

Thursday 28 March

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InterFlood 4: Innovations in Flood Mitigation, Management & Resilience

## **A full life-cycle IT approach for flood management**

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# A full life cycle IT approach for flood management

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# 01 **Challenges**

# Challenges of Drainage System

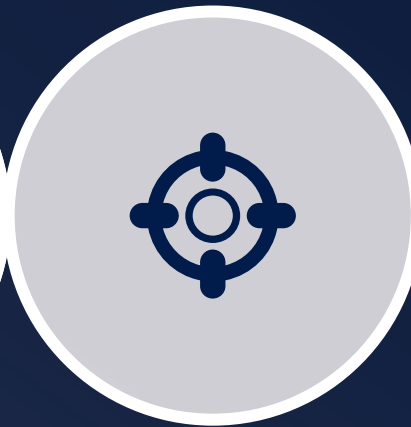


# Challenges of Drainage Industry

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**No Accurate  
Command**

**No Scientific  
Recovery**



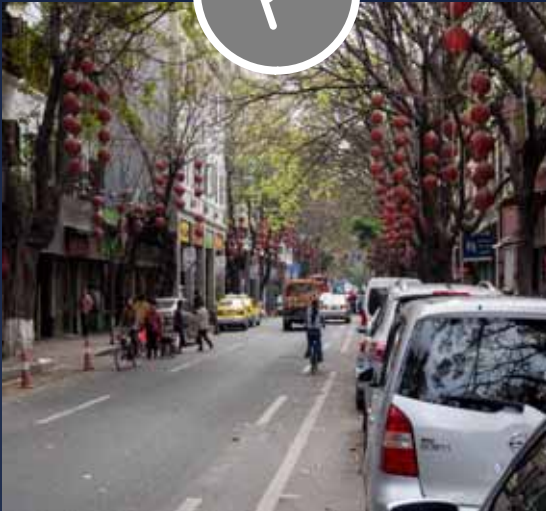
**No Real Time  
Information**

**No Lean  
Maintenance**

# 02 **Solution**

# Solution Concept

## Pre-Flood



Perfect time for preparation to fight weather change

## In-Flood



Focus on dispatch and optimized resources for emergency works

## Post-Flood



Recap the event and conduct infrastructure works at mostly needed



# Solution Concept



Delayed Warning  
Slow Response  
Great Damage



**Innovative ICT**



Early Warning  
Fast Response  
Less Damage



**Cloud**



**Big Data**



**Mobile**



**SDN**



**IOT**

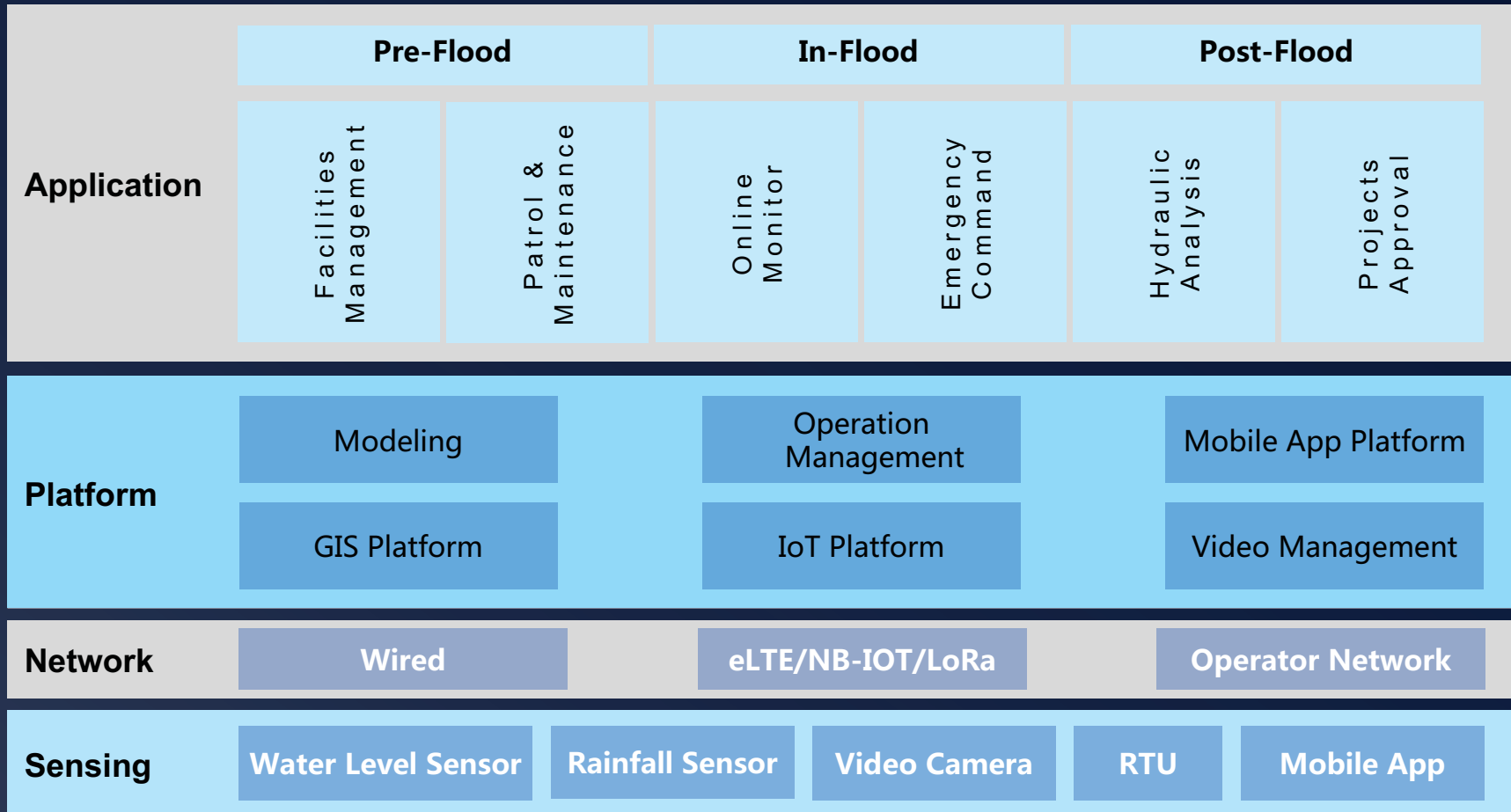


**AI**



**NB**

# Solution Structure



# Application Layer Concept

**3R  
Full-Cycle  
Management**

**3**



**6**

**6 Modules  
Professional  
Applications**

