Multi-layered Security Technologies

for hyper-connected smart cities

A EU-Japan collaboration

M-Sec goals

We aim to leverage **Cloud, IoT, device, BigData, blockchain, and end-end security** technologies to build innovative smart city applications.

Our **new IoT applications** will be tested across **two smart cities**

Fujisawa, Japan

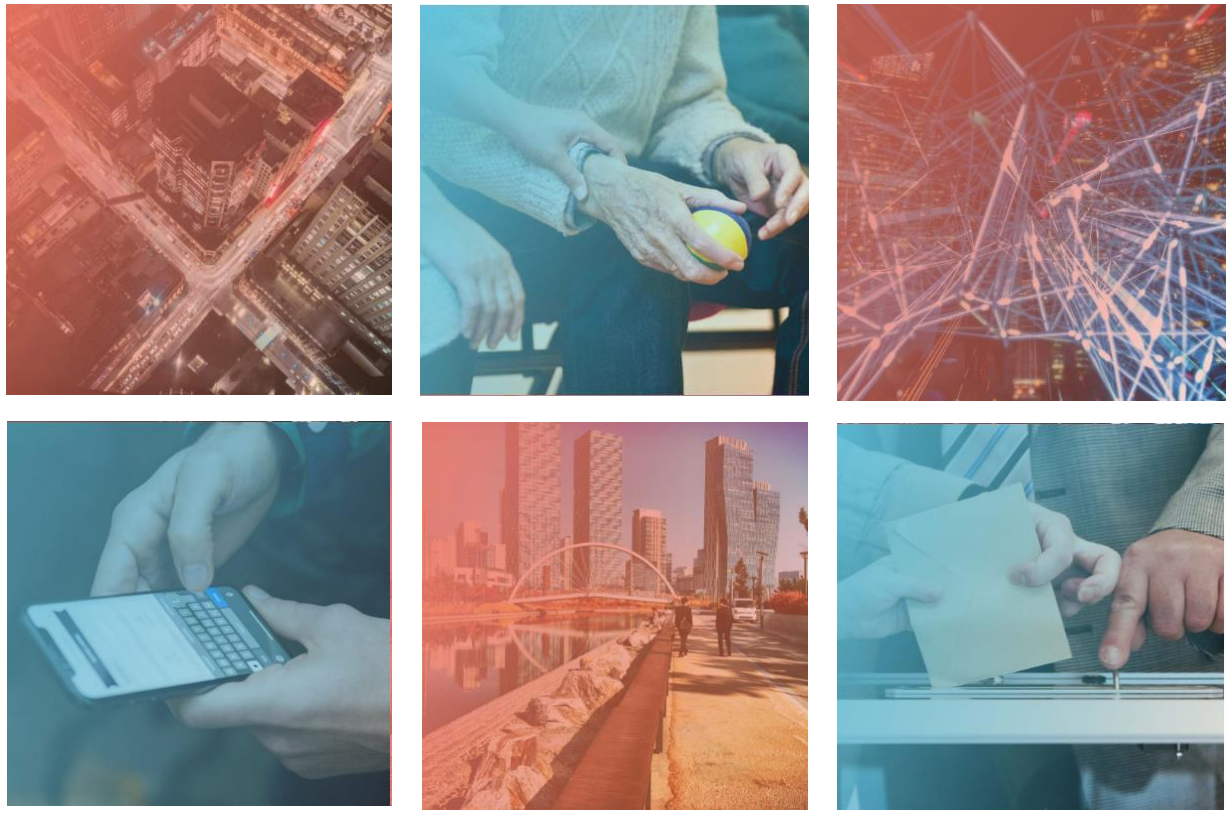
A pioneer in citizen wellness tech, natural disaster protection and sustainable energy, Fujisawa stands out as one of Japan's most innovative cities.

Santander, Spain

A global leader in citizen-oriented technologies, Santander has developed its own "city brain" platform to manage all urban facilities.

