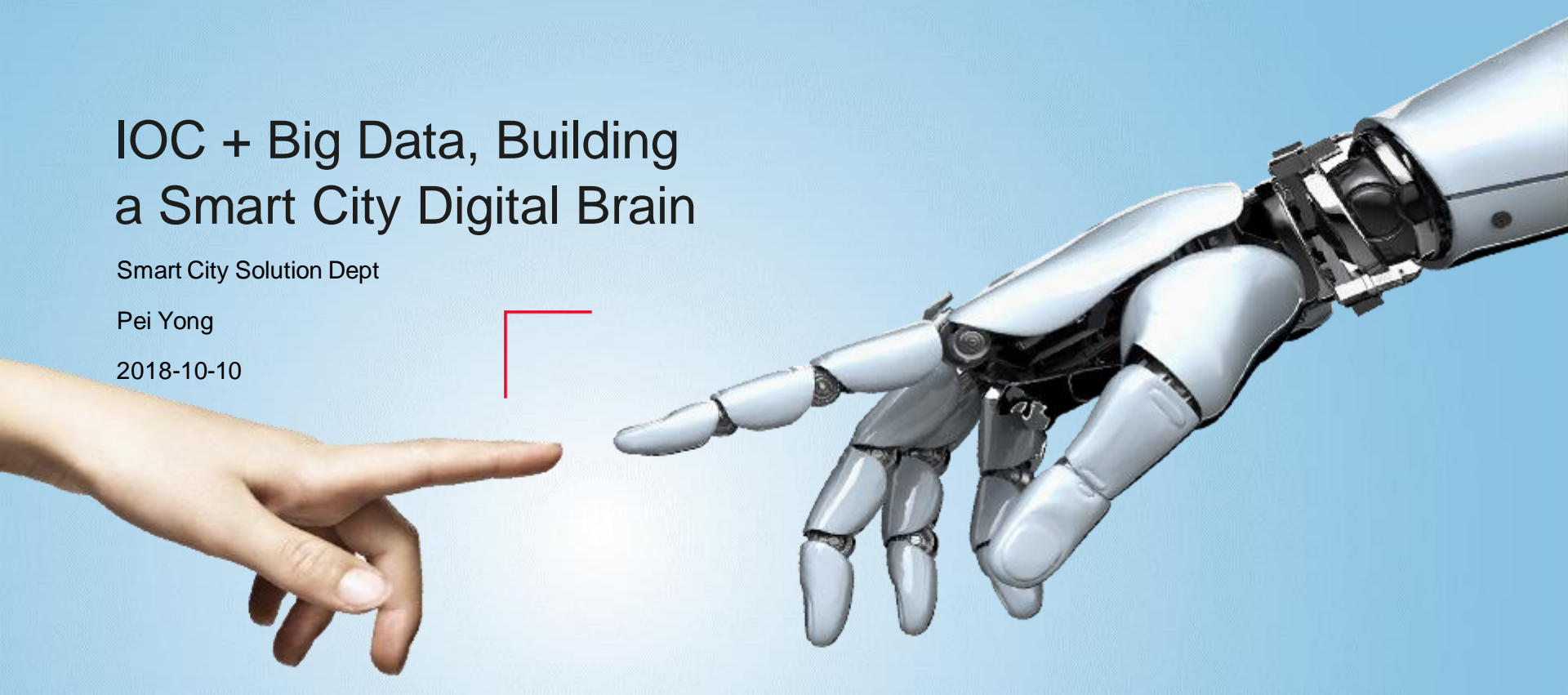


# IOC + Big Data, Building a Smart City Digital Brain

Smart City Solution Dept

Pei Yong

2018-10-10



# Contents

- 1 Objectives and Positioning of IOC
- 2 IOC + Big Data, Building a Smart City Digital Brain
- 3 IOC Application Scenarios and Cases

# Smart City Construction Ushers in a New Growth Period

“Accelerate the implementation of the national big data strategy and the construction of a digital China.”

The 19th National Congress put forward the construction of a smart society.

