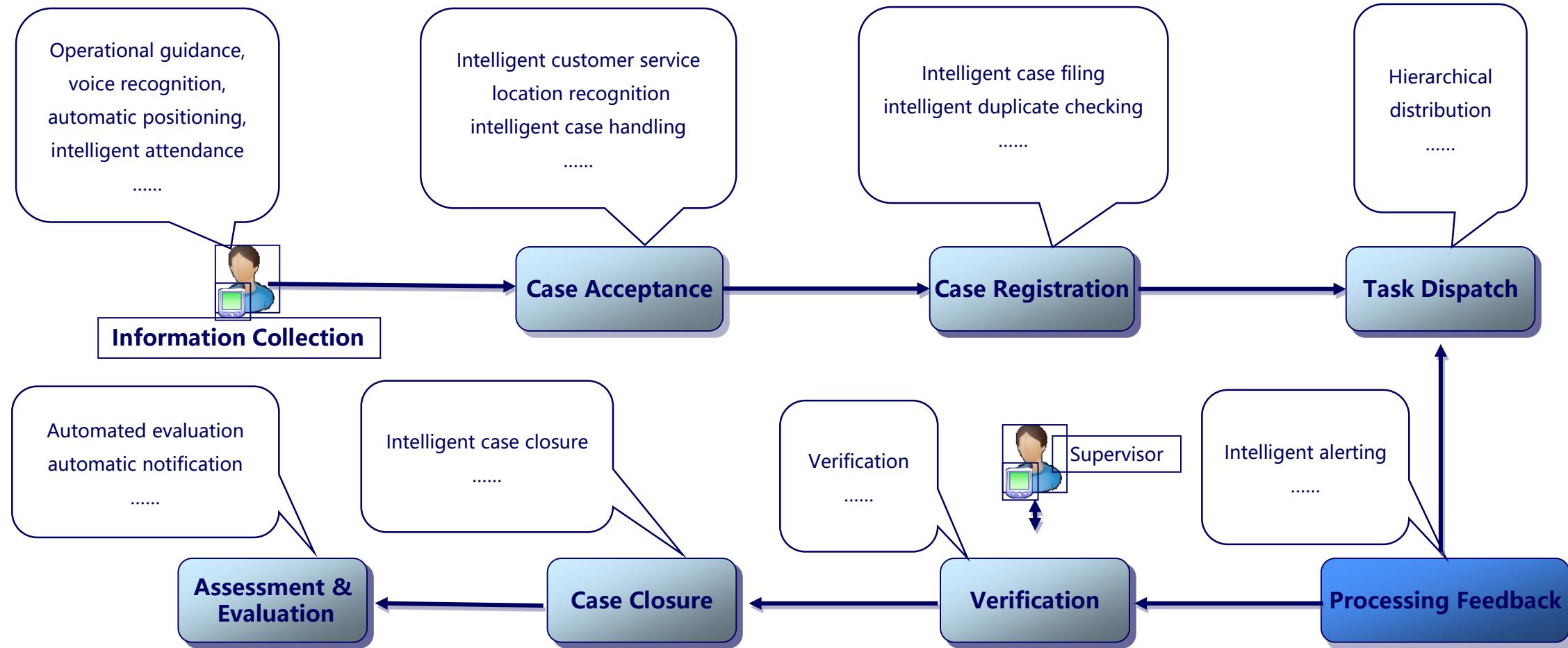
### Comprehensive Evaluation Subsystem

Conducts assessments and evaluations of all responsible entities in urban management, generating visualized results in graphs, reports, and other formats.