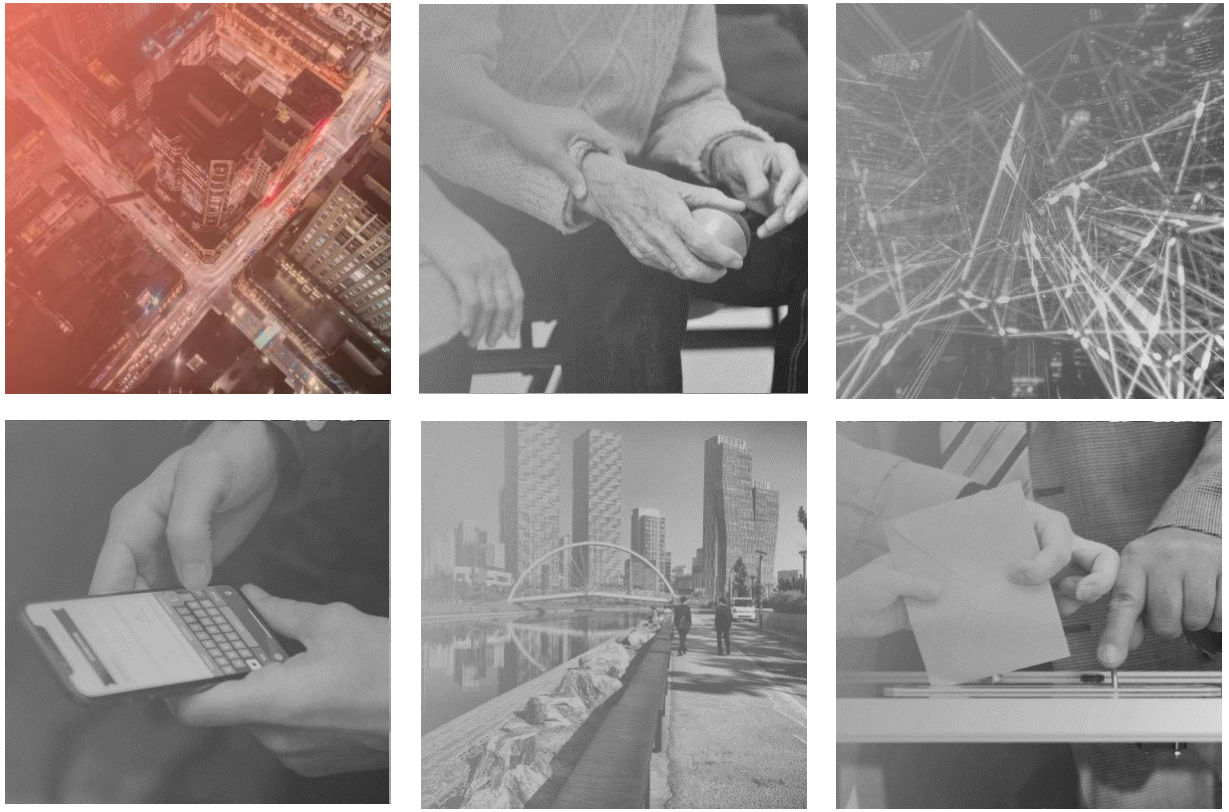
Testing six unique ‘Use Cases’

M-Sec aims to facilitate **diverse areas of smart city life**, from improving the wellbeing of growing elderly populations, to monitoring rubbish collection, to creating playable city ‘games’.