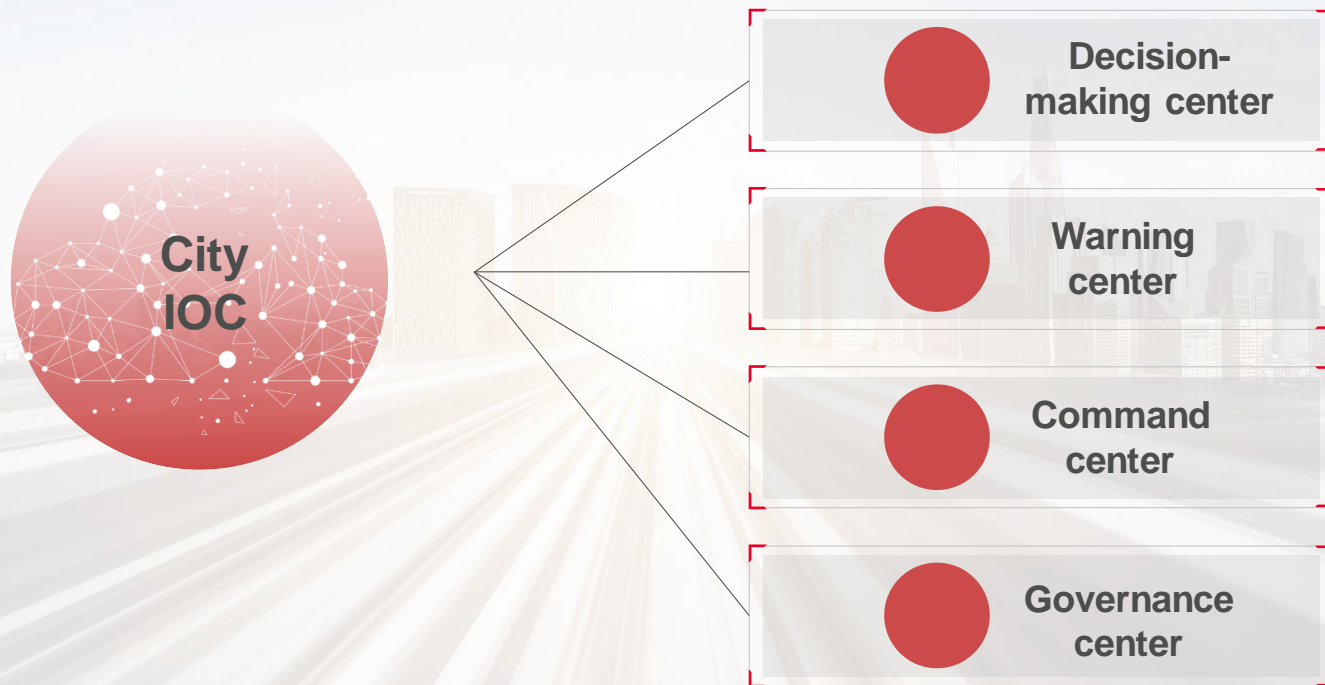
The Ministry of Emergency Management was set up under the government agency restructuring.



The accelerated urbanization demands smart city governance.