# Smart Urban Management



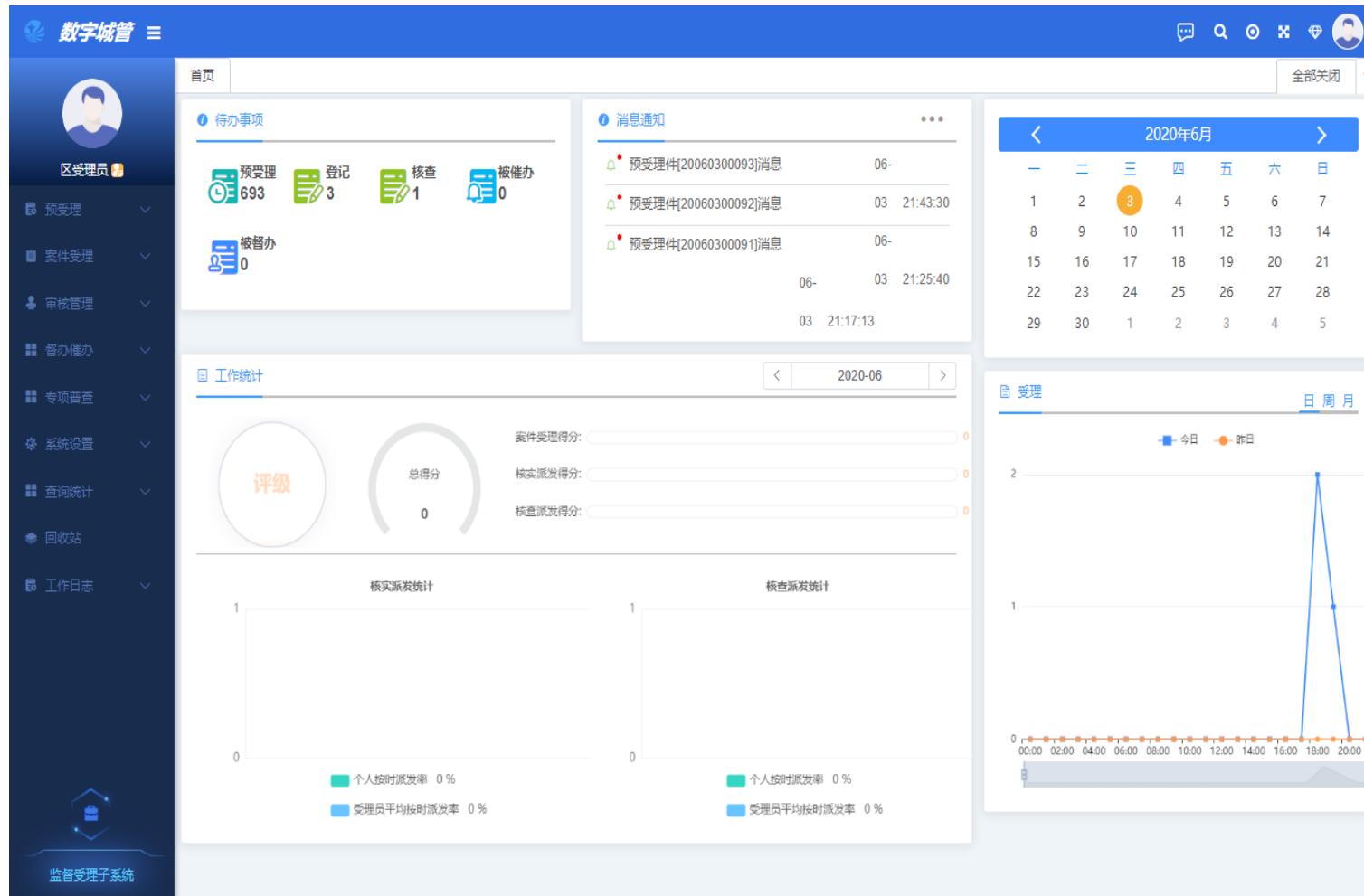
# Business Logic



# Smart Urban Management



## System Interface



### Establish a long-term urban management mechanism

Enable public participation, transparency, and oversight, with clearly assigned responsibilities. Proactively identify issues to achieve standardized and institutionalized urban governance.

### Improve urban management efficiency

Enable timely problem detection, accurate task dispatch, and prompt resolution. Strengthen departmental capabilities and clarify administrative responsibilities for more precise management.

### Promote collaboration among urban management departments

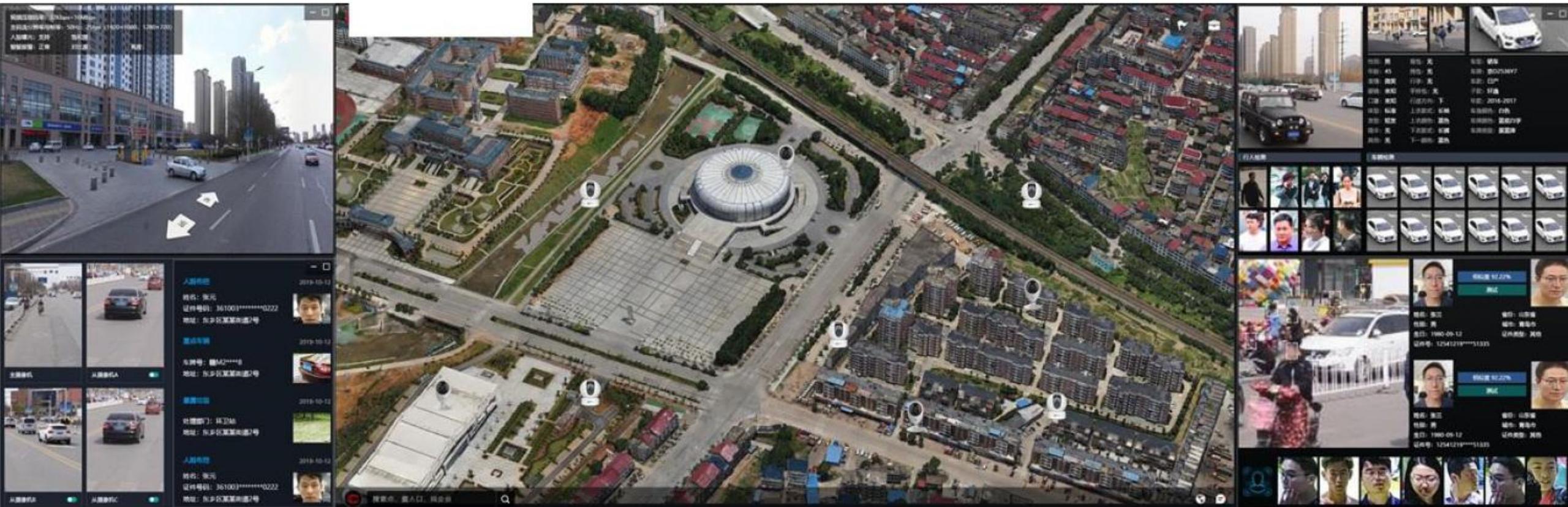
Drive institutional reform and process reengineering. Establish a supervision and evaluation system to integrate management resources and enhance oversight effectiveness.