Use Case 1: Reliable IoT Devices

Santander

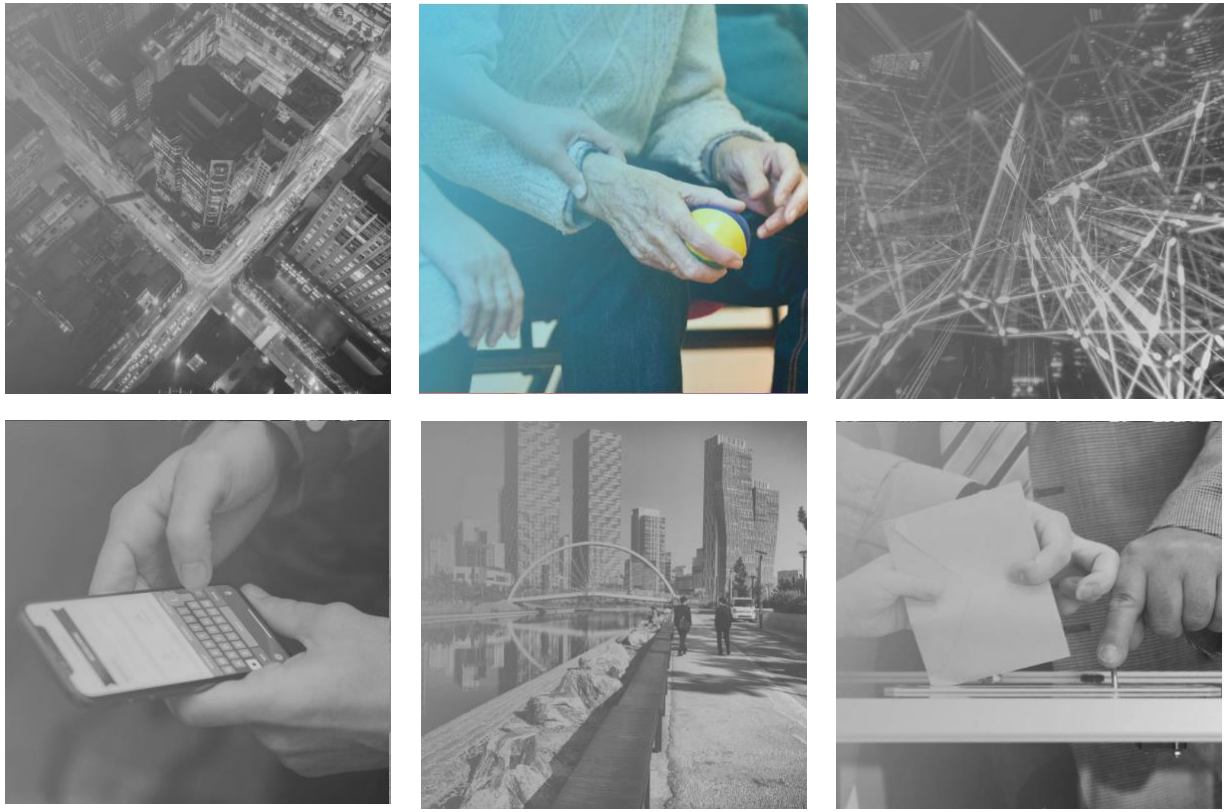


Problem:
Increasing numbers of anonymous attacks on IoT device networks

M-Sec Solution:
Hide and anonymize servers, create secure and authentication-mandatory techniques, protect communications between smart meters (water) and servers

Use Case 2: Well-being

Santander



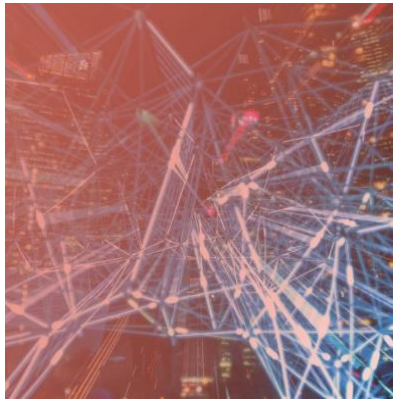
Problem:
Barriers against ageing populations participating society: falling, being unwell, needing regular medical checks or being isolated.

M-Sec Solution:
Using cloud & edge, mobile, tracking and medical devices so the elderly can self-manage and share their health status

Use Case 3: Environment Monitoring

Fujisawa






Problem:
The sensors and devices that help citizens optimize their environment, avoid traffic, adjust the air quality, and even stay safe when a natural disaster hits can be sensitive to attack

M-Sec Solution:
Encrypt and anonymise data collection and storage, use citizens as sensors, use the M-Sec marketplace to leverage the blockchain mechanism