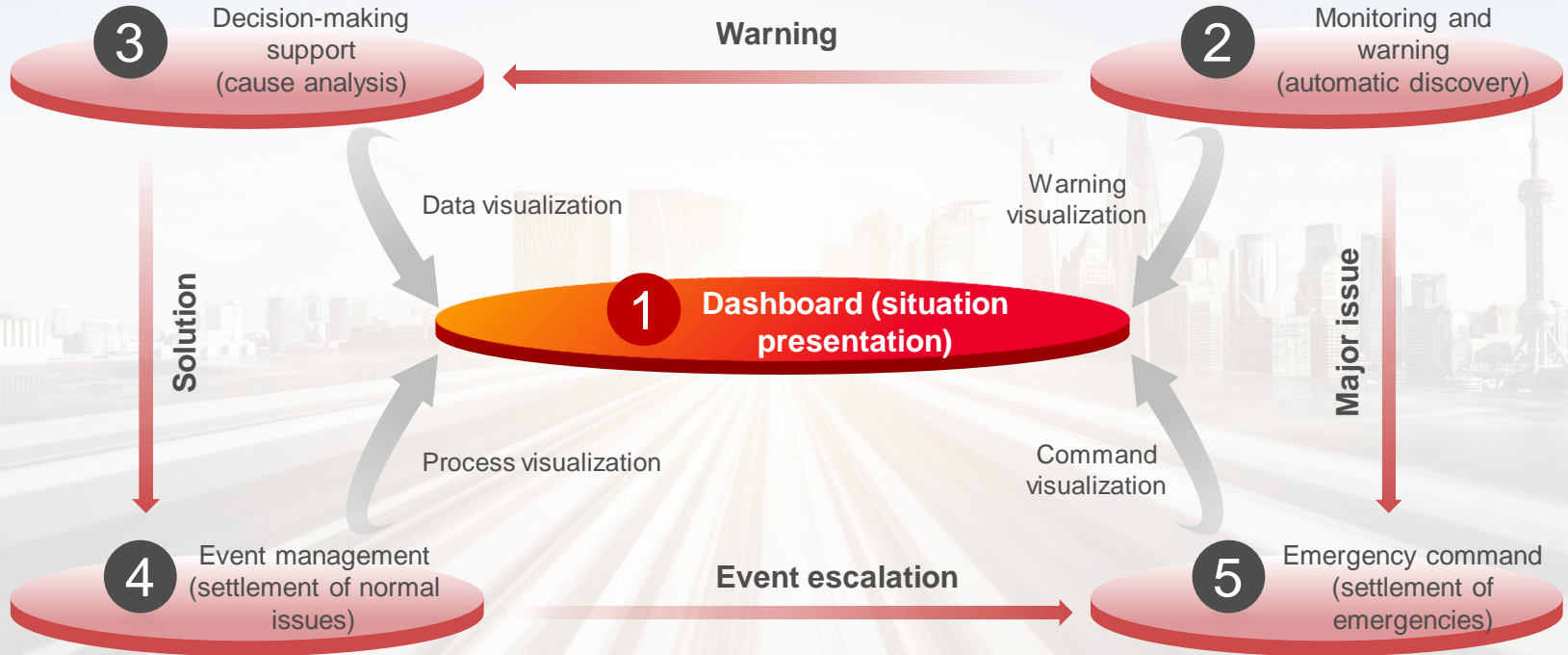
An Intelligent Operation Center (IOC) is required to build new smart cities.