### Generate direct economic benefits

Reduce redundant data collection across government and enterprise departments, lower labor costs, and improve information utilization and timeliness.

# Video Surveillance System

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- Illegal Parking Detection
- Wrong-Way Driving Detection
- Key Area Monitoring

- Garbage Exposure Detection
- Material Piling Detection
- Muck Truck Detection

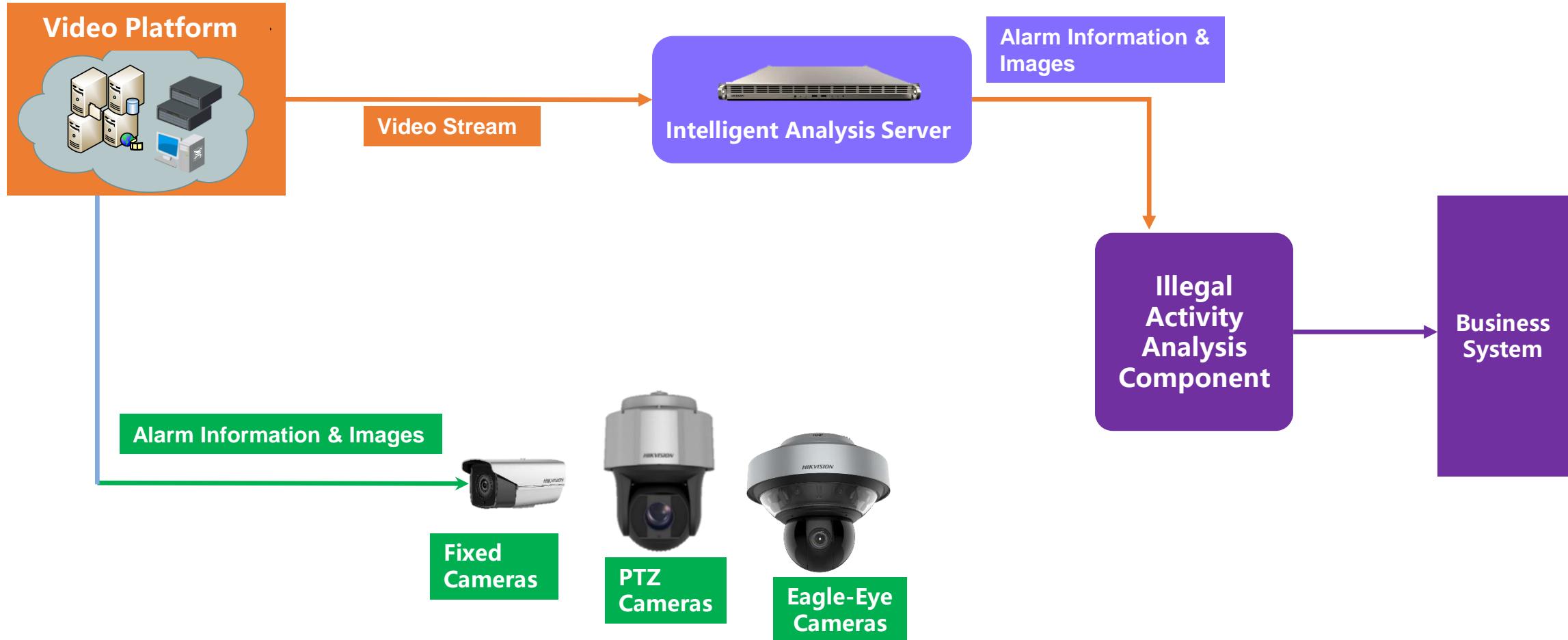
- Smoke and Fire Detection
- Pedestrian Flow Analysis
- Vehicle Flow Analysis

- Illegal Vendor Detection
- Target Trajectory Analysis
- Face Recognition & Clustering

# Video Surveillance System



## Business Logic



# Video Surveillance System

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## Abnormal Event Monitoring



