ASIA PACIFIC PANDEMIC PREPAREDNESS AND RESPONSE REGIONAL FORUM

WORLD BANK GROUP

Ministry of Economy and Finance

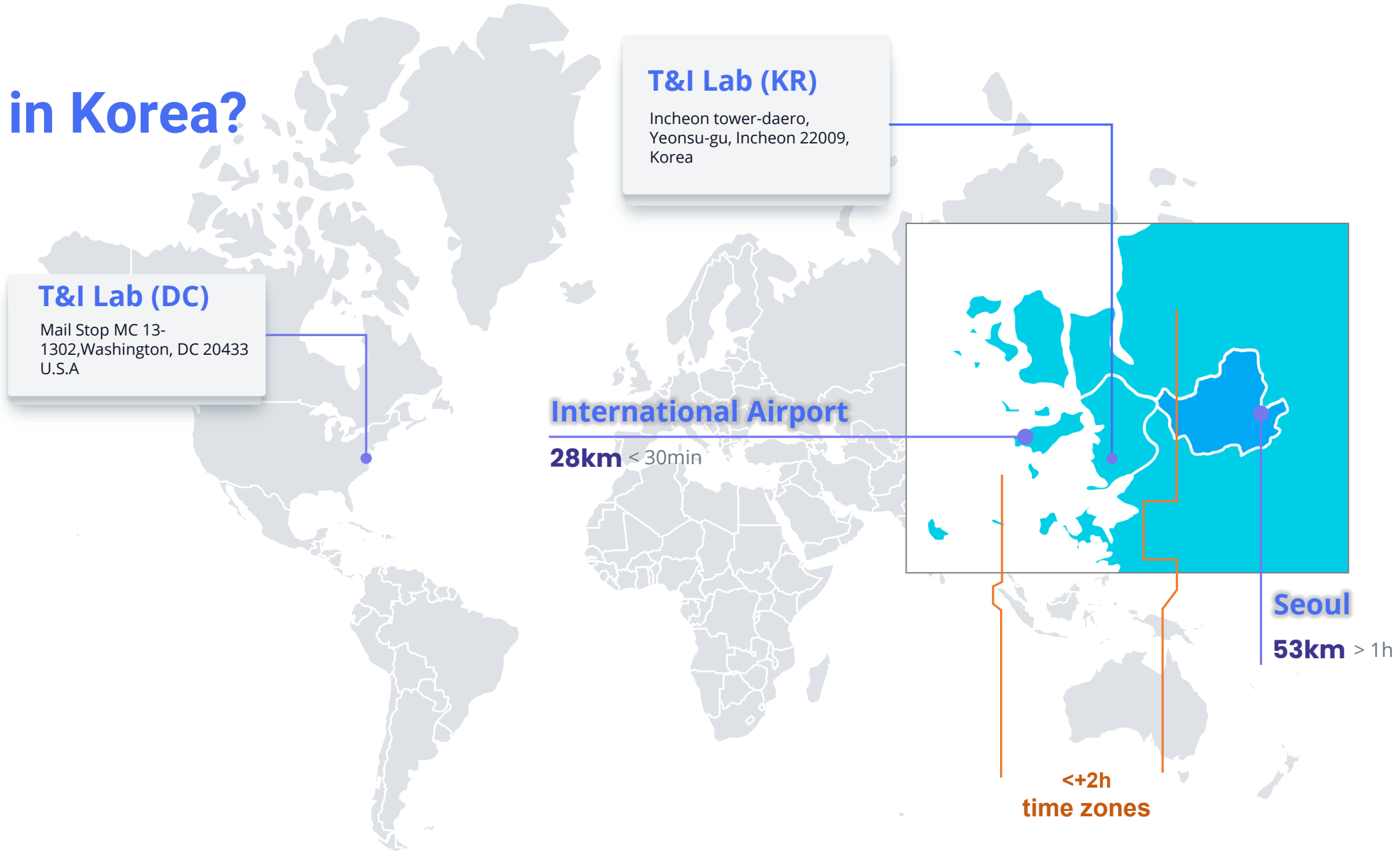
WORKS AND EXAMPLES OF THE TECHNOLOGY & INNOVATION LAB

Yongdae Kim

IT Officer, Technology & Innovation Lab
World Bank Group Korea Office

Location

Why in Korea?