# Objectives and Positioning of Huawei Smart City IOC Solution

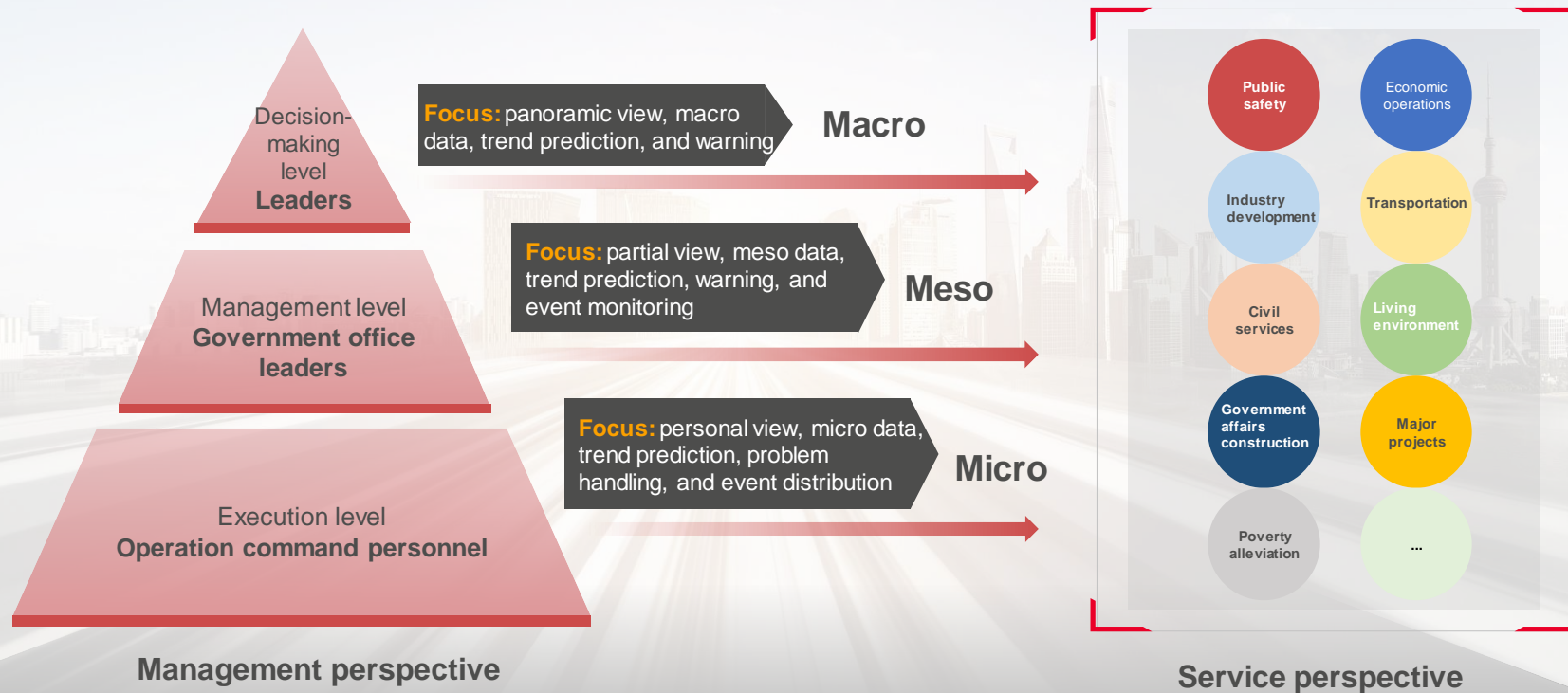




# IOC Service Architecture



# IOC Provides Personalized Views for Managers at Different Levels



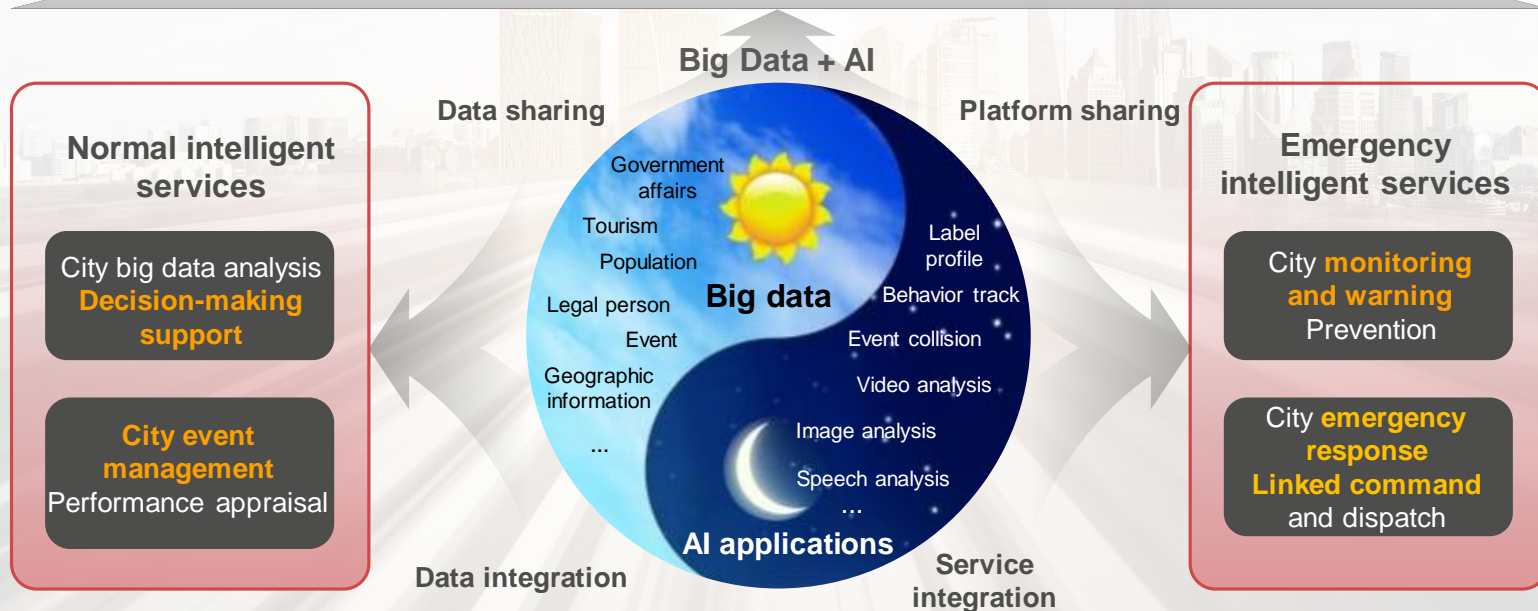
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# IOC Provides Integrated Urban Services Based on Big Data and AI