# Pre-Flood Ready - Facilities Management, Patrol & Maintenance



Facilities Location Inquiry



Device Logbook Management



Task Locating, Patrol Report, Performance Review



Device Profile Checking



Maintenance Unit Management



Routes Monitoring

# Pre-Flood Ready – Benefits



## Optimized Decision

All facilities management supports optimized decision on facilities planning.

## Transparent Information

Facilities status information up to date, transparent to all levels of management.

## Cost Saving

Cost and performance review ensure competitiveness on maintenance budget.

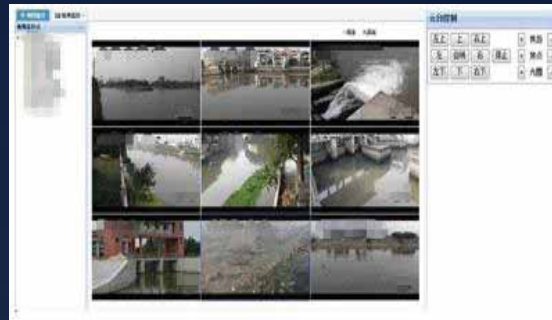
## Consistent High Performance

Always clean canals and pipelines, better preparation for rain.

# In-Flood Respond - Online Monitor, Emergency Command



Meteorological Info Monitor



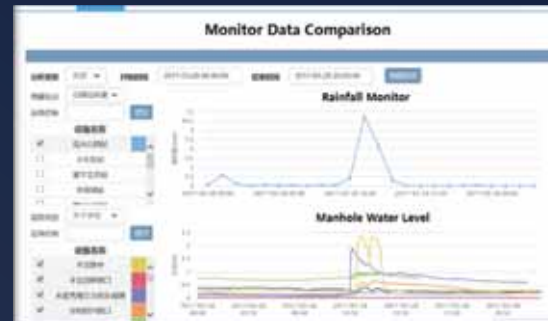
Video Surveillance



Team Remote Command



Monitoring Warning Level Setting



Monitor Data Comparison



Monitor and Report on Mobile APP

# In-Flood Respond – Benefits



## Full Picture View

Real time all status information shared for full picture understanding on one map.



## Minimized Impact

Timely pre-warning published for decision making to minimize potential impact.



## Improved Efficiency

Effective and efficient operation from timely generated task and activated emergency plan as well as device control.