Restricted Zone Monitoring



Non-motorized Vehicles in Motor Lanes



Jaywalking Detection



Illegal Parking



Fire Lane Occupancy



Smoke and Fire Detection



Garbage Accumulation Detection



Mobile Vendor/Unauthorized Stall Occupation

# Video Surveillance System

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## AI Recognition

### Road Occupation Business



### Mobile Vendor



### Bulk Waste



### Garbage Accumulation



### Waterlogging



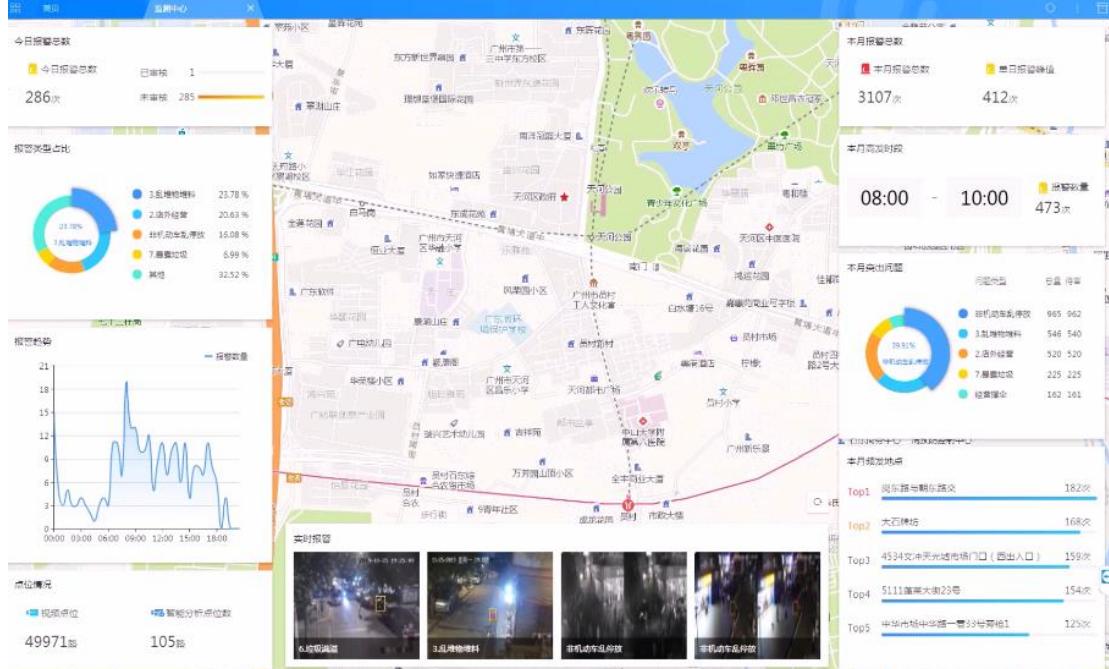
### Motor Vehicle Illegal Parking



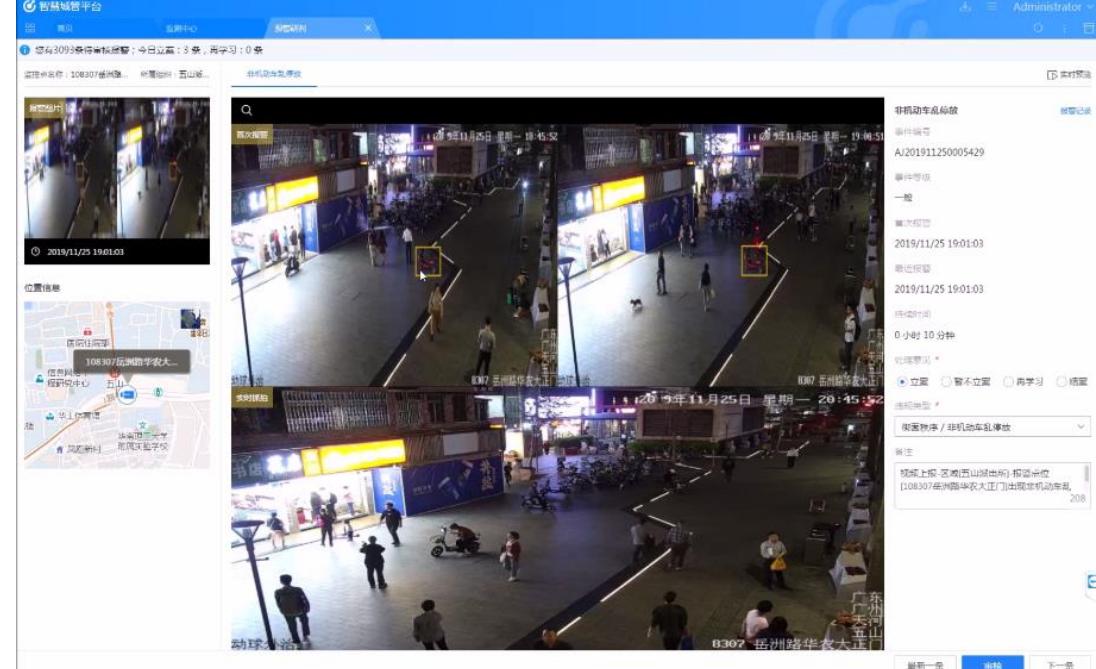
# Video Surveillance System

磁石科技

## System Interface



### Road Occupation Business



### Early Warning & Prediction

- Covers seven key scenarios including waterlogging, unlicensed vending, storefront encroachment, and illegal parking.
- Offers monitoring, trend analysis, reporting, and statistical functions, supported by features like image comparison, multi-rule mapping, and an evidence chain database.

## System Architecture



## Visualization Dashboard



### ➤ Key Event Alerts

Shows warnings for suspicious individuals, security/fire emergencies, equipment failures, etc.