Location

Why in Korea?

T&I Lab (KR)

Incheon tower-daero,
Yeonsu-gu, Incheon 22009,
Korea

Agile in responding to the COVID-19 pandemic based on IT

Top the e-participation index of the UN e-government survey

Many Korean partners with rich development experience and resources

“ Leveraging Innovation and Technology for Development

We help WBG staff to explore emerging technologies and fosters a “learning by doing” approach through collaboration with partners.

Prototyping & Feasibility Study

In-house prototyping by hands-on experimentation and feasibility studies for WB Projects

Technology Advisory

Support WB operations to explore and operationalize emerging technologies

Knowledge & Partnership

Serves as an internal knowledge hub of emerging technologies and share Korea’s expertise

Technology & Innovation Lab

Korea Office T&I Lab

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01 Prototyping & Feasibility Study

02 Technology Advisory

03 Knowledge & Partnership

Use Case

Prototyping & Feasibility Study

CAN THO City
urban development and Resilience
(P152851, $322M)

Three Components

- Flood Risk Management and Environmental Sanitation
- Urban Corridor Development
- Spatial Planning Platform and Financial and Social Protection Instruments

We helped the sub-components

- Spatial Planning Platform
- Disaster Responsive Social Assistance System

Prototype

Spatial Planning Platform (SPP)

single platform for spatial data

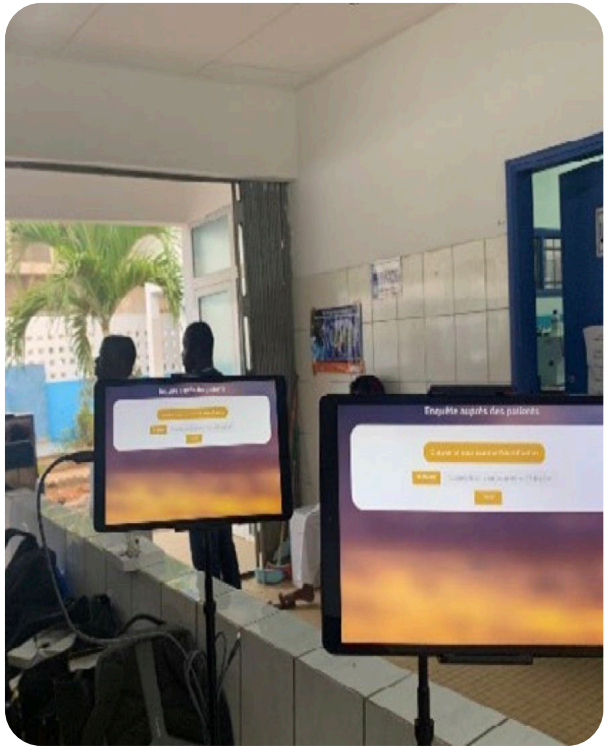
- Geodata Analysis
- Front-end Technologies
- Asynchronous Programming

- Authentication & Authorization
- Security
- Geospatial Database

Use Case

Prototyping & Feasibility Study

Blockchain for Health Results Based Financing in Core d'Ivoire



PROBLEM TO SOLVE

- Healthcare financing verification: costly, time-consuming (25% of project costs)

SOLUTION

- Explored blockchain's role in seamless healthcare records.
- Benefits for patients, providers, and financing program administrators.

