

# IoT Strategy

**Smart IoT Division**

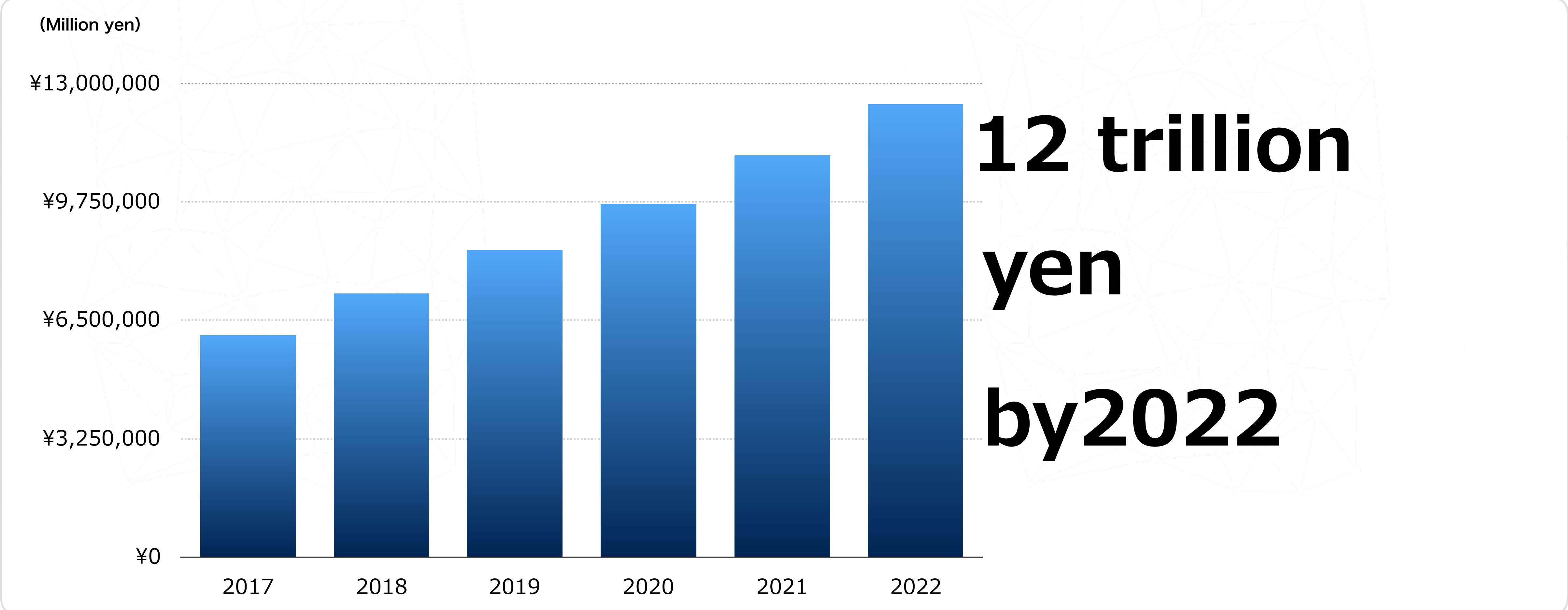
**Hironobu Tamba**

**2nd MAR. 2018**

# IoT Market Forecasts in Japan

# IoT Market Forecasts in Japan

Expenditure in IoT market is forecasted 6 trillion 102billion yen in 2017.  
By 2022, it'll reach 12 trillion 435billion yen with 15% growth of CAGR.