Use Case 4: Hyper-connected citizen care

Fujisawa



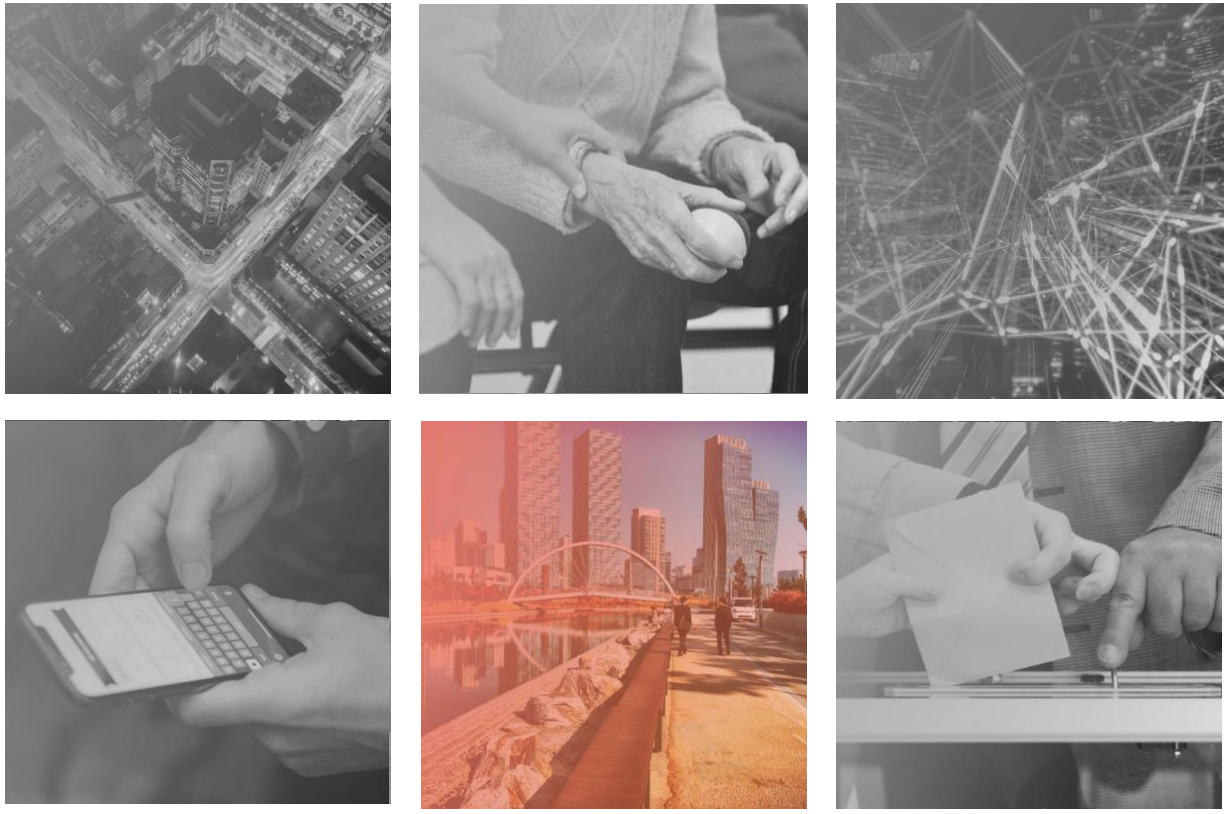



Problem:
Governments need support to provide a stable service, as well as ensuring the security and authenticity of data, and protecting personal information.

M-Sec Solution:
Collecting data from “human sensors”, encrypting and anonymising data, using the M-Sec marketplace

Use Case 5: A marketplace of IoT services

Fujisawa/Santander



Problem:
In the modern day there are few opportunities for citizens to play and connect, in the coldness and anonymity of the urban environment

M-Sec Solution:
Create playful solutions, such as novel walking traffic counter, playful air quality sensor, smart parking animation, etc., added to the city IoT network

