

# **JTOWER**

## **Our Business Plan and Growth Potential**

November 10, 2021

J T O W E R Inc.

**1**

## **Company Information**

**2**

**Pioneer of telecom Infra-Sharing**

**3**

**Growth drivers backed by 5G**

**4**

**Strengthen International business and related businesses**

**5**

**Alliance/ Sustainability**

**6**

**Stable and predictable business model**

**7**

**Appendix**

## JTOWER's Vision

# Infra-Sharing Services from Japan Lead the World

Japan is behind in the field of global telecommunications infrastructure sharing.

In 2012, when the term "Infra-Sharing" was not common in Japan, we launched our first business.

Our goal is not the same as other global tower companies; our goal is what they have never done.

Meeting the world's highest standard for network quality as required in the Japanese telecommunications industry, we will overcome challenges and improve services.

We will treat all stakeholders with respect and honesty, including mobile network operators, real-estate developers, and partner companies,

We will continue to innovate and challenge new ideas to expand business globally.

We will pursue the world's state-of-the-art technologies, services, and business models.

As a result of these efforts, we will make the Infra-Sharing services that we provide global standards and create our future through businesses expansion.

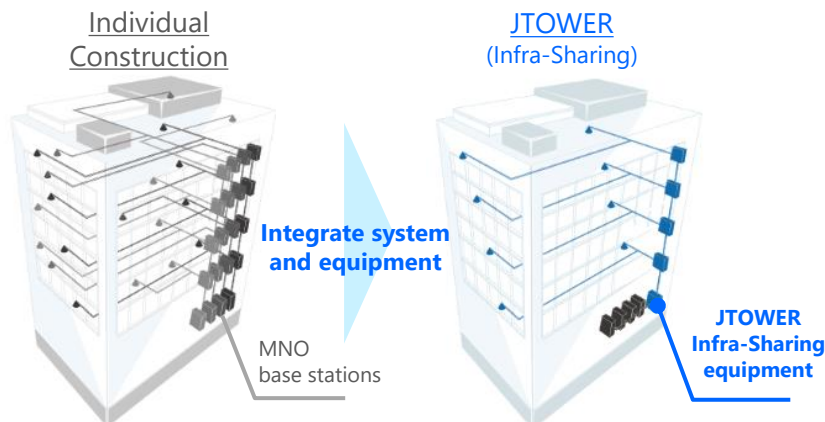
This is the vision of our company.

<b>Company Name</b>	J T O W E R I n c .
<b>Founded</b>	June 2012
<b>Representative Director</b>	Atsushi Tanaka
<b>Head office</b>	8-5-41 Akasaka, Minato-ku, Tokyo, Japan
<b>Employees</b>	148 <sup>*1</sup> (consolidated, as of September 30, 2021)
<b>Capital</b>	JPY7,984 million (as of September 30, 2021)
<b>Business Description</b>	Provision of telecom Infra-Sharing service and related services in Japan and overseas

\*1: Number of employees includes the average number of temporary workers (contract workers and workers from staffing agencies) in the past year, which is 21.

## IBS\*1 Business (Indoor Infra-Sharing)

- ✓ Integrate mobile network operators' in-building infrastructure as a shared system
- ✓ Beneficial for real-estate firms, mobile users and mobile network operators
- ✓ Steady growth with a stable revenue model



Japan

- ✓ **Installation at 389 properties\*2**  
(4G IBS 356, 5G IBS 33 properties)  
(including the number of installations to be completed)

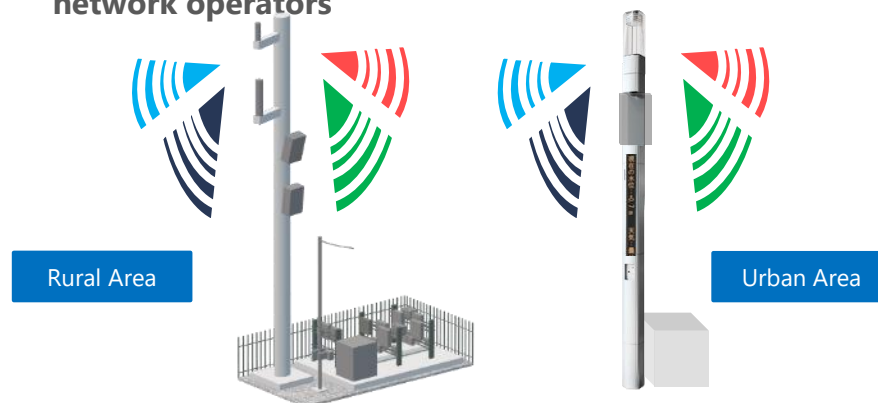
- ✓ **Expansion in emerging markets**

Overseas

- ✓ **Expand business in both organic and inorganic, mainly in Vietnam**
  - Top player in Vietnam (Installation at 178 properties\*2)
  - Expanding in Malaysia

## Tower Business (Outdoor Tower Sharing)

- ✓ Full-scale entry in FY2020
- ✓ New market for outdoor Infra-Sharing service driven by the deployment of 5G
- ✓ Outdoor telecom infrastructure sharing among mobile network operators