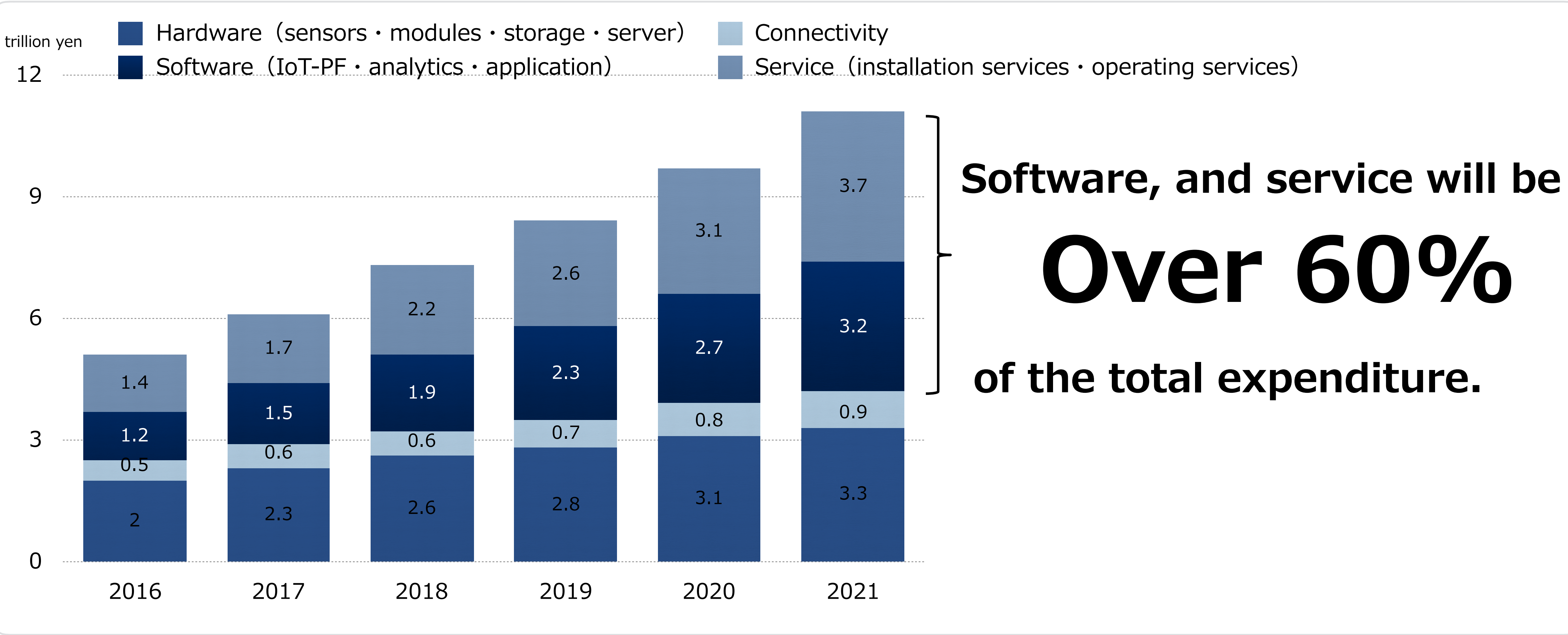


※Reference : IDC Japan 2017



# IoT Market Forecasts in Japan

A ratio of expenditure for IoT platform, analytics, and installation / operating services will increase, in reaction of departing from the selling hardware business.



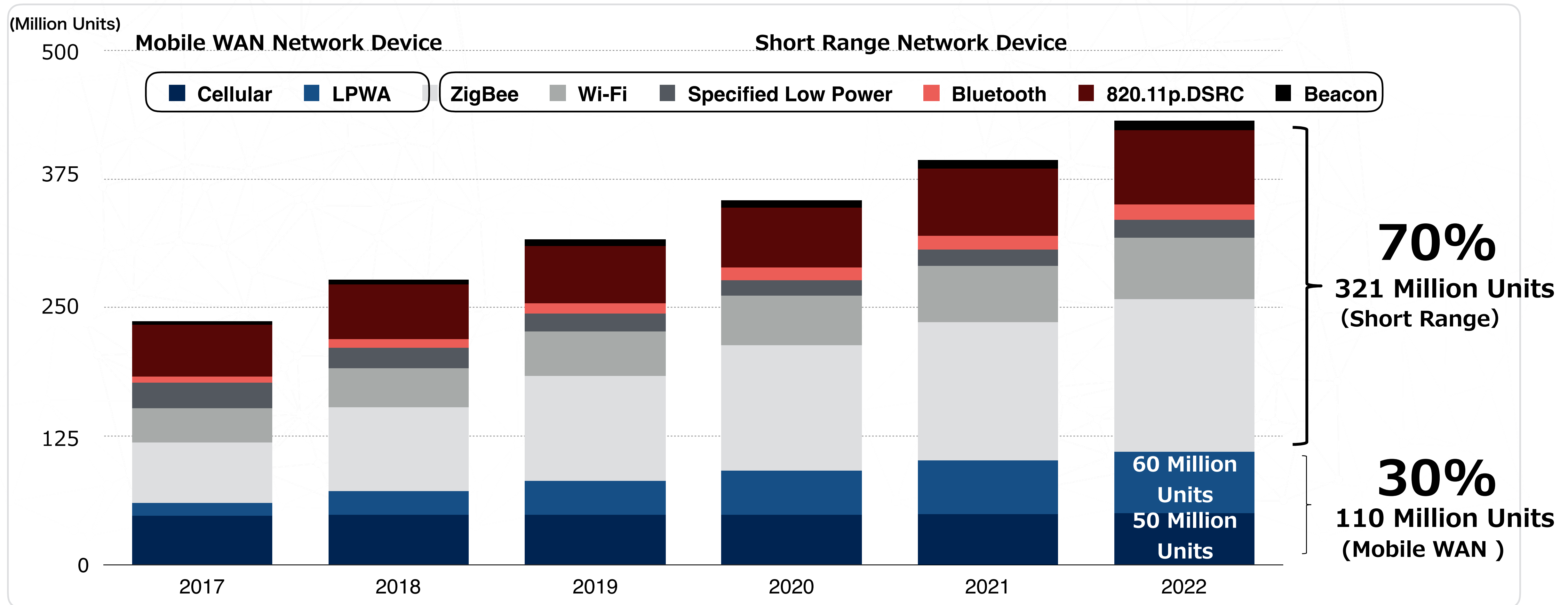
※Reference : IDC Japan 2017



# IoT Market Forecasts in Japan

By 2022, the number of IoT Device will reach over 430 million units.

Mobile WAN Network Device accounts for 30%, and Short Range Network Device accounts for 70%.



# SoftBank IoT Platform Target

≡ SoftBank

# IoT as a **Service**

We will be No.1 even in the IoT field as a service platform provider.

We **visualize everything by connecting to the Internet,**  
and **provide valuable information, converted from collected data.**



## The 3 Target Markets

### Smart City



There are various cross-industry use case such as Public infrastructure, agriculture and fishery, civil engineering, construction, manufacturing etc.  
We expand smart city drastically by various PoC, and public attention.

### Mobility



Domestic automobile shipments are about 80million (including commercial cars),and 1.65million of them have an access to the Internet already (build-in). Therefore, the rest of the cars will be our targets (80%).  
We expand various solutions to attain this potential market

### Smart Building



Domestic building mgmt market is about 4trillion yen  
It will be bigger in the future with decrepit of the building  
We expand smart buildings by combining IoT and robotics technology, which other companies don't have.