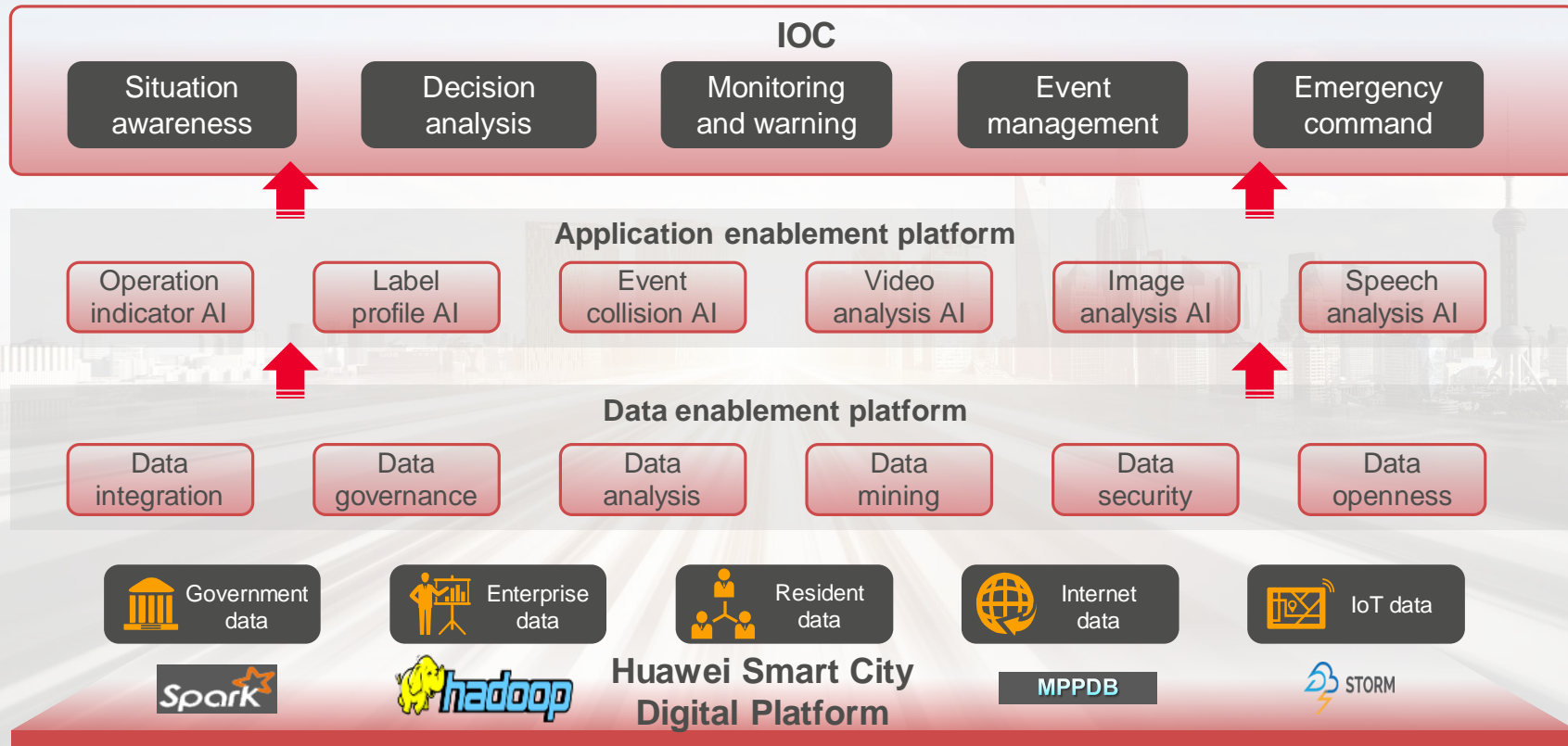


City dashboard for situation overview and awareness





# Huawei Smart City Digital Platform Provides Data and Model Support for IOC



# Contents

- 1 Objectives and Positioning of IOC
- 2 IOC + Big Data, Building a Smart City Digital Brain
- 3 IOC Application Scenarios and Cases

# Overall Situation Presentation

Monitors and visualizes major operation indicators in real time.





# Analyzing Waterlogging Risks Based on the City Meteorological Warning, IoT Real-Time Monitoring Information, and Historical Data





# Intelligent Association and Collaborative Management of City Events



- 1 The fire hydrant was knocked down by a vehicle and would be fixed in four days.



- A fire engine was dispatched to the fire location.



- Ultra-long water pipes were taken with the fire engine.

## Event integration and linked command



- 5 After obtaining IOC information, the fire brigade adjusted fire facilities and bypassed the traffic accident.