## Solution Business

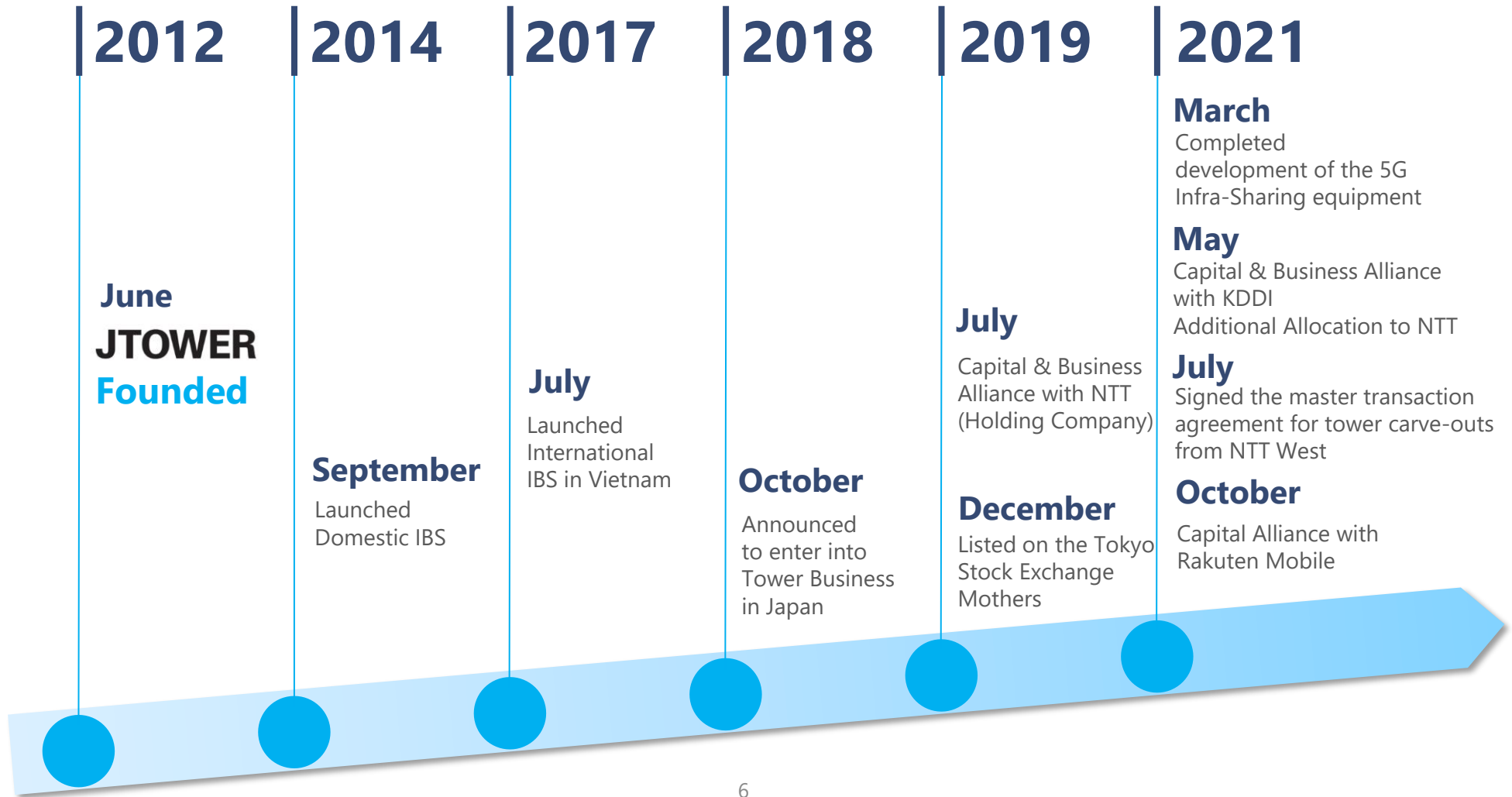
- ✓ **Value-added services for Infra-Sharing business**
- ✓ **Serve demand by mobile carriers and real estate companies for rooftop base station installation through SITE LOCATOR, cloud-managed Wi-Fi solution and others**



\*1: IBS: In-Building Solution

\*2: As of September 30, 2021

## Footsteps as a Pioneer of Telecom Infra-Sharing



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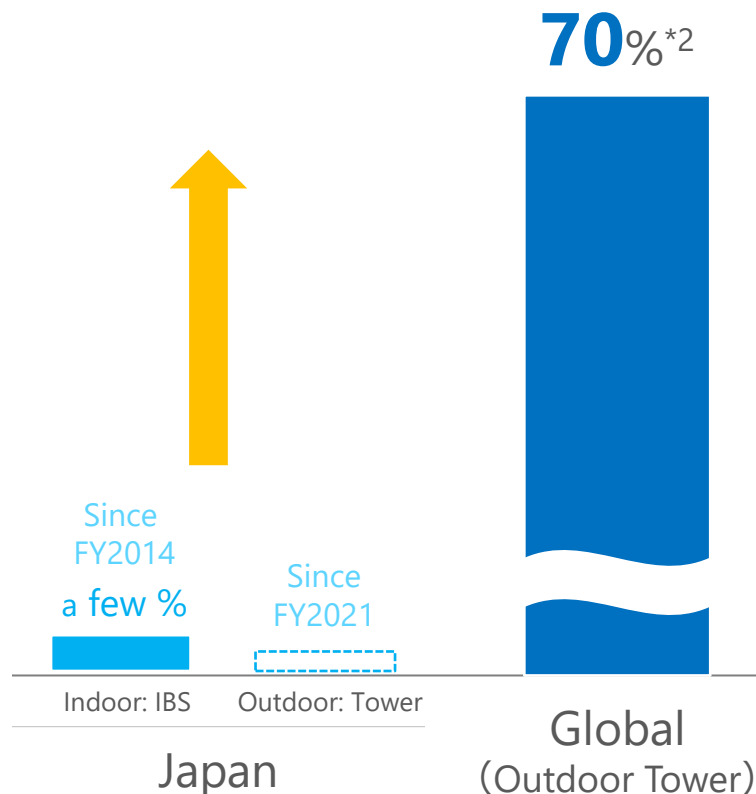
Stable and predictable business model

7

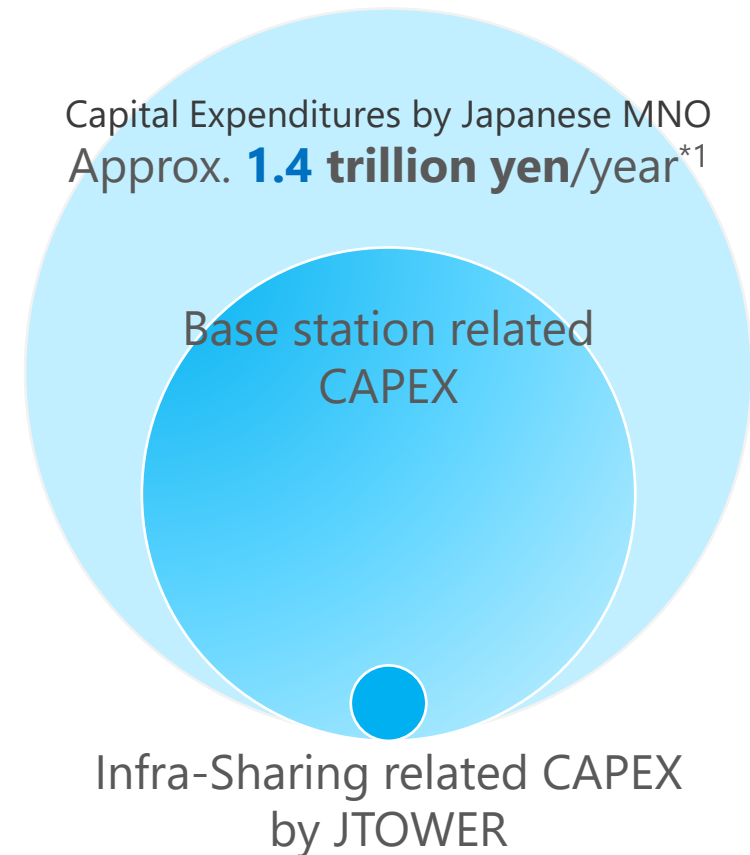
Appendix

- In Japan, JTOWER has been leading Infra-Sharing market as a pioneer.
- On the other hand, compared to the global market, Japanese Infra-Sharing market seems to be a market with considerable room for future expansion.