# Provide Valuable Data

External Data



Visitor Data

Sales Data

Point Data

Rent Data

Claim Data

SoftBank



**Optimal Personnel Placement**

**Reduction of Energy&Cost**

**Improve Safety**

**Improve Convenience**

**Failure Prediction**

etc...



# Business Use Case



# Smart City platform is created with movement

## Manage the whole city and create new value

- ① Provide IoT solution by connecting all systems
- ② Provide new solution by Data × Data × Analysis

② Combining different systems



### Smart City Platform

### Smart City Integrated UI

Database

Analysis · AI

Network management

Device management

Security

River

Bridge

Tunnel

Road

Artificial Slope

Traffic control

population fluidity

Parking

Location

Fleet Management

Security camera

Street lamp

About of dust

Weather forecast

Agriculture

Fishing industry

Farming

etc.

① Provide IoT solution by connecting individual systems

# API Eco-System

Offer Comprehensive APIs by collaborating with Micro Service Providers.

② Combining different systems



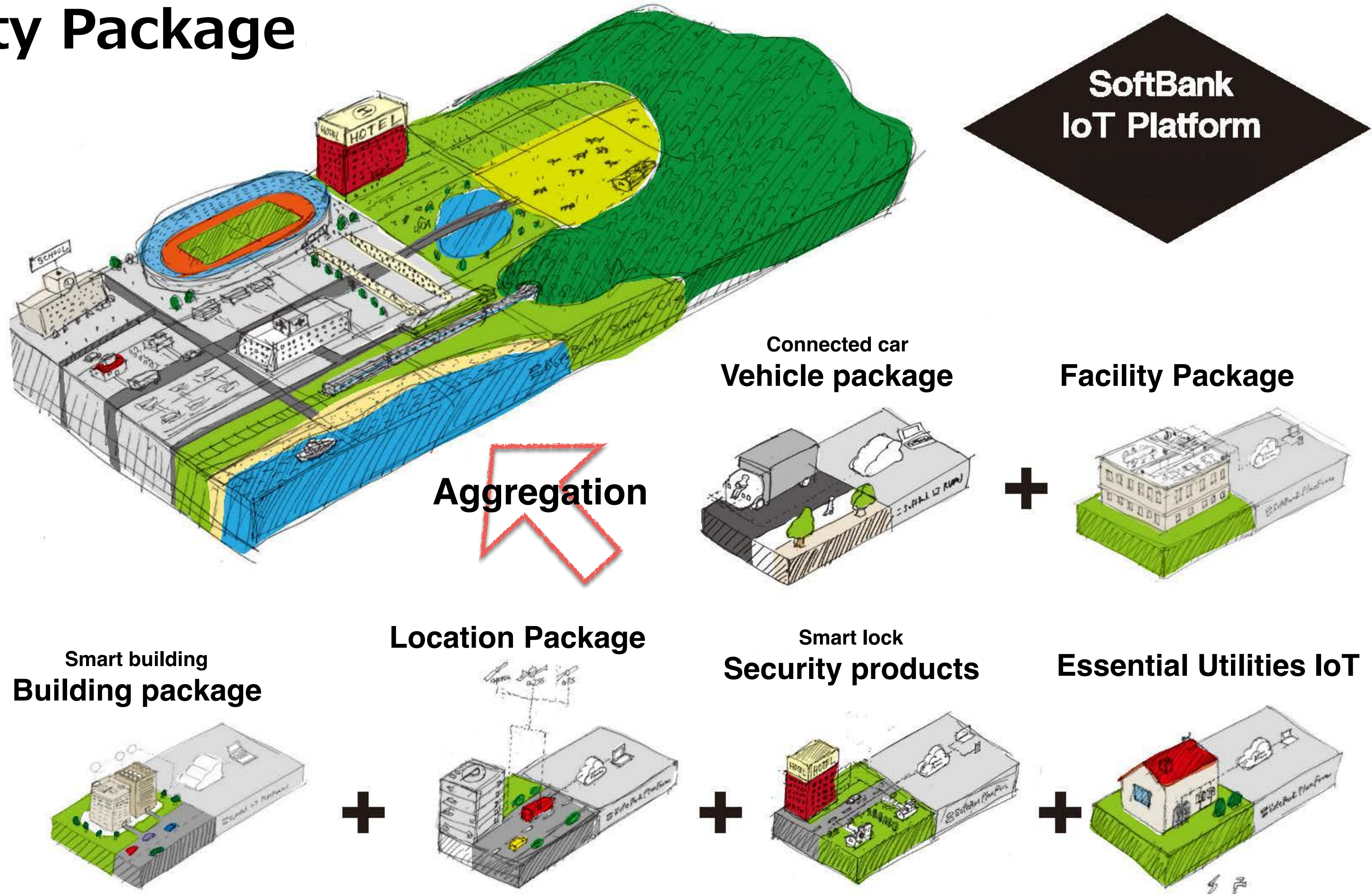
① Provide IoT solution by connecting individual systems





# Smart City Solutions • Business Usecase

## Smart City Package





# Smart City Solutions • Business Use Case

Category	Usecase
<b>Tourism • Commerce</b>	visualization of tourist site, and optimization of tourist route (Stream analysis of people, image analysis)
	visualization of commercial facilities /avenues, best-suited means of transport (Stream analysis of people, image analysis)
	Bicycle sharing system
	Smart parking
	Bus location service Platform for allocation of taxis
<b>Smart arena /Smart Stadium</b>	Maintenance of high-speed network connectivity (offering next-generation Wi-Fi)
	congestion reduce • suspicious person/object detection • waiting time detection by image analytics
	Stream analysis of people (downtown →Arena/Stadium → downtown)
	Delivery of VR contents
	Smart food-ordering / visualization of congestion at restaurants
	Stadium lighting synchronizing w/ smart phones Cleaning robots