- 2 A fire accident occurred in the block where the fire hydrant was knocked down.



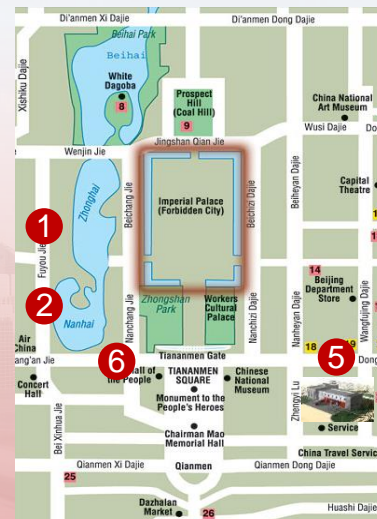
- 3 A 119 fire alarm call was received.



- A 122 traffic accident call was received.

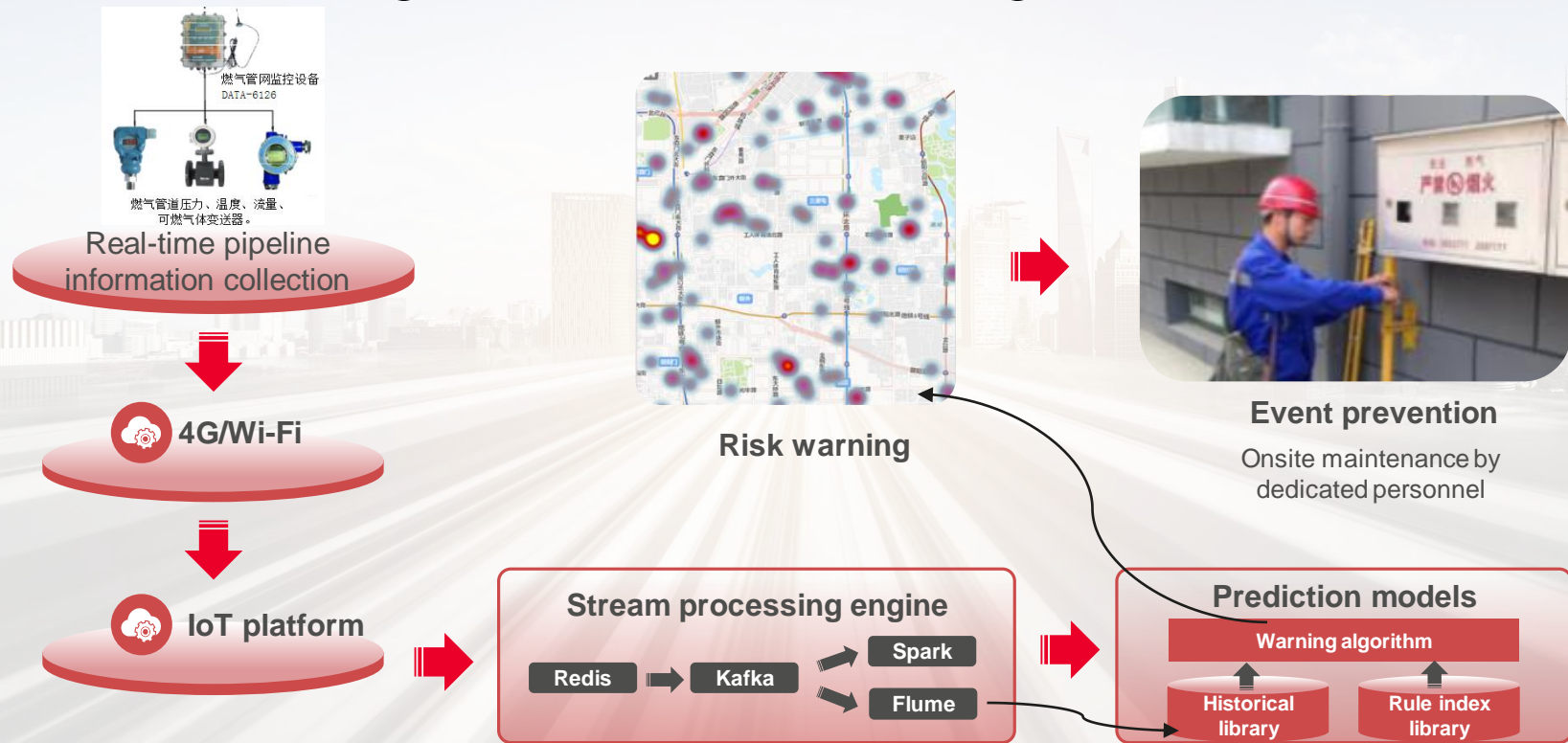


- A traffic accident just happened.