### ➤ Real-time Community Data

- 1) Resident flow & access records
- 2) Incident statistics & handling status
- 3) Equipment status & malfunction reports
- 4) Housing occupancy & vacancy rates
- 5) Commercial tenant analytics & lease status

## Security Management

### Core Functions



- **Video Surveillance**

- Live monitoring, playback, and alarm management, serving as the “eyes” for site security.



- **AI Smart Alert**

- Detects intrusions, obstructions, crowding, e-bikes in elevators, and objects thrown from heights, with predefined alert rules for visualized incident handling.



- **Face Recognition Control**

- Manages face databases and monitoring plans to identify key/stranger/frequent persons, track trajectories, and review recognition records.



- **Smart Patrol**

- Supports electronic and video patrols with configurable routes/plans, record tracking, and abnormality reporting, enabling remote video patrols and on-site QR-code checks.



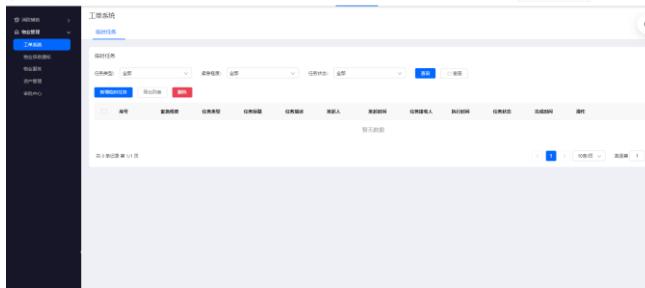
## Key Population Management



- Integrates trajectory and operational data to model and analyze key populations, enhancing frontline capacity for targeted early warning, control, and support services.

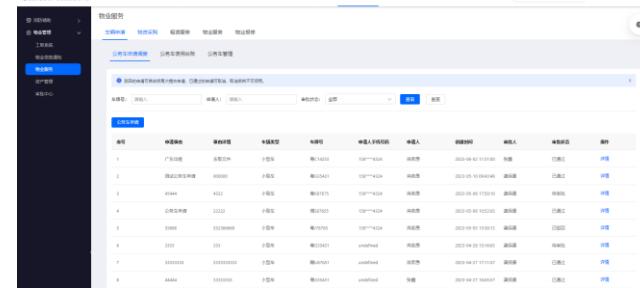
## Property Management

### Core Functions



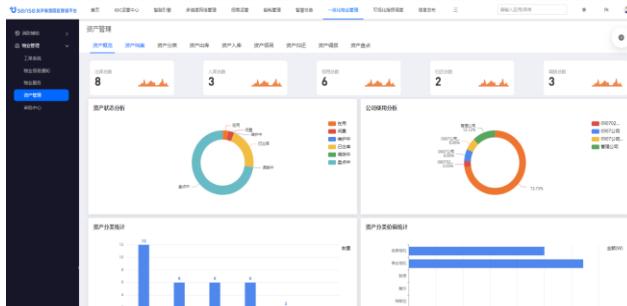
- **Work Order System**

- Create work orders, set priorities/task types/schedules, track status—enabling precise control and improved efficiency.



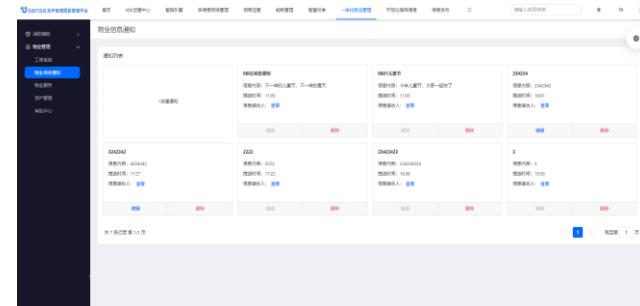
- **Property Services**

- Handle repairs, leasing, procurement, and vehicle management with full digital tracking for closed-loop, auditable service.



- **Asset Management**

- Track assets via inventory, check-in/out, records, and categorization—establishing a traceable, full-lifecycle model.



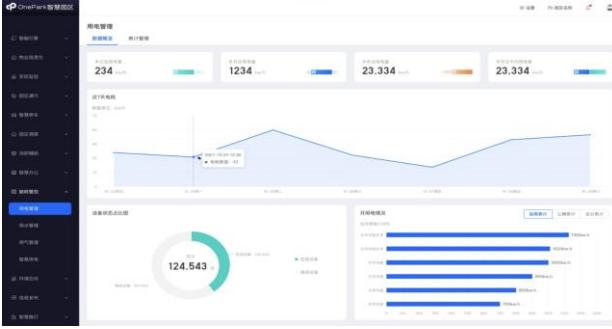
- **Notifications**

- Customize community notices, assign approvers, and view history for timely platform/mobile alerts and faster response.