# Smart City Solutions • Business Use Case

Category	Usecase
<b>Healthcare, social welfare</b>	medical machines • location and condition mgmt of healthcare devices
	IoT network installation at hospitals, and machine/people mgmt by BLE mesh tech
	Analytics of medical data and daily life data such as locational and/or vocal data
	Objects (radioactive substance, advanced medical equipment etc)management by eNFC
<b>Safety and security / civil order</b>	Kids / Elder people watching service
	Image / video analysis (install cameras on base-station equipment and/or public buildings)

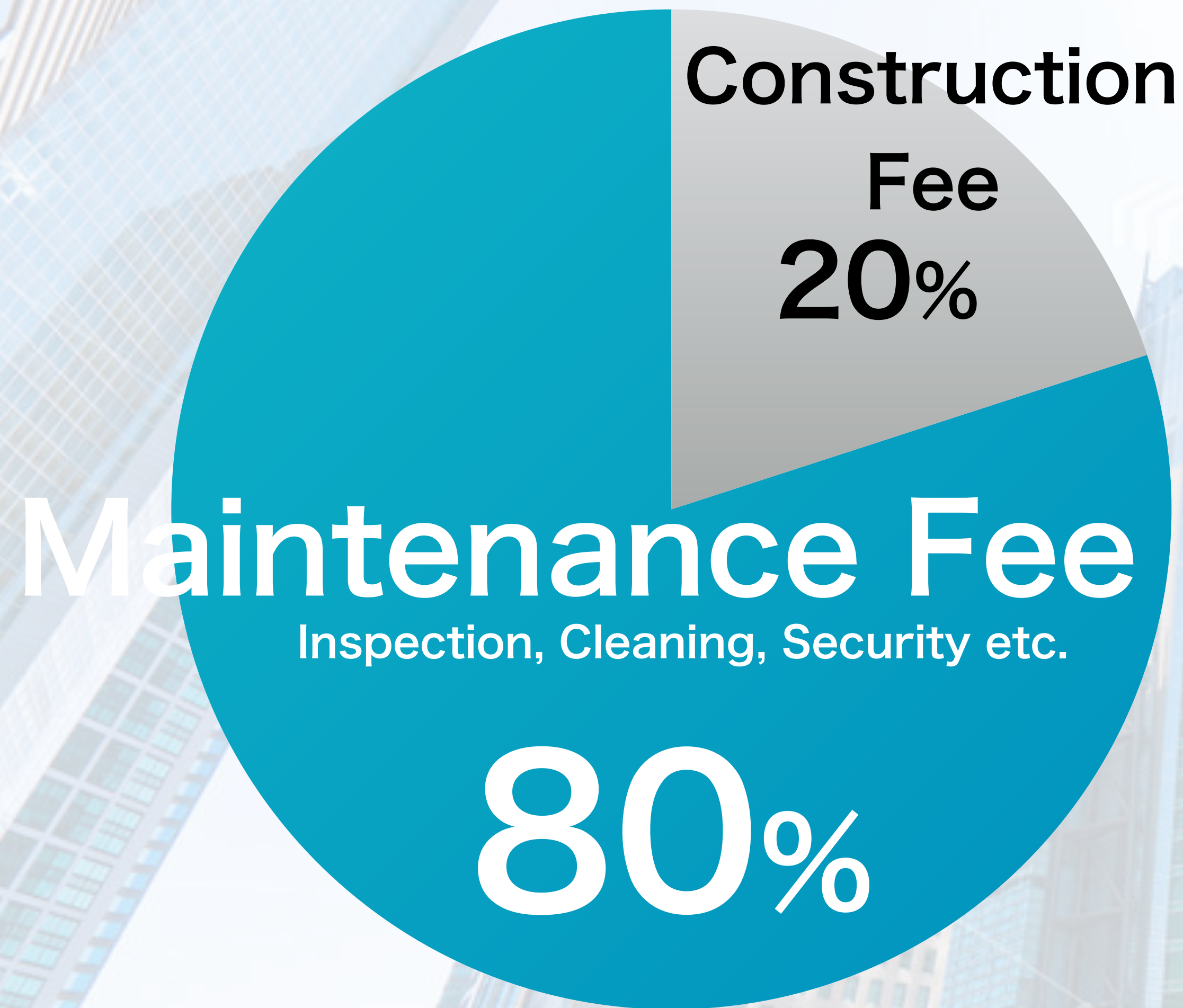
# Smart City Solutions • Business Use Case

Category	Usecase
Public infrastructure	road maintenance solution
	Mgmt for aging infrastructure (bridges, tunnels, water and sewerage facility tourism facility / cultural properties etc.)
	wearable IoT for construction employees
Disaster counter measuring	sediment disaster solution
	Flood disaster solution
agriculture • fishery • farming	Smart agriculture / farm field management
	Smart farming / healthcare for livestocks
	Smart fishery / (buoy • visualization of ocean)
	sharing agricultural machines



# Office Buildings Life cycle cost

Life cycle cost (50years)