Prototype

Health Result Based Financing (RBF)

The health Global Practice in cooperation with the ITS T&I Lab identified and developed two initiatives to use blockchain

Technology Stack

NodeJS, Angular, Twilio SMS Gateway, Hyperledger Fabric, HTML5

Goals & Achievement

Provide faster verification and payments, Reducing leakages in supply chain for pharmaceutical goods

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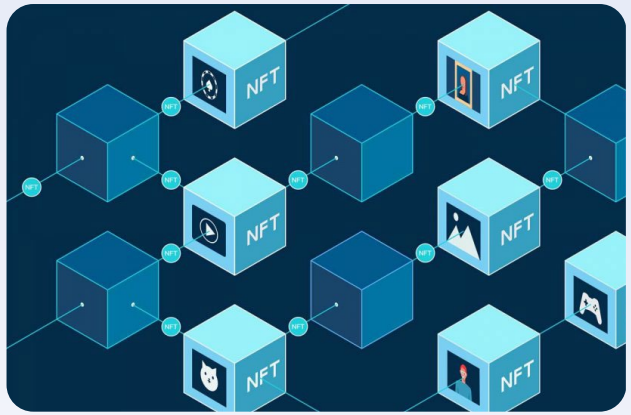
Technology Advisory Lists

Help clients make informed decisions, mitigate risks, and achieve their goals by leveraging



Blockchain, CBDC

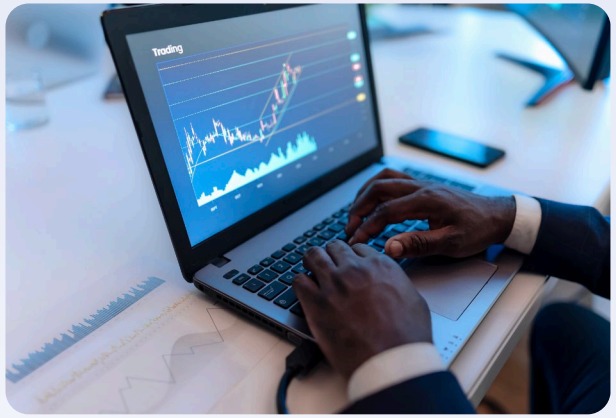
CBDC for Central Bank of Morocco, IMF & FCI

Focused on programmability, cybersecurity, technology risks

Token, ERC20

Tokenization of Asset Based Supply Chains

Design transparency and traceability and tokenization of value chains



System, Machine Learning

Review ToR for Implementation

Provide technical feasibility and budget adequacy

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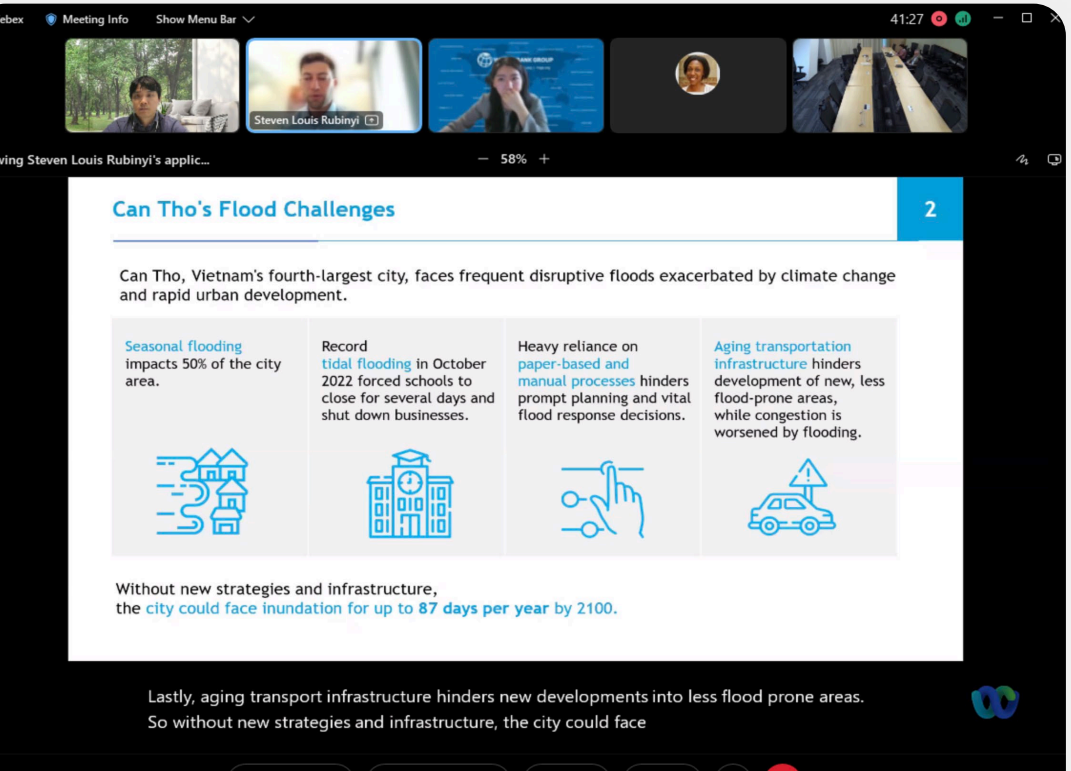
Knowledge & Partnership