Infra-Sharing Penetration



Investment in telecommunications infrastructure in Japan



Source:

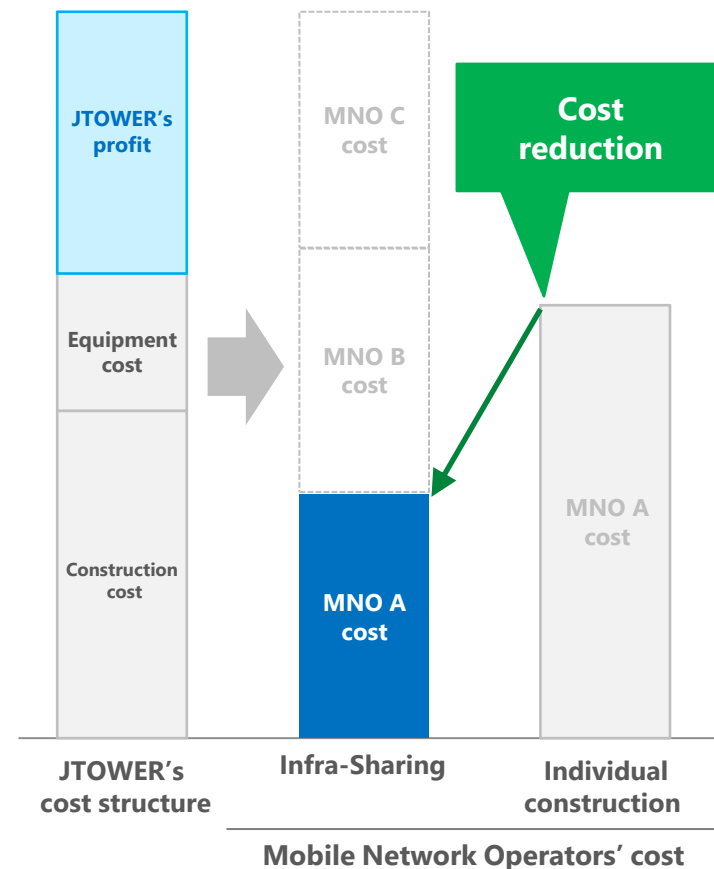
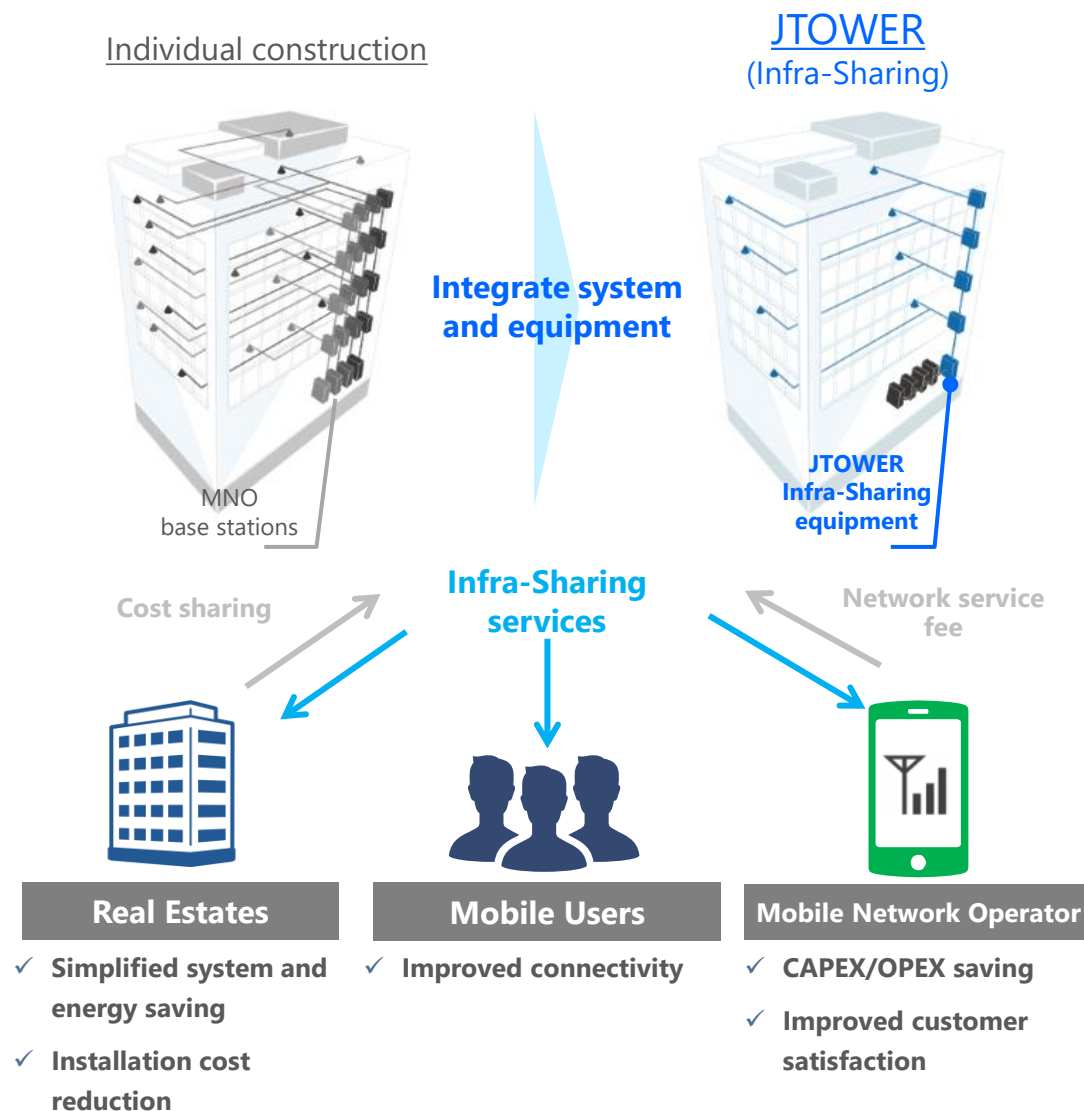
\*1: Based on Current Status and Future Forecast of the Mobile Phone Base Station Market and Peripheral Materials Market (2020 Version) by MCA