**Maintenance Fee is  
4 times Construction fee.**



# Smart Building Solutions

## Work Place Design

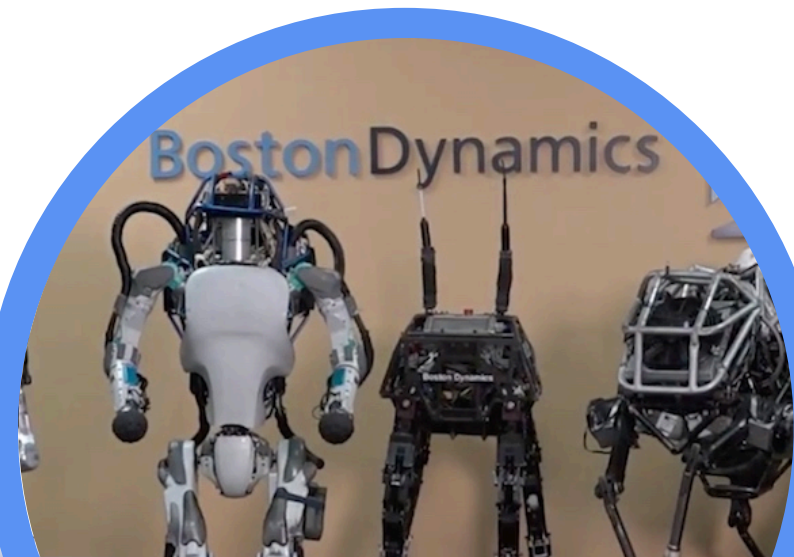
**Comfortable  
architectural space**  
by IoT sensing devices



**IoT**

## Building Design

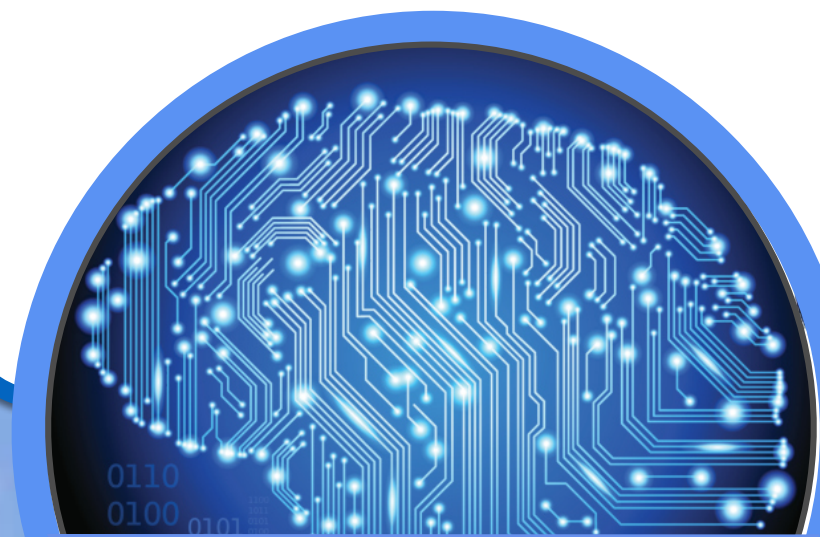
**Innovative  
Architectural design**  
by introducing IoT devices  
and robots



**Robots**

## Life Cycle Design

**Optimization of Life Cycle**  
by big data analysis solutions



**AI**

# Smart Building Business Usecase

Category	Use case
<b>Non-residential / residential Buildings</b>	<b>Optimization of HVAC(Heating, Ventilation, and Air Conditioning)</b>
	<b>Efficient facility operations, congestion prediction inside an office commercial facility's tenant operations by human stream analysis</b>
	<b>Efficient way of energy management</b>
	<b>Efficient management and operations of office facilities such as elevator, and escalators.</b>
	<b>Efficient facility management (repair and maintenance)</b>
	<b>Remote surveillance of facility operations</b>
<b>Smart City</b>	<b>Urban development, disaster-preventing simulation, evacuation route guidance</b>
	<b>Efficient use and power-saving of electricity (smart grid, smart meters)</b>
	<b>Maintaining charging-system for EV.</b>