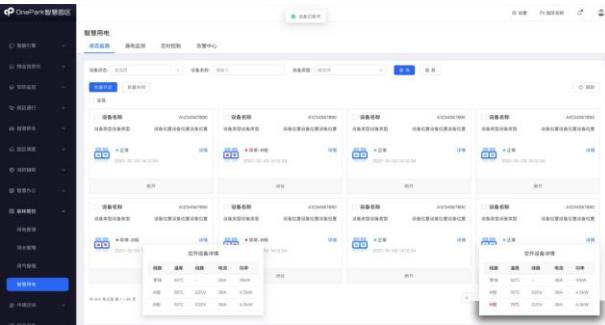
## Energy Management

### Core Functions



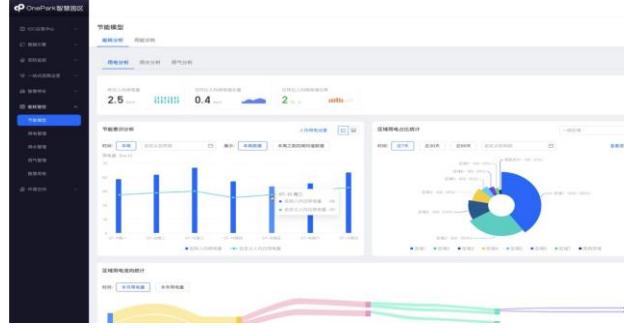
#### • Energy Consumption Monitoring

- Real-time tracking of water/electricity/gas usage with meter management and threshold alerts to reduce waste and costs.



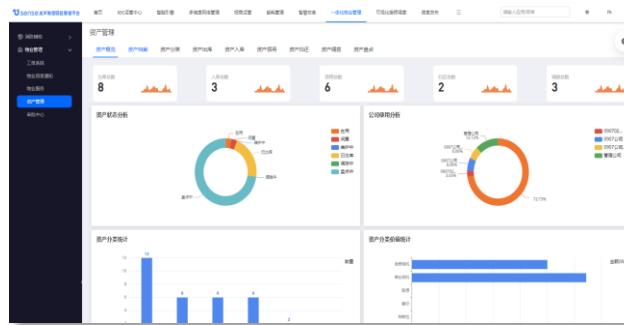
#### • Smart Circuit Breaker Control

- Remote monitoring, scheduled on/off control, and status logs to prevent energy waste and electrical fires.



#### • Energy Analysis

- Review consumption per capita, regional usage patterns, and efficiency suggestions to identify anomalies and support energy-saving plans.



#### • Alert Integration

- Real-time detection of line/terminal issues with tri-level alerts and automated work orders to ensure safety and extend equipment life.



## Event Handling

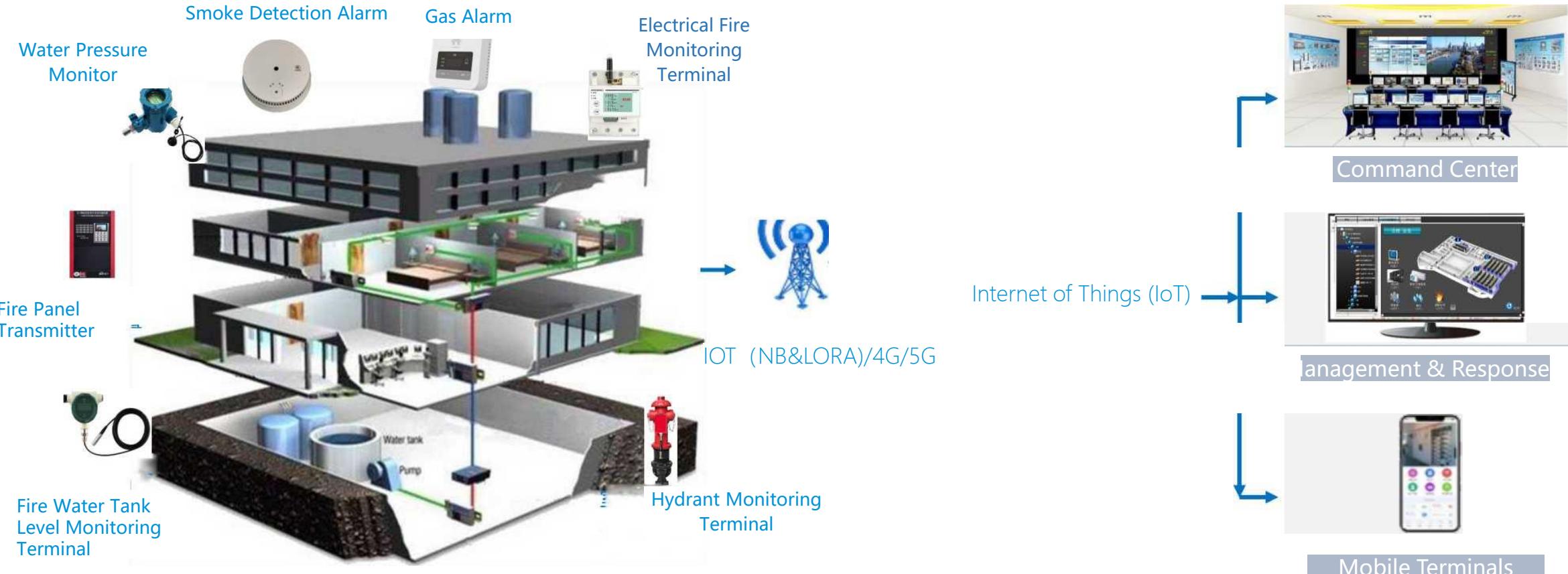


Achieves closed-loop event management (report → assign → resolve → evaluate), enabling cross-department and multi-level coordination to enhance grassroots governance. This integrated service-governance model ensures minor issues stay within community grids and major issues are contained at the neighborhood level.