\*2: Based on TowerXchange



### Unique Business Model to Build Win-Win Relationships

### Cost-Benefits for Mobile Network Operator\*1

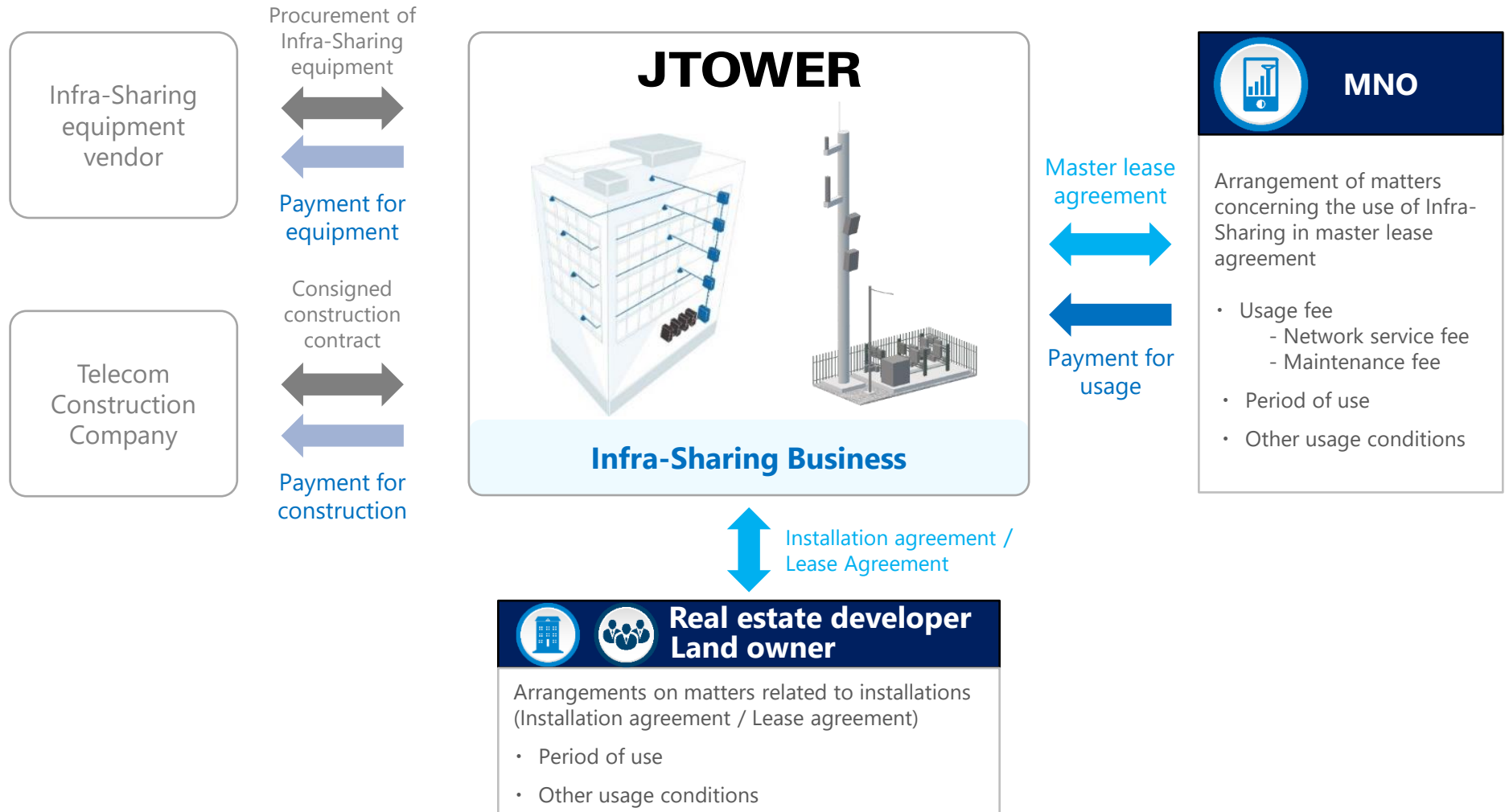


Note1:

For illustrative purposes only

## 2 Overview of Infra-Sharing contract structure

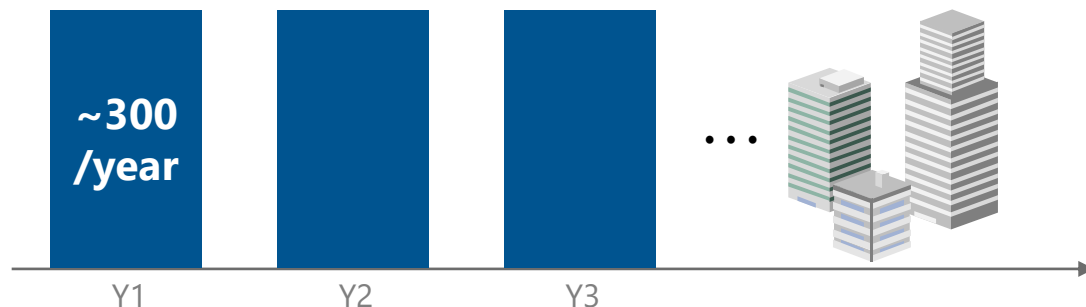
- Contracts for Infra-Sharing services, such as master lease agreement with MNO, installation agreement with real estate developers, and lease agreement with landowners.



## 2 Domestic IBS - Persistent Demand and Upside Potential

**JTOWER**

### ① New buildings<sup>\*1</sup>



**4G**

New  
installation

**Main target**

**5G**

New  
installation

**Major  
Upside Factors**

### ② Existing buildings

(Offices<sup>\*2</sup>, commercial<sup>\*3</sup>, hotels<sup>\*4</sup>, hospitals<sup>\*5</sup>, high-rise residence<sup>\*6</sup>, etc.)