# SB Business Use Case

-introducing examples-

## Smart City



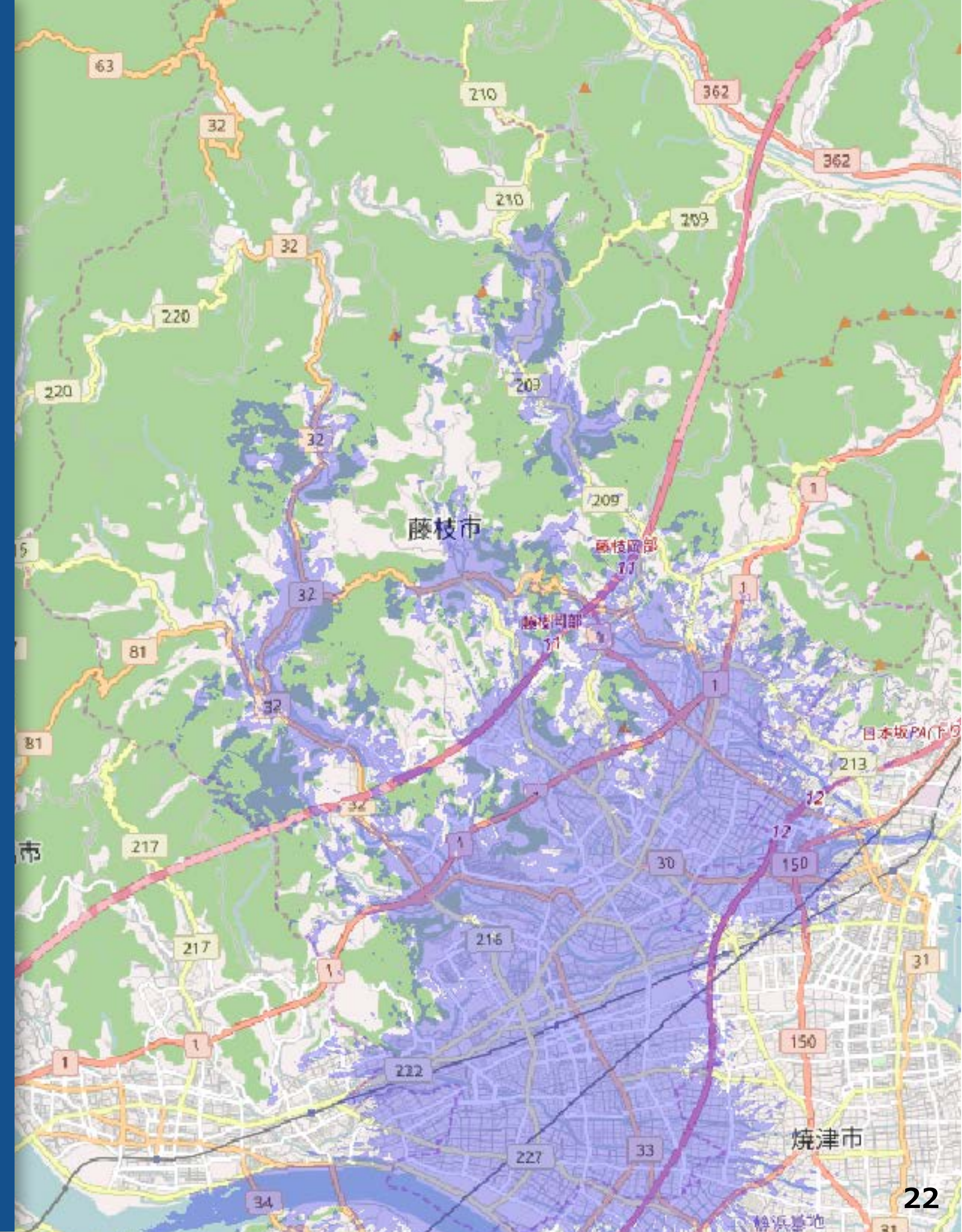
**Fujieda City**

藤枝市



**2017 / AUG.**  
**Launched PoC by using**  
**SoftBank IoT platform**

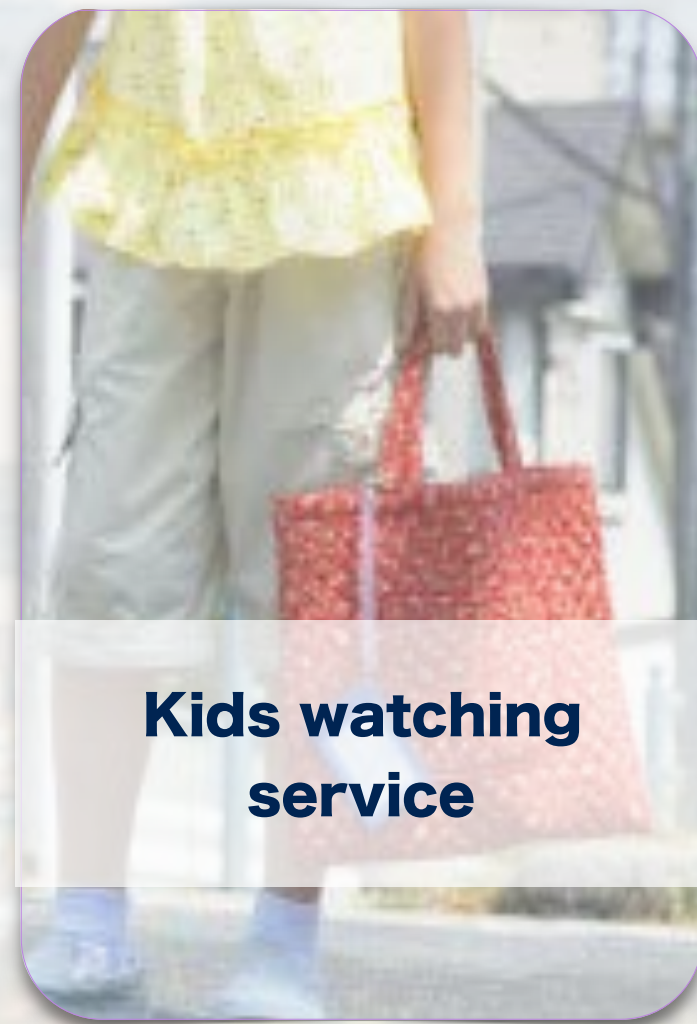
**Fujieda City**





# Fujieda City

**creating a new business field**  
**tie-up with wide variety of business operators**

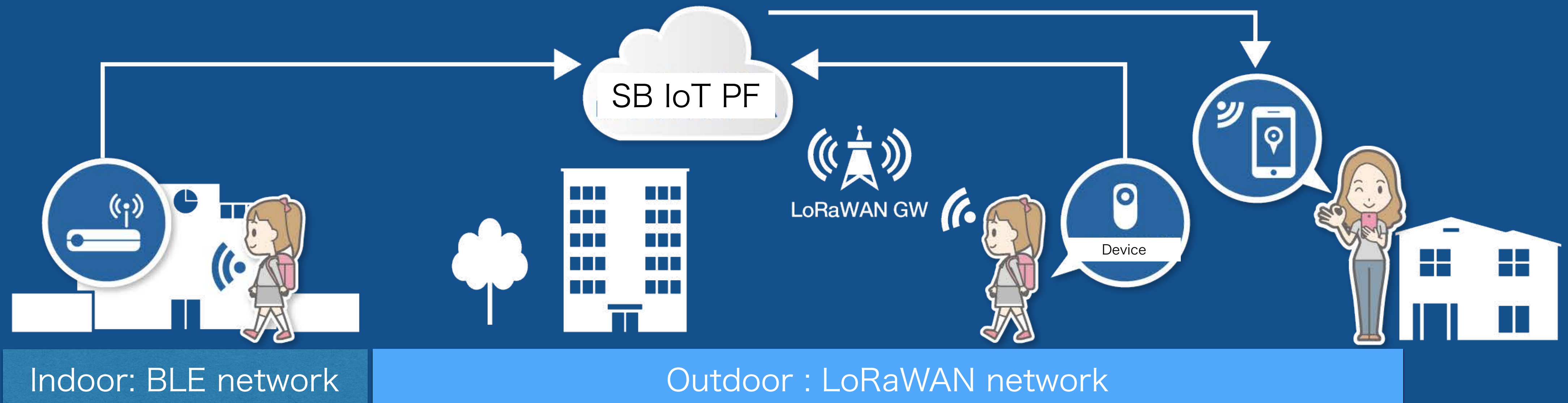




# Kids monitoring service

Offering a device to each 1st grader kids in the city

The device can detect locational info of the kids and send a notification to their parents' smartphones.





