

Risk-Informed Investments for Local Resilience

Accurately assess risks and proactively invest
limited resources where they are needed most

Risk Information

Prioritization

Proactive Investment

September 7, 2026 | Citizens Safety Headquarters, Incheon Metropolitan City

Translating Locally-led Resilience into Action
in the Age of Complex Risk and Digital Transformation
복합위험과 디지털 전환시대, 지역주도 복원력의 실행

The 5th



International Disaster Resilience
Leaders Forum **Incheon 2026**

인천 국제재난복원력 지도자 포럼



2026. 9. 7.(월) - 8.(화)
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송도컨벤시아 그랜드볼룸 A
Songdo Convensia, Grand Ballroom A

Risk Information Changes Investment Priorities

Shift from recovery-focused spending to proactive risk reduction

Not by spending more,
but by investing **earlier where
the risks are greater**

The goal is not to spend more,
but to invest where it matters most for
reducing risk

When we change how we
understand risk, **we change where
and when we invest**



Integrate Information → Set Investment Priorities → Take Early Action → Learn and Improve

Build an evidence base
for investment
decisions

Prioritize investments
based on risk and
impact

Prioritize projects
that prevent or
reduce risk

Use results to inform
future investments

Risks in Incheon Are **Interconnected**

Flooding, coastal hazards, aging infrastructure, and complex urban risks coexist across the city

Urban Flooding

Low-lying areas,
underground spaces,
and rivers

Coastal & Island Areas

Coastal areas, islands,
and strong winds

Aging Infrastructure

Signs of deterioration
and unstable slopes

Complex Disasters

Industrial,
transportation, and
fire-related disasters

Incheon's risk information goes beyond individual hazards to **identify where multiple risks converge**



Investment Questions

Where is risk **greatest**?

What should we **address first**?

Integrate Risk Information to Set Investment Priorities

Integrated risk information provides the foundation for identifying vulnerable areas and prioritizing preventive measures

Disaster Data

96 types

CCTV Feeds

~28,000 units

Information Sharing

11 districts

1

Data
Collection

Weather, water levels,
and flooding



2

Situation
Monitoring

CCTV, 119, and NDMS



3

Risk Analysis

Identify vulnerable areas



4

Investment
Decisions

Set project priorities

Consolidate risk information to guide project and budget priorities

From Early Detection to Preventive Action

Continuously monitor flood risks and expand preventive measures in vulnerable areas



45 flood-prone areas

180 flood detection sensors

Flood Prevention Facilities Planned for 2026

KRW 1.63 billion

- Flood barriers **1,149 units**
- Backflow prevention valves **1,928 units**
- Sandbags **12,522 units**

**Invest in vulnerable areas
before flooding occurs**

Invest in Infrastructure **Where Risk Is Greatest**

Use flood history, topography, and inland flood risk information to determine where facilities are needed and how large they should be

Total Project Cost

KRW 130.8 billion

Government:
KRW 65.39 billion

Incheon:
KRW 59.19 billion

Districts: KRW 6.2 billion

Additional Districts: 4

14 existing facilities currently in operation

Investment by District (KRW billion)

- Seoknam Zone 1  38.25
- Gajwa Zone 2  37.23
- Ganseok Storage Tank 1  30.00
- Ganseok Storage Tank 3  25.30

Planned Storage Capacity: 110,880 m³
Total Project Cost in 4 Districts

Detect Early Signs of Risk with AI & IoT

Enhance AI-powered analysis and connect monitoring systems and sensors with on-site response



Integrated Monitoring in Incheon's Disaster and Safety Situation Room

Incheon's Urban Safety Network and Initiatives

I-SAFETY

Employ AI-powered monitoring systems and sensors to identify early signs of risk and trigger on-site response

- 01 Collect risk information from CCTV & IoT sensors
- 02 Expand AI-based anomaly detection
- 03 Link situation room operations with on-site response

2026 CCTV installation

KRW 5 billion

500 new CCTV cameras

More than 28,000 cameras
currently in operation

IoT monitoring of aging and high-risk facilities

161 sites, 824 sensors

Crack and tilt monitoring → Inspection and maintenance

Turn Risk Information into Real-World Improvements

Identify and assess risks, then direct resources to the facilities and areas where improvements are needed most

CASE ①

Targeted Safety Inspections

Identify aging and high-risk facilities



848 joint public-private inspections



414 issues requiring corrective action



228 repair/reinforcement measures and other follow-up actions

Turn inspection findings into tangible improvements, including repairs and reinforcement

CASE ②

Resident-Requested Safety Inspections

Residents request safety inspections of high-risk facilities



160 experts from various fields



485 safety inspections and expert consultations



Recommend repair and reinforcement measures

Combine administrative inspections with safety concerns reported by residents

1 Identify Risks



2 Expert Inspections



3 Implement Improvements



4 Build Local Resilience

Turn Lessons into Future Investment Criteria

Build on operational data and resident input to strengthen investment prioritization and performance feedback

Current Initiatives	Investment Focus	Next Steps
45 flood monitoring sites	Small-scale preventive investments	Integrate flood history and resident reports
Stormwater storage in 4 districts	Major infrastructure investments	Prioritize projects based on risk
CCTV & IoT safety network	Early detection and risk analysis	Use early warning signs to guide inspections and maintenance



Policy Proposal:

Engage residents across the entire process—from risk data collection to outcome disclosure

From a city that understands risk to a city that takes action to reduce it

Risk information helps the city direct its budget where and when it can make the greatest difference

Incheon uses risk information to guide investment and strengthen resilience

Thank you

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