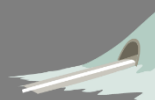


System  
upgrade

### ③ New category (Railway tunnels etc.)<sup>\*7</sup>



~5,000



New  
installation

New  
installation

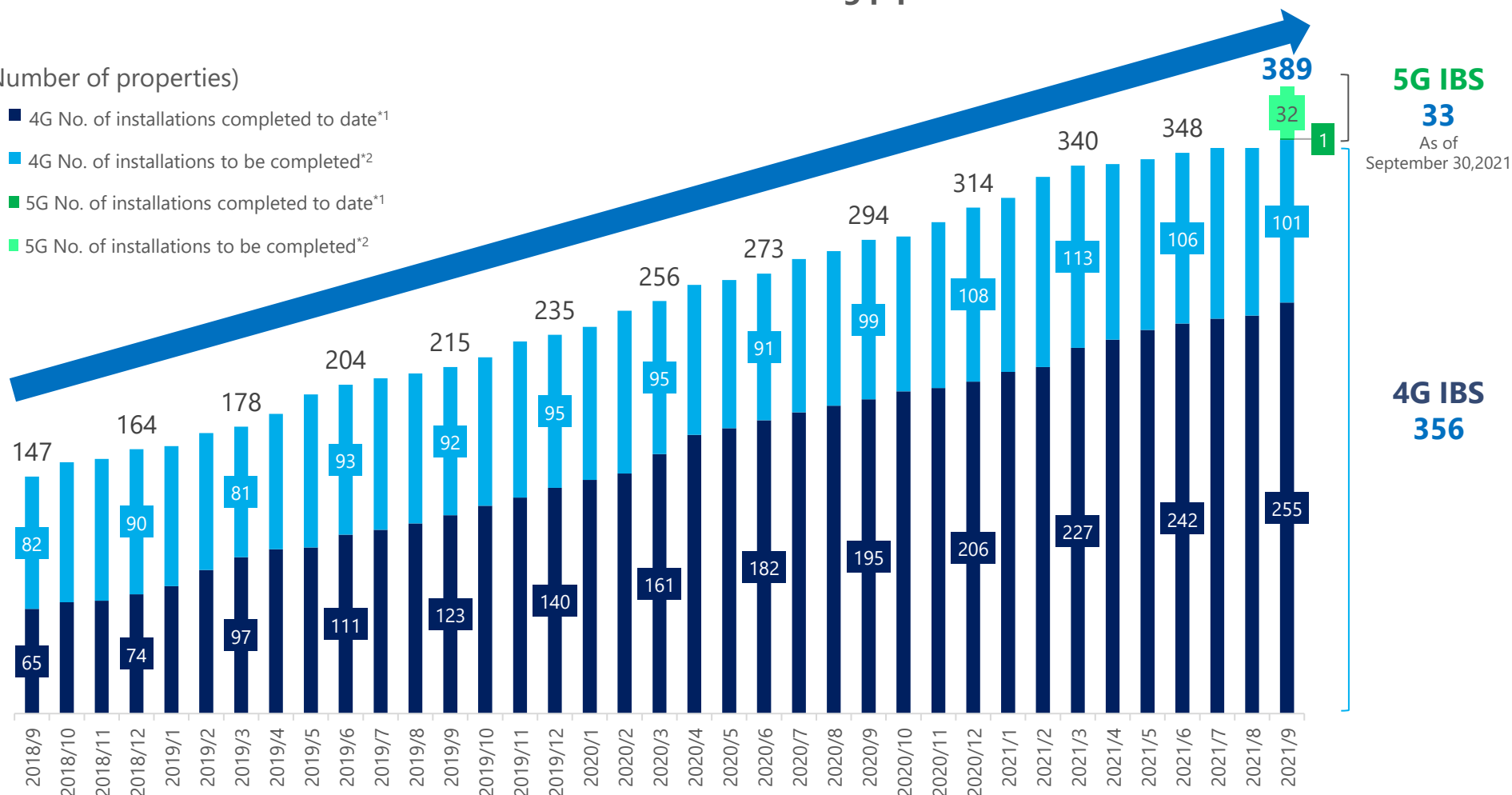
\* 1 : Company estimate based on large-scale projects with floor area of >10,000m<sup>2</sup>. \*2 Large-scale projects with >330m<sup>2</sup> per floor (as of Sept. end 2018, office building criterion based on Sanko Estate). \*3: Large-scale projects with >1,500m<sup>2</sup> retail floor space and >10 tenants, developed by a developer. \*4: Based on the number of resort hotels, city hotels and business hotels in Japan (as of Dec. 31, 2018). \*5: Large hospitals with >300 beds in Japan (excluding general clinics, as of Oct. 1, 2017). \*6: Condominium buildings with >20 floors in Japan (estimate for 2020 as of Oct. 31, 2018). \*7: Total number of tunnels used by private railway companies and Japan Railway Company based on the statistics provided by the Ministry of Land, Infrastructure, Transport and Tourism (as of 2016)  
Source: "OFFICE RENT DATA 2017" by Sanko Estate Co., Ltd., Japan Council of Shopping Centers Website, TOKYO KANTEI Co., Ltd. and the Ministry of Land, Infrastructure, Transport and Tourism (Annual Railway Statistics)

## 2 Historical Number of Installations (Domestic IBS-4G·5G) JTOWER

- Total number of 4G IBS installations has increased to **356** (installation completed: **255**, to be installed: **101**).
- Started disclosing 5G IBS progress from September 2021.  
Total number of installations of 5G IBS became **33** including pipelines.

(Number of properties)

- 4G No. of installations completed to date\*1
- 4G No. of installations to be completed\*2
- 5G No. of installations completed to date\*1
- 5G No. of installations to be completed\*2



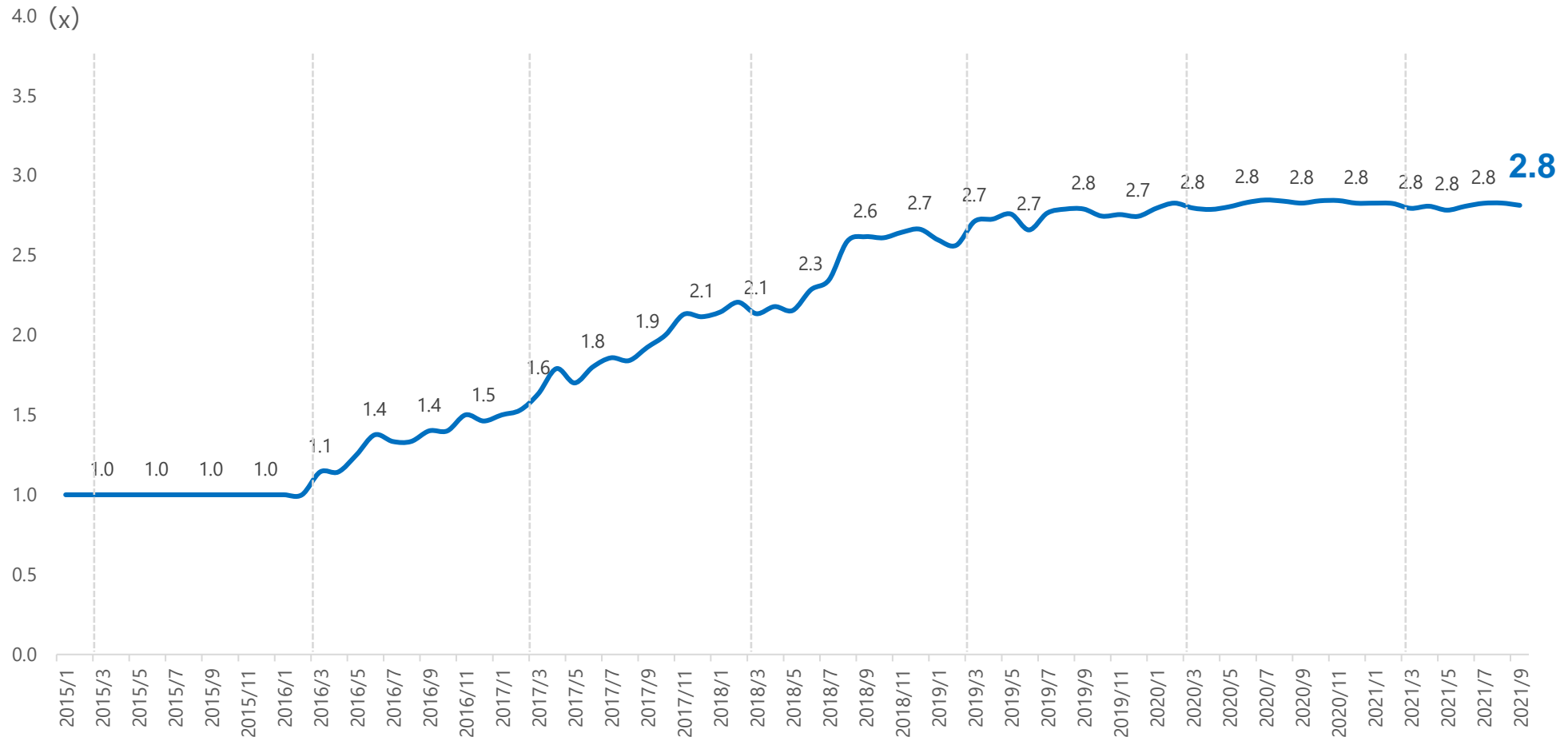
\*1: Projects where radio waves have been emitted and revenues are recognized.