# Kids Monitoring service & water level monitoring / bridge management



Kids monitoring

remote monitoring  
service of the water level



24/7 Bridge management



**Kyoto Prefecture**

京都府





## Tourism

congestion mgmt /  
control, and  
standardization



## Facility mgmt

protection of  
cultural assets



## Agriculture / Fishery

Growing mgmt for  
Uji tea / traditional  
Kyoto vegetables



## Disaster prevention

prediction of flood  
disaster at rivers



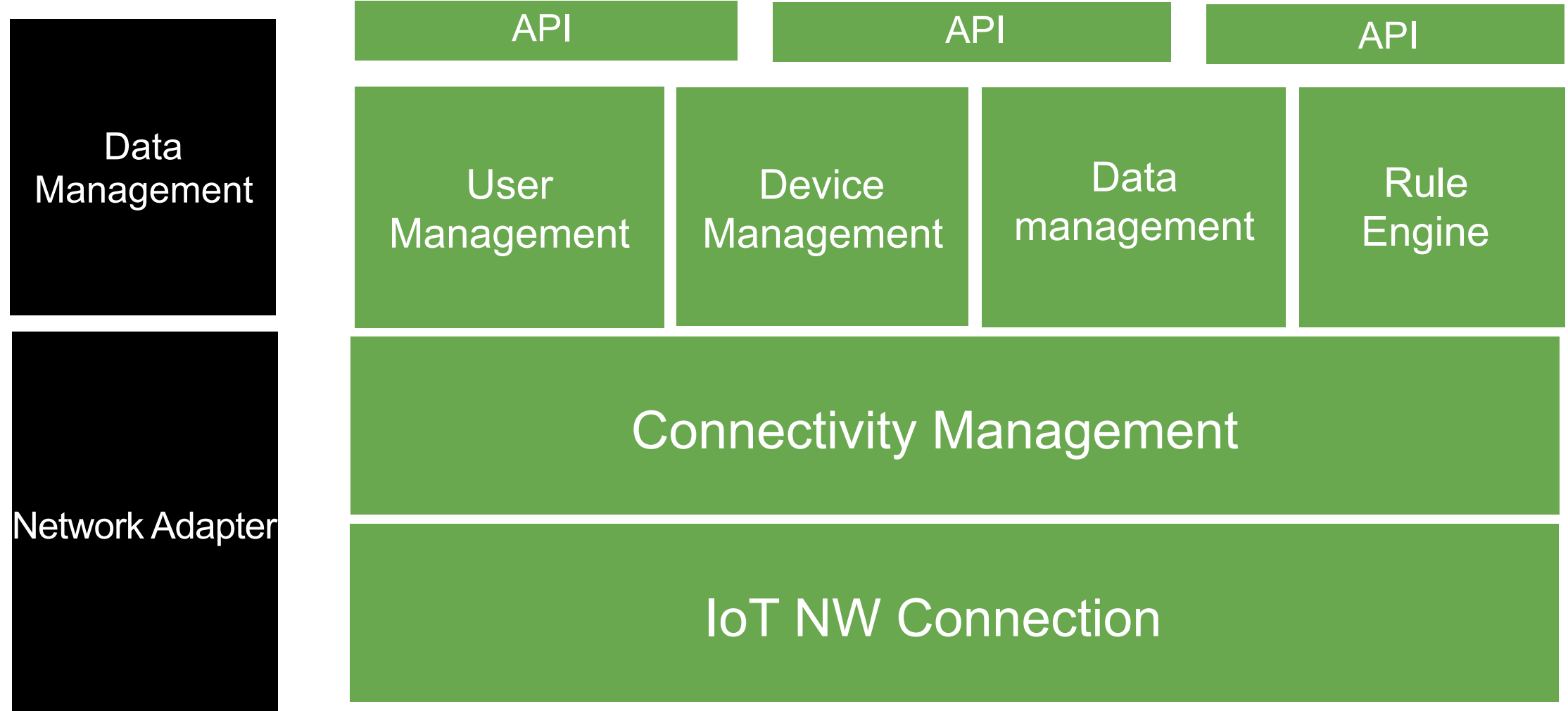
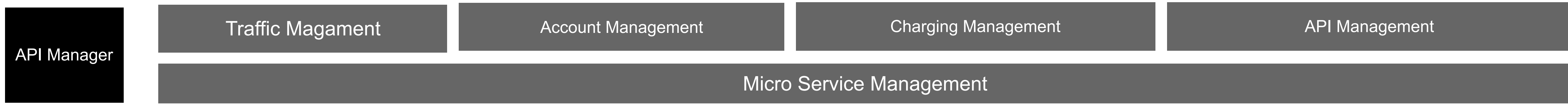
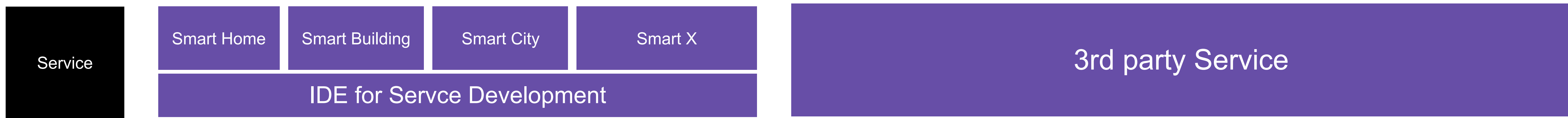