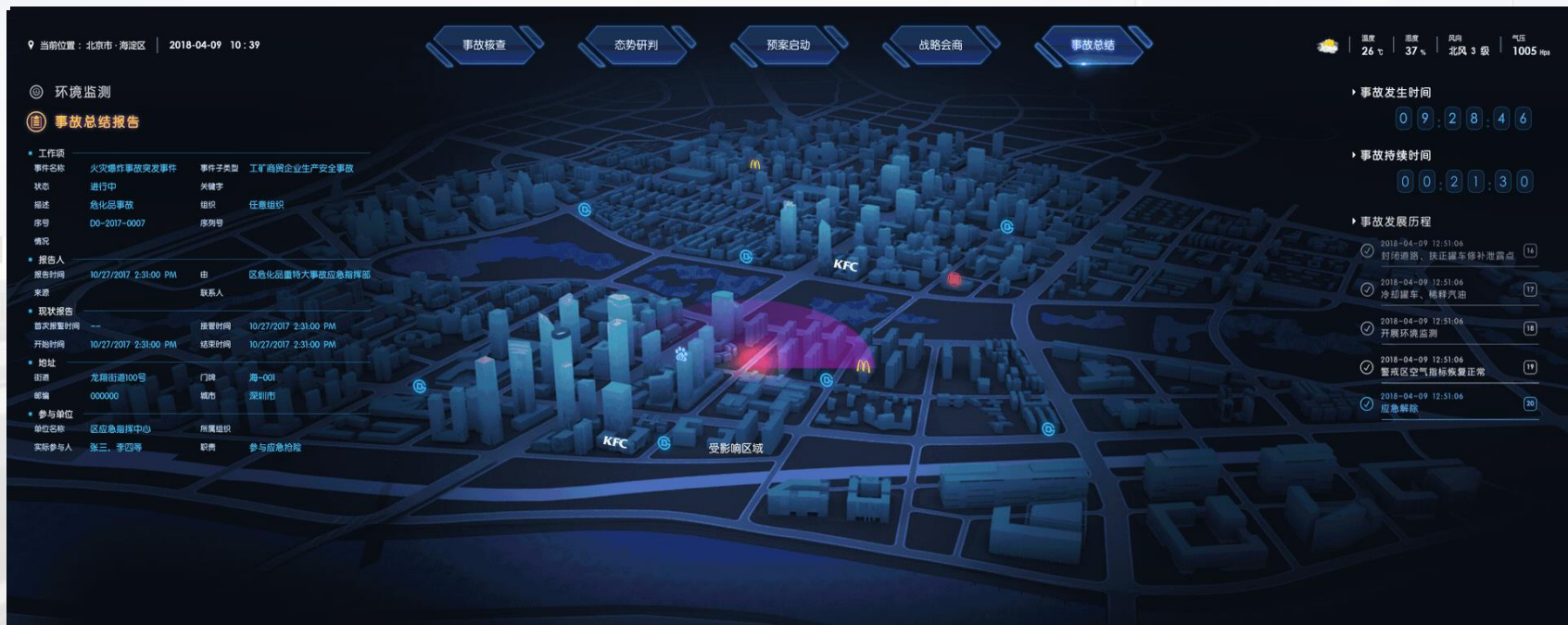


## Event integration and intelligent operation management

# Real-Time Monitoring and Warning of Gas Pipelines Based on IOT and Big Data Flow Processing



# Emergency Linked Command Scenario

Event report  
managementAccident  
inspectionSituation  
analysisContingency  
plan initiationOnsite  
commandAccident  
summary



# Case 1: Shenzhen Longgang Smart City IOC

## Comprehensive data collection

### Sensing device collection



655 license plate recognition cameras, 3301 facial recognition monitoring sites, 6000 Wi-Fi collection devices, and 230,000+ sensors that collect 40 million data records each day