\*2: Projects where we have reached an agreement with the property owner and mobile carriers, and radio waves emission and revenue recognition are expected in the next few years.

## 2 Historical Tenancy Ratio\*<sup>1</sup> (Domestic IBS-4G)

JTOWER

- Tenancy Ratio (average number of participating mobile network operators per property) has been steady in **the higher 2 point range**.



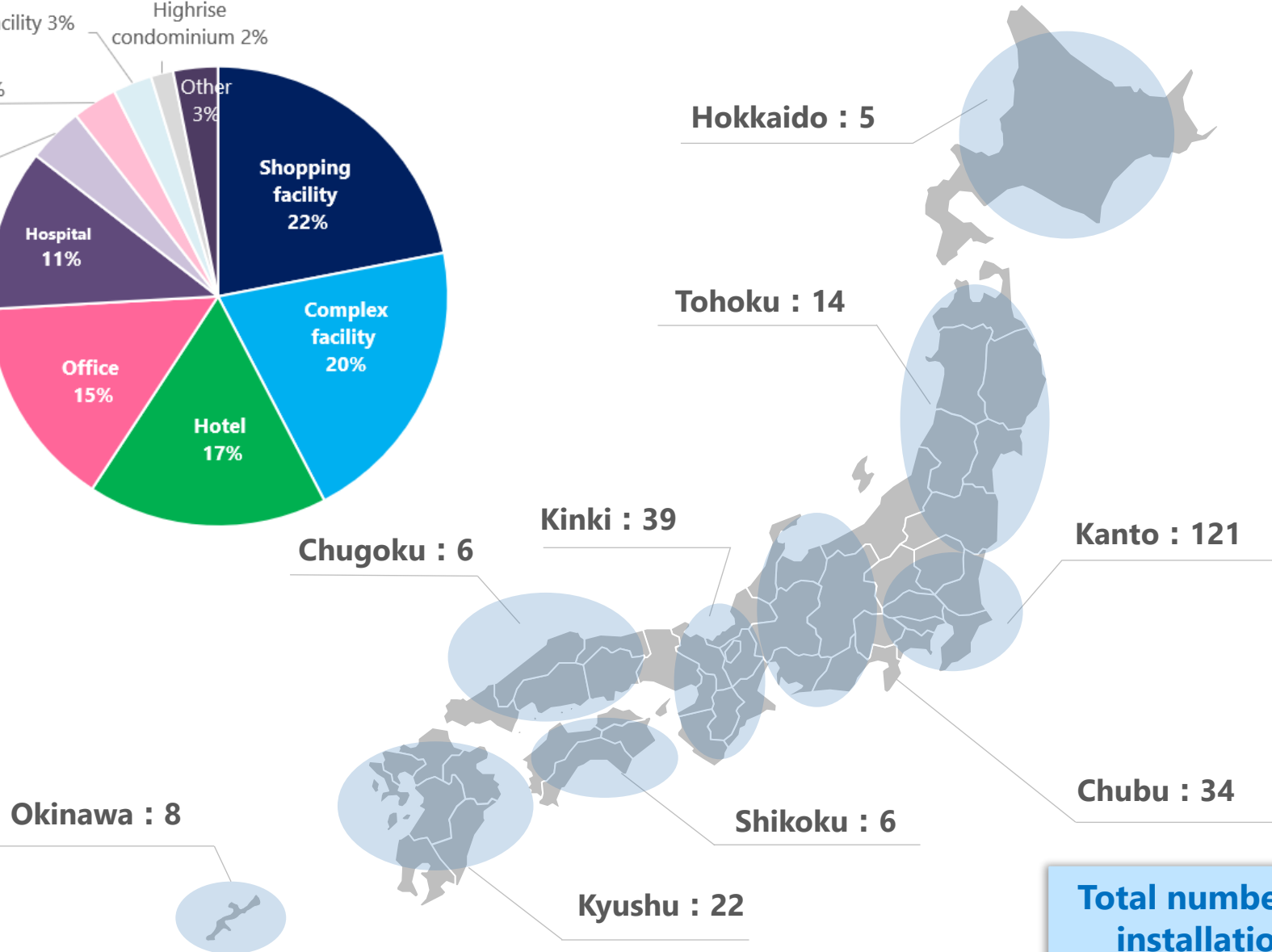
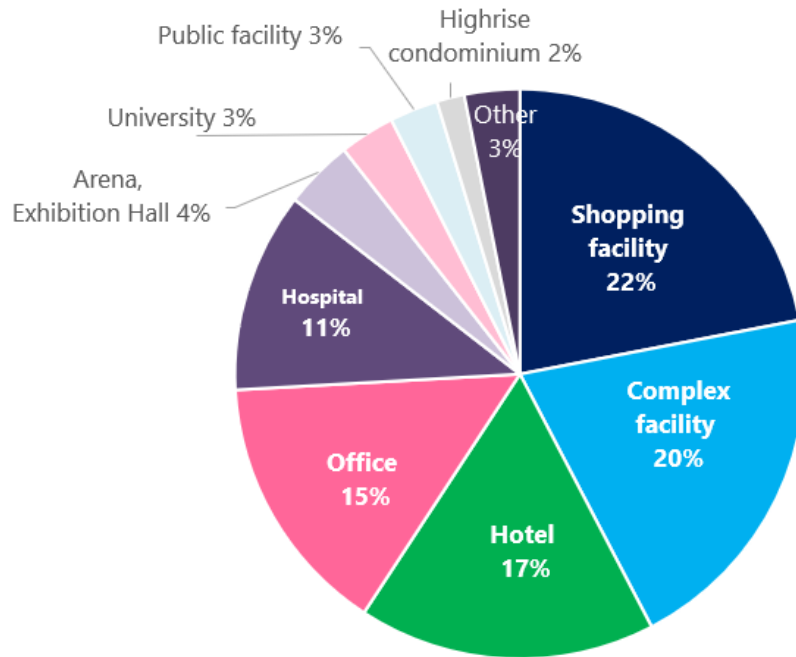
\*<sup>1</sup>: Average number of participating mobile carriers per property (at properties where IBS has been installed to date).