# Smart Fire Protection Solution



## Framework



Leveraging IoT technologies, a unified smart fire protection platform provides 24/7 real-time monitoring of electrical, gas, and smoke hazards in communities. Upon detecting risks, the system automatically issues multi-level alerts to residents, neighbors, and grid staff, shifting from passive response to proactive prevention. This enables a transition from human-based to intelligence-driven fire safety, significantly enhancing urban early warning and emergency response capabilities.

# Smart Fire Protection Solution



## Integrated Security-Firefighting System



### 1 Alert Initiation

Fire alarms trigger alerts, but manual verification can be delayed by unclear locations, access routes, or communication issues, increasing fire risk.



### 2 Verification & Confirmation

Upon alarm activation, sensors trigger nearby cameras to automatically display live feeds at the command center, enabling guards to quickly verify incidents and launch emergency protocols.



### 3 Automated System Response

The security system unlocks all exits in the affected area and opens pedestrian/vehicle barriers to facilitate rapid evacuation.



### 4 Multi-department Mobilization

Sends SMS alerts to affected individuals, provides escape guidance via broadcast, and escalates to fire departments based on incident severity.

Centered on event-driven integration, it combines video patrols, fire-security linkage, and barrier control. With features including centralized management, visual monitoring, flexible coordination, and decision support, it enables intelligent and visible community safety management, comprehensively enhancing security efficiency and protecting lives and property.

# Smart Fire Protection Solution



## Real-time Equipment Alert Monitoring

1 Configure alert rules and severity levels.



2 Alerts trigger when operational data meets rule criteria.



3 Multi-level notifications based on severity .



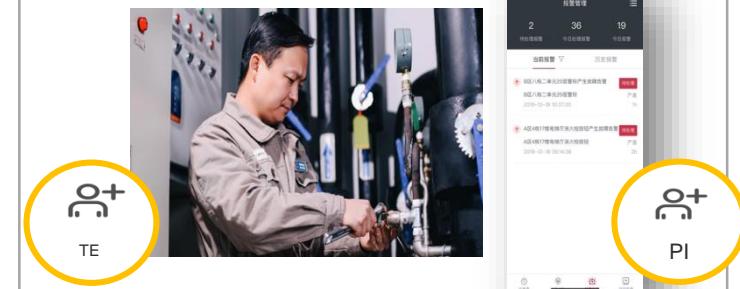
3.1 Monitor alerts centrally and drill down to buildings/equipment rooms.



3.2 Dispatch personnel based on real-time equipment data.



4 On-site resolution with completion confirmed via app.



Closed-loop Fire Monitoring: This system covers the full process—from setting rules in advance and real-time monitoring during events to automated notifications afterwards—ensuring orderly management through controlled information flow.