We have organized knowledge sharing sessions around emerging technologies with our Korean partners



금융보안원
FINANCIAL SECURITY INSTITUTE

국토지리정보원
National Geographic Information Institute

ETRI 한국전자통신연구원
Electronics and Telecommunications Research Institute

LG CNS
Healthcare Solutions

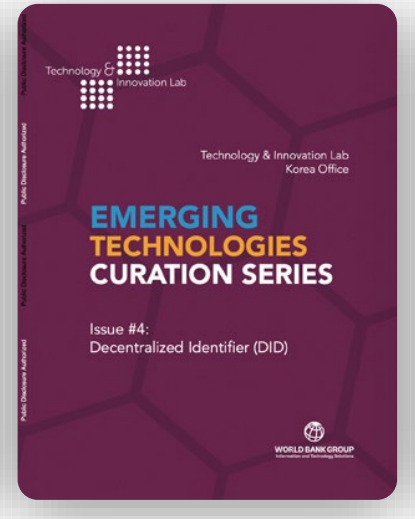
KSD Korea Securities Depository

Knowledge & Partnership

Blockchain

Edge Computing

Metaverse



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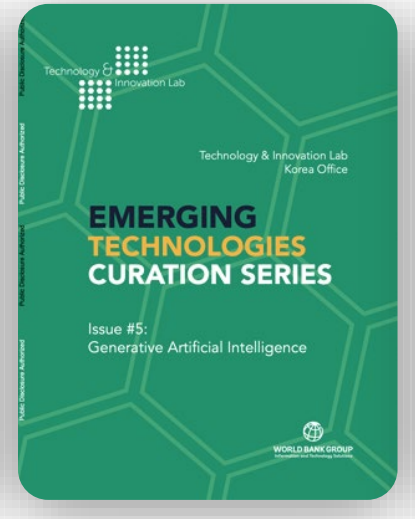
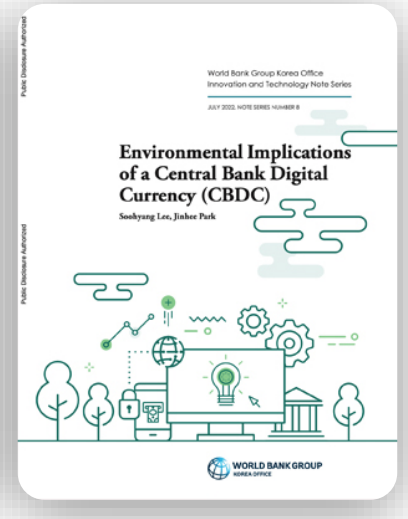