# Domestic IBS (4G)

2

-The number of installations around the country and type of buildings <sup>\*1, 2</sup>

**JTOWER**



**Total number of  
installation  
255<sup>\*1</sup>**

\*1: As of September 30, 2021

\*2: The number of buildings where IBS installation was completed

## 2 Our strengths in Infra-Sharing market

**JTOWER**

- As a leading company of Infra-Sharing, JTOWER has established a solid position in the market with a high entry barrier.

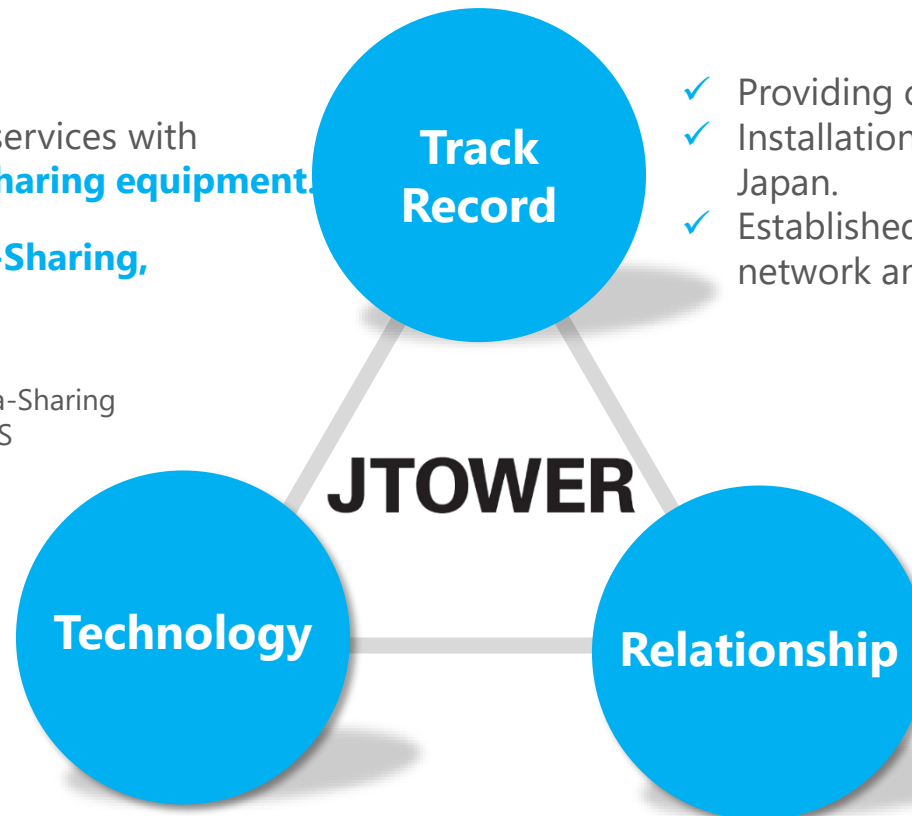
- ✓ Provide active Infra-Sharing services with **our own developed Infra-Sharing equipment**.
- ✓ Lead in **the high-level Infra-Sharing, such as 5G.**

### - Sub6

Completed development of 5G Infra-Sharing equipment and have installed 5G IBS

### - mmWave

Started to develop 5G mmWave shared radio units



- ✓ Providing commercial services to **4 MNO**.
- ✓ Installations in more than **250 buildings** in Japan.
- ✓ Established the nationwide maintenance network and continue stable operations.

- ✓ Relationship with MNO and real estate developers.
- ✓ **Capital and business alliance** with MNO.
- ✓ Participate in projects by MIC and the Tokyo Metropolitan Government.

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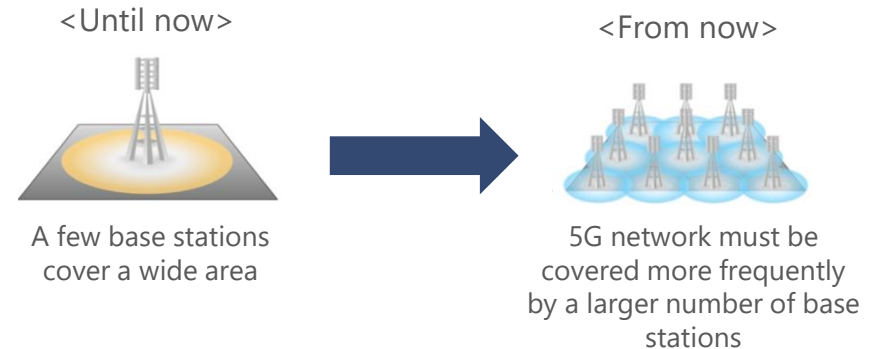
Appendix



- Demand for Infra-Sharing has been increasing due to the launch of 5G.

## Changes by 5G

- ✓ The number of base stations increases through the shift to small cells and multiple cells
- ✓ Expansion of the network coverage in rural areas
- ✓ Intensified competition due to the new entry of the fourth carrier



## Issues in 5G Infrastructure Development

- ✓ **To secure installation sites**  
(Landscape and environmental issues)
- ✓ **Expansion of CAPEX and operation costs**

+

## Changes in the business environment

MIC

Promote **Infra-Sharing**  
(Infra-Sharing Guideline, Master Plan)

MNO

- ✓ The mainstay of competition shifted from infra-networks to **non-teleco areas such as service layers**
- ✓ Promoting financial efficiency

**Demand for Infra-Sharing increases as a solution in 5G/Beyond 5G age**

- ✓ Formulation of **Infra-Sharing Guideline**
- ✓ At the time of 5G spectrum allocation, **required Infra-Sharing plan** as an item in 5G infrastructure deployment plan for MNO
- ✓ If 5G base stations are installed by several companies in rural areas, it is decided that **the subsidy rate will be more favorable than that of a single company**
- ✓ Build 5G network **utilizing traffic signals**
- ✓ Initiatives to utilize **public assets** (Ministry of Finance and local governments)  
Released lists and database of assets owned by the national government and the Tokyo Metropolitan Government to use as installation sites for 5G base stations