# Smart Fire Protection Solution

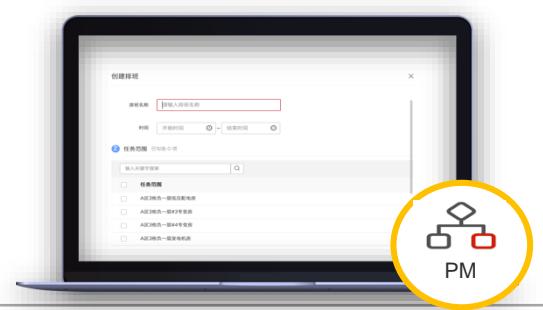


## Manual & Automated Inspections

1 Create inspection tasks linked to check items.



2 Set inspection schedules and assign tasks.



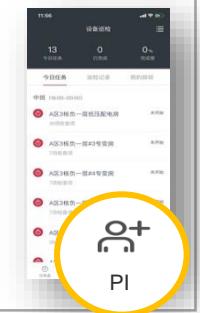
### Manual Inspection Scheduling

3.1 Manual Inspection Scheduling:  
Add schedules -link inspection tasks.



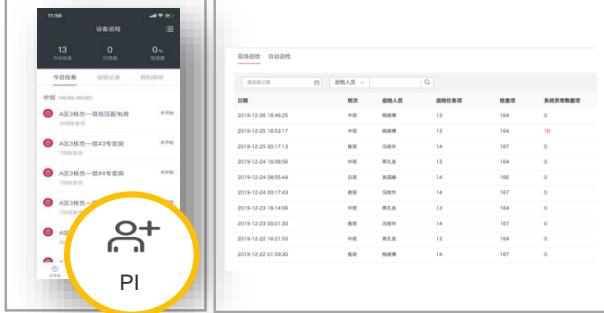
### Manual On-site Inspection

3.1.1



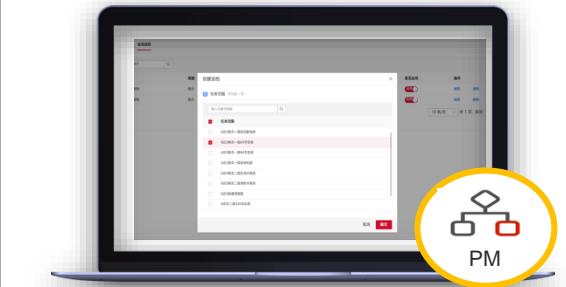
### Generate Inspection Report

3.1.2



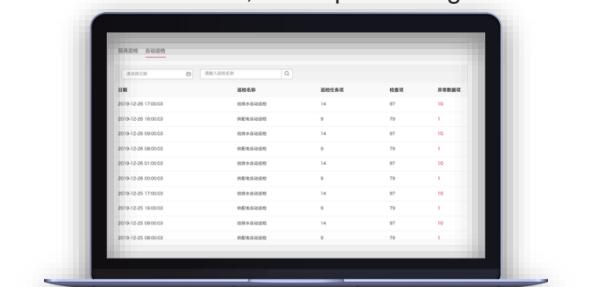
### AI Video-Based Smart Inspection Setup

3.2 System creates inspection tasks  
with defined scope.



### System Automated Inspection Generate Inspection Report

3.2.1 Inspections are completed automatically  
on schedule, and reports are generated.



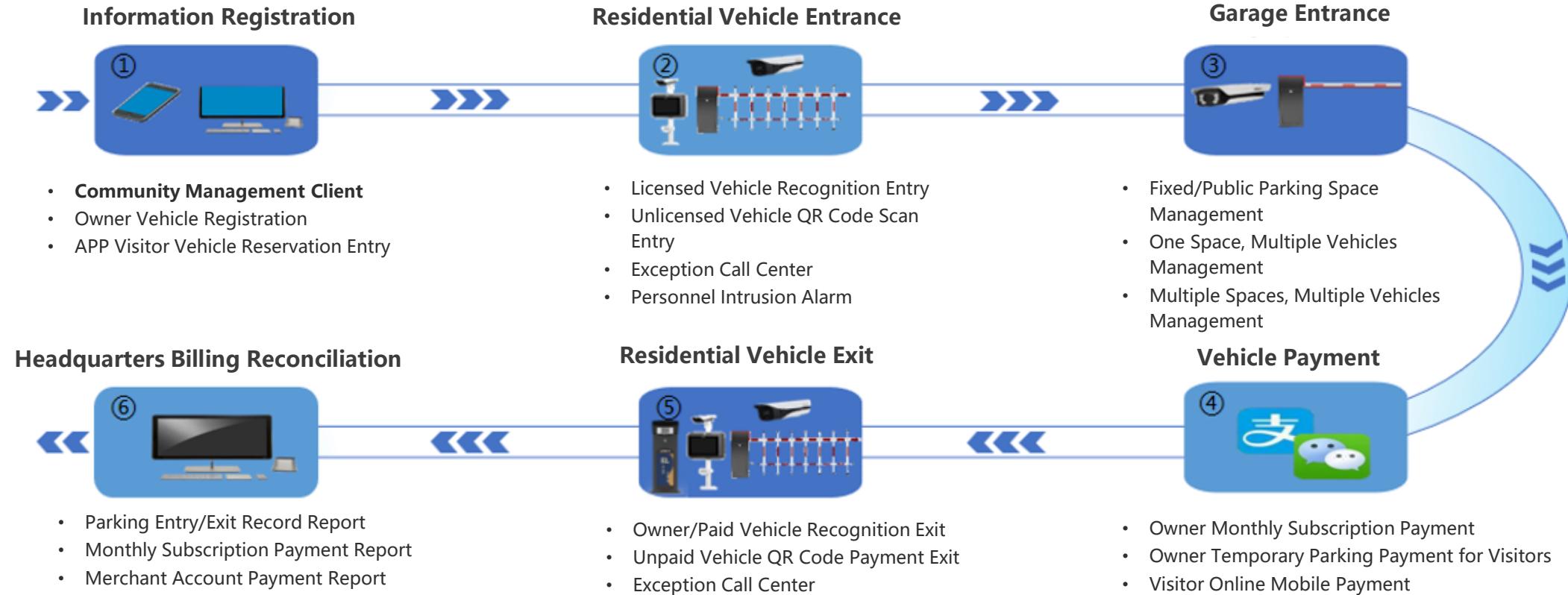
### 4 PMC、PM、MCC

All relevant parties have  
access to daily inspection  
summaries and reports.

## Unattended Solutions



## Residential Vehicle Management



This system provides smart management of the entire vehicle process—from information registration and entry to parking, self-service payment, and exit. It enables fast vehicle recognition and access, supports unattended entry points, and allows self-service registration upon arrival and self-service payment upon departure.

## Other Unattended Application Scenarios



Office Buildings



Large Commercial Plazas



Airports/Train Stations



Urban CBD Centers

Suitable for CBD core areas, urban complexes, large commercial squares, transportation hubs, major public venues, and other locations that integrate commercial, office, leisure, and residential functions.

### Card-Free Access

- License plate recognition verifies vehicle identity.
- Enables card-free, non-stop entry and exit, improving traffic efficiency.
- Offers standard-speed, fast, or high-speed barrier gates for different scenarios.
- Supports optional LED guidance systems at entrances/exits.

### Unattended Parking

- Unmanned Parking Facility



# Thank you for your attention!

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