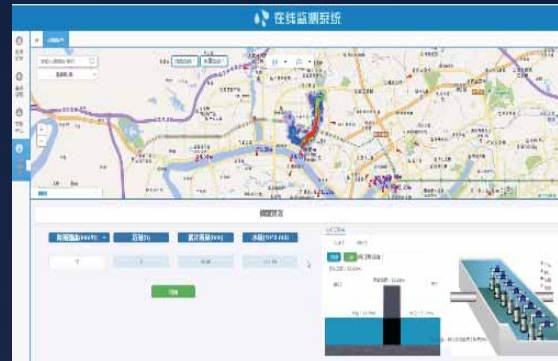
## Convenient Management

Manage and report anytime anywhere on mobile.

# Post-Flood Recover - Hydraulic Analysis, Projects Approval



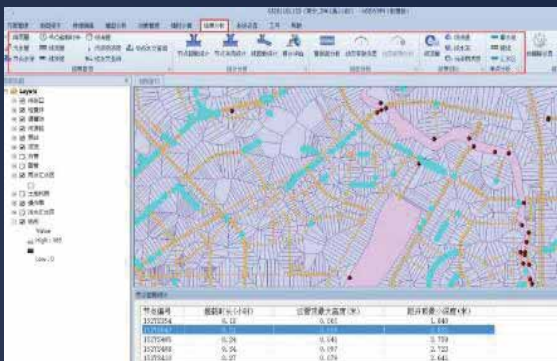
District Model Building



River Flood Modeling



Improvement Project Selection



District Flash Flood Simulation



Pump Effect Simulation



On-site Engineering Work Check



# Post-Flood Recover – Benefits



## Easy Tracking

Online checking on project application status and easy feedback and follow-up.

## Actual Reference

Easy reference to real time actual condition, more scientific decision making on project approval.

## Scientific Understanding

Fundamentally support city planning policy for lowering impact under heavy rainfall.

## Complete Cycle

Complete PDCA cycle for ever better flood management.

# Solution Visualization – Process



**Ensure Facilities Status**



**On-site Work**



**Flood Info Archive**



**Facilities Dredging**



**Team Dispatch**



**Flood Modeling**



**24/7 Monitor**



**Command Instruction**



**Projects Implement**

# Solution Visualization – Delivery



# 03 Summary

# Concept Summary

**3R  
Full-Cycle  
Management**

**3**

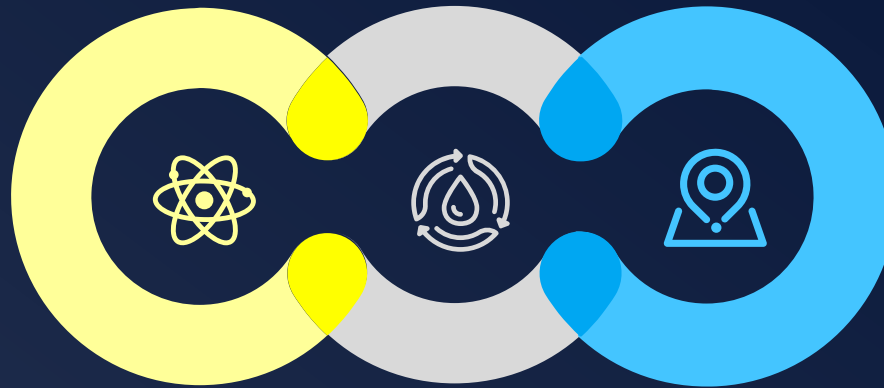


**6**

**6 Modules  
Professional  
Applications**

# Advantages Summary

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## Advanced Technology

Utilizing advanced IoT technology, cloud and other latest software technology

## Full Cycle Application

Covering all 3R process with various modules to improve effectiveness and efficiency

## Broad Implementation

Well tested and praised from over 40 cities across various terrains and weather.

## City Benefits Summary

### Reduce the affected area (20%-30%)

- Reduce water in underground parking lots
- Reduce collapse of slum buildings

### Reduce annual emergency manpower input by 2000 person



Reduce direct economic losses  
up to 84M USD

Reduce the number of casualty

## Projects Summary

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Over **40** cities work with us for flood management IT system.

- Across terrain types: plain or mountain.
- Across climate types: tropical or frigid.





# Thank You

**Augur Intelligence Technology, See You @ Booth C29**

Su Xu, Augur Intelligence Technology Asia Pacific Pte. Ltd.

Mar 28<sup>th</sup>, 2019