Generative AI



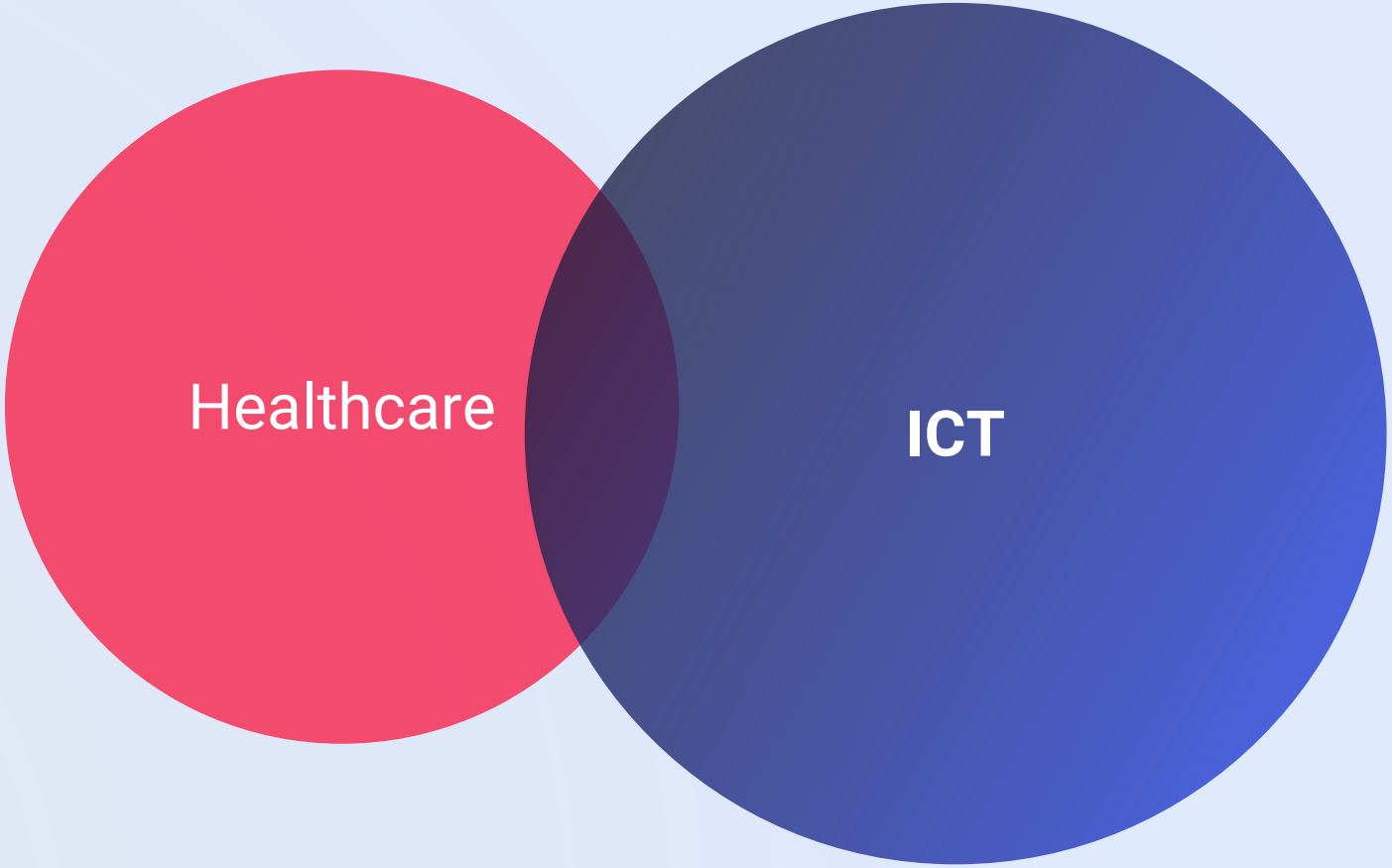
CBDC

Published five emerging technologies curation series and CBDC report with FCI

Healthcare & ICT

As ICT played a significant role in responding to Covid-19, it is also a critical area in other healthcare domains

- improve health
- medical diagnosis
- treatment
- preventive measures
- telemedicine / telehealth



- telecommunications
- machine learning
- data lakehouse
- blockchain
- AI
- Large Language Model

Contact Us

How to start an engagement?

Submit your engagement requests to work with our team

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negative feedbacks

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offer pro bono

failure rate

Thank You