# SB IoT Platform Strategy

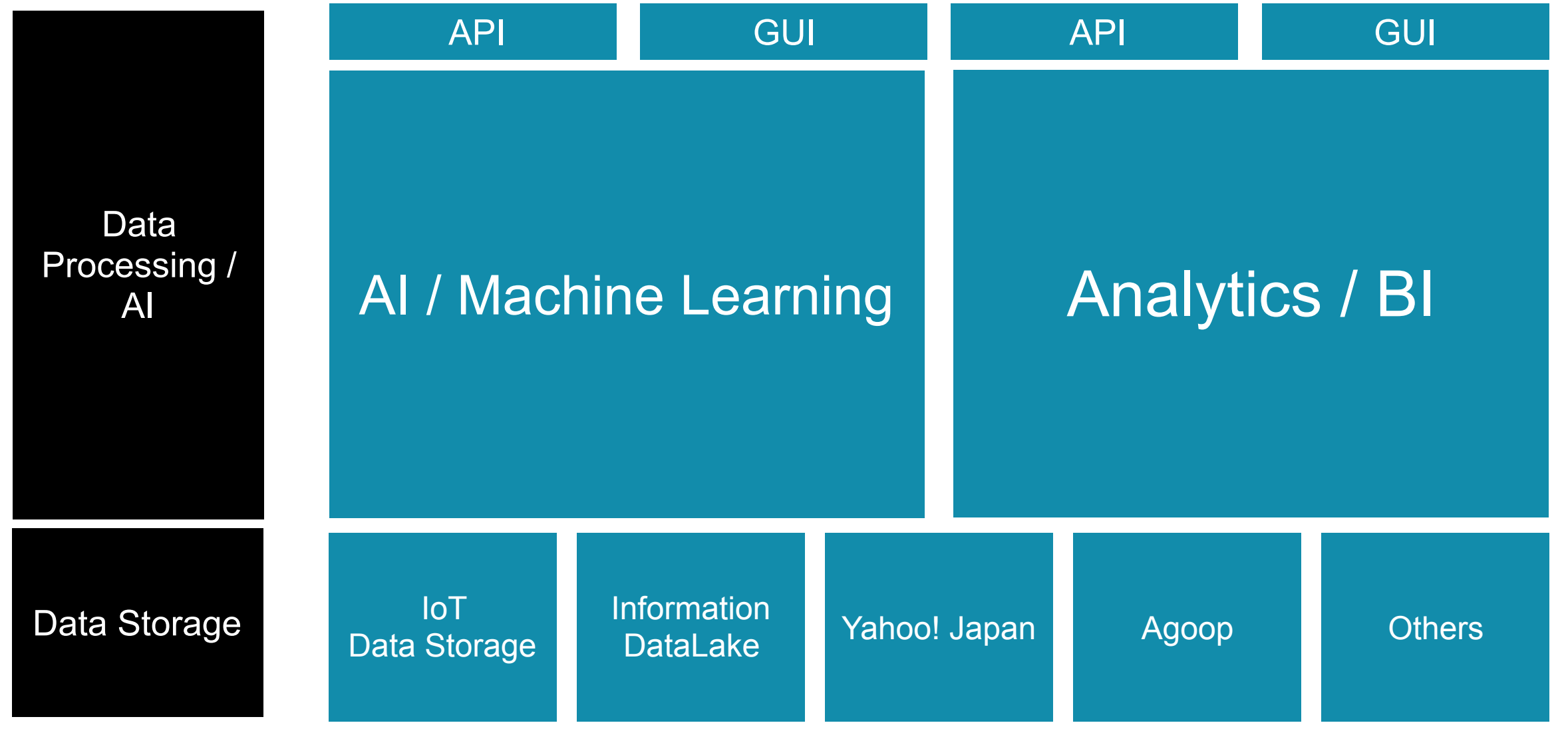


# SoftBank IoT Platform Overview

## SoftBank Service Platform



## SoftBank IoT Platform



## SoftBank Data Platform





SoftBank