### System interconnection collection



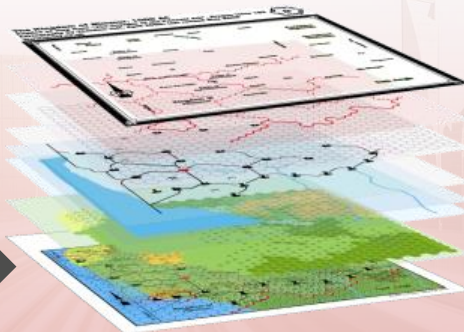
**500 million** data records obtained from **61** municipal units  
**180 million** data records obtained from **68** district-level units

### Onsite collection



525,000 data records collected by rental housing and security segment inspectors each month  
25,000 onsite data records collected by city management personnel each month

## Multi-system data integration



The big data processing technology is used to clean data and form **1954** district-level data directories. This integrates data with the map and presents users with a comprehensive view on the map.

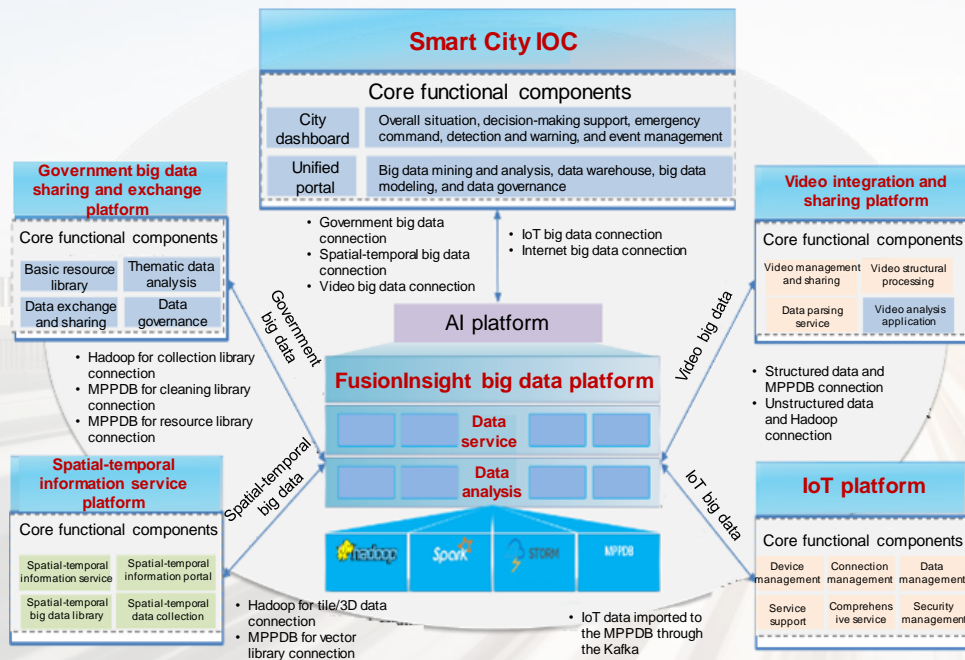
## Data intelligence



The IOC platform displays the situation in a comprehensive way, collaborating the auxiliary decision-making, smart government affairs, and civil services.



# Case 2: Building Lanzhou New Area as a Eurasia Land Bridge Through Data Integration and Intelligent Operations



## Government big data

- Aggregates 695 information resources in 34 units.
- Builds a monitoring database for the population, legal persons, housing, macro economy, and economic operations.
- Analyzes nine topics: population, public education, housing structure, healthcare, social insurance decision making, social service decision making, family planning decision making, housing assurance decision making, and economic operation.



## City operation big data

- Aggregates Internet data.
- Builds a special library of economy, public safety, regional governance, happiness index, human settlement, party and government justice, and new district overview.
- Analyzes eight topics: economic innovation, strategic and emerging industries, public safety, district governance, livelihood happiness, human settlement, party and government justice, and new district overview.



## Video big data

- Converges video data from public security, traffic police, municipal, and environmental protection departments.
- Constructs the video image information library (vehicle library, personnel library, and event library).
- Implements license plate recognition, facial recognition, personnel profile, and human/vehicle track analysis.



## IoT big data

- Converges firefighting IoT monitoring data, flash flood disaster warning and monitoring data, and reservoir monitoring data.
- Constructs the firefighting IoT monitoring database, flash flood disaster warning database, and reservoir monitoring database.
- Helps firefighting departments perform fire risk assessment and visualized analysis.

# Thank you.

把数字世界带入每个人、每个家庭、  
每个组织，构建万物互联的智能世界。

Bring digital to every person, home, and  
organization for a fully connected,  
intelligent world.

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