Use Case 6: Citizens as sensor

Fujisawa/Santander



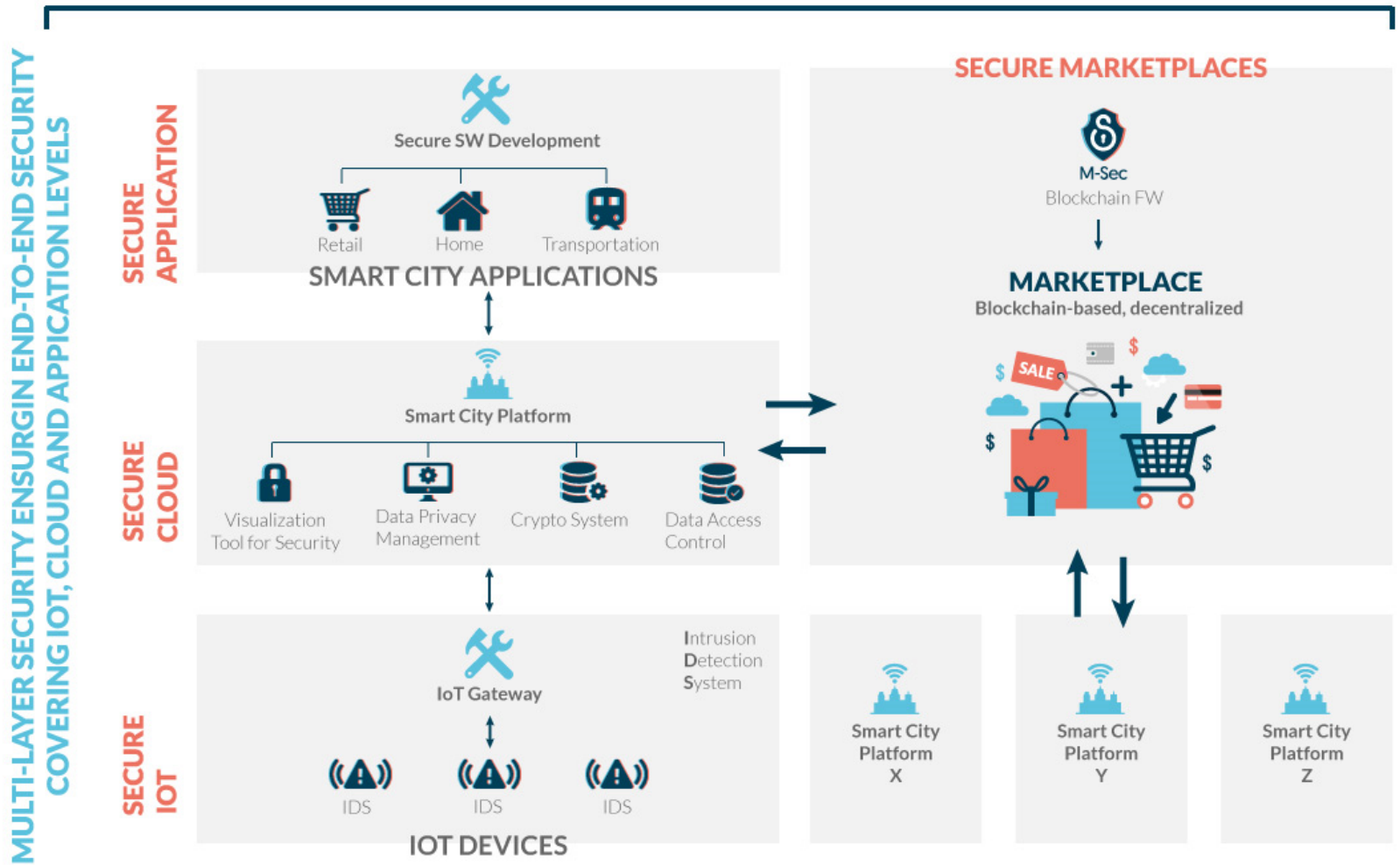



Problem:
Governments need support collecting more accurate and further reaching data sources on the state of the city and its services at any given time

M-Sec Solution: Through innovative smartphone apps, the citizen will be a “sensor”, sending data about incidents related to infrastructure, parks, traffic and other issues.

M-SEC ARCHITECTURE

Enabling Secure Sharing, Dealing and
Intereaction among Cities



Expected results

M-Sec IoT infrastructure

Through this trusted infrastructure, IoT stakeholders will be empowered to develop and operate new IoT applications for smart cities.

M-Sec Smart City Ecosystem

City governments, researchers, businesses, startups and developers will be connected and given access to a complete set of tools.

M-Sec Marketplace

Our open market of applications, data and services will facilitate the exchange of value and information between IoT devices and people through virtual currencies.

M-Sec Replication Plan

Learn how to replicate the M-Sec approach in your city. Our revenue model will guarantee the return on investment and all M-Sec benefits.

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Thank you!

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