## 5G Base Stations Deployment Policy

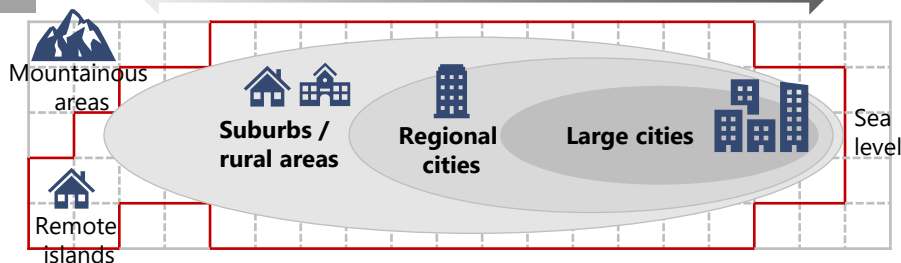
Based on area coverage→ **Development focus will be on business feasibility and not area type (residential, urban, regional, etc.)**

5G

Based on population coverage

→ Coverage of residential areas &amp; large cities is prioritized

~4G



※Divide country into grids of 10km² to determine areas to develop

## Infra-Sharing Guideline by MIC

移動通信分野におけるインフラシェアリングに係る電気通信事業法及び電波法の適用関係に関するガイドライン

2018年12月

## 1. ガイドラインの目的

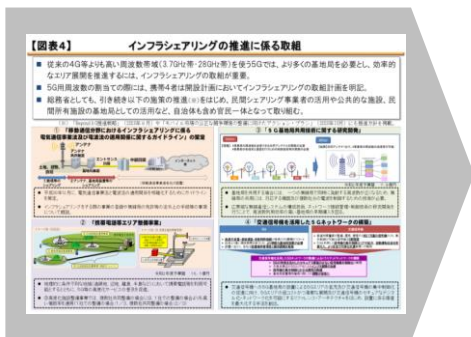
携帯電話等の移動通信サービスの提供においては、広範な地域に相当多数の基地局を設置することが必要となる。

特に、第5世代移動通信システム（以下「5G」という。）の導入に当たっては、移動通信システムの高速度・大容量化や高周波数帯の利用のために基地局の小セル化や多セル化が必要となるが、空中線を設置するための鉄塔の設置場所やビル等の物理スペースは限られており、また、景観上の問題等で新たな鉄塔等の設置が制限される場合もあるため、ビルや地下街等の屋内のみならず、ビル屋上やルーラルエリア等の屋外において鉄塔等の設備を他人に使用させ、又は複数事業者間で共同で使用する「**インフラシェアリング**」がこれまで以上に重要となることが想定される

**Infra-Sharing will play an even more significant role**

Source: Ministry of Internal Affairs and Communications

## &lt;Master Plan on the development of 5G base stations&gt;



In order to promote the development of 5G network nationwide, including in rural areas, **Infra-Sharing in which multiple operators jointly develop network facilities such as base station facilities will be promoted** in accordance with Guidelines for the Application of the Telecommunications Business Act and Radio Act Concerning Infrastructure Sharing in the Mobile Communications Field (formulated in December 2018).

**The public and private sectors, including local governments, will work together** to promote;

- The support for joint development by multiple operators in the development of mobile network
- R&D on shared-use technologies for network facilities of 5G base stations
- The installation of base stations on traffic signals where is physical restrictions on the space
- **Utilization of private Infra-Sharing service providers**
- Utilization of public facilities and privately owned facilities for base station sites

- Accelerate outdoor Infra-Sharing to expand 5G coverage.
- Expanding 5G coverage in 3 areas contributing to regional digitization.

### Rural Tower Sharing

Launch new tower sharing  
in rural areas



### Smart Pole

Expand the coverage in areas  
with smart solution demands



### Carve-out

Further expand carve out  
transactions for  
telecommunications towers



### 3 Tower – Tower sharing in rural areas

# JTOWER

## Progress of Tower sharing in rural areas

Deployment of parent-stations to cover meshes

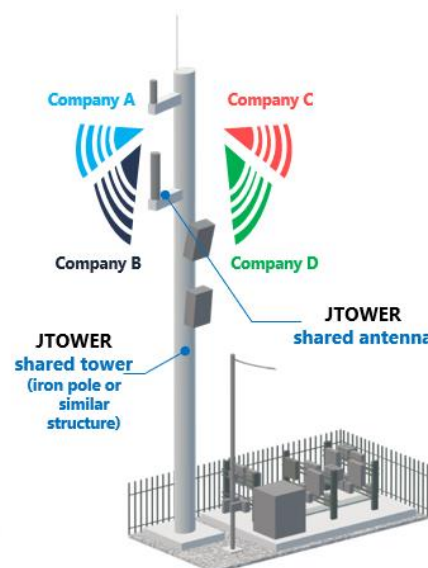
### MIC

Promote 5G expansion in rural areas.  
(Area Coverage Policy)

### MNO

In order to achieve 5G infrastructure deployment plan, MNO needs to deploy 5G base stations in rural areas where they have not previously installed base stations **by the end of FY2024**.

### Image of the installation of rural tower



FY 2019

- ✓ Selection of candidate sites
- ✓ Negotiations with landowners

FY 2020

- ✓ Propose **hundreds of** new towers (parent stations) to 4 MNOs
- ✓ Began preparations for the construction of **more than 60** towers

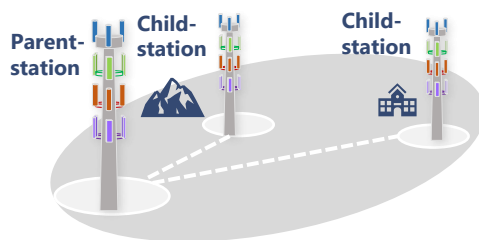
FY 2021

- ✓ Promote sales activities to expand the number of orders
- ✓ Received **additional responses** from certain MNO
- ✓ Launch of services in completed towers (from Q4)

Mid - long term

- ✓ Further expansion of **parent-stations**
- ✓ Rollout of **child-stations** within meshes

Deployment of child-stations



- Regional revitalization through the use of 5G
- Development of IoT services

Note:

A 5G advanced specified base station (parent base station) which is deployed in each mesh is one that is connected to a high capacity line and can connect to multiple 5G specified base stations (child stations)



## Image of Smart Pole



Street light

5G Sub-6  
shared antenna5G 28GHz  
antenna

Wi-Fi6

Digital Signage

Charger  
(plug in)

## Tower sharing in urban areas

July  
2020

- Selected as the 5G Smart Poles provider of the Tokyo Metropolitan Government (April 3, 2020)
- Construction of smart poles completed in Nishi-Shinjuku area, and **The four MNOs** all decided to use these smart poles.

October  
2020  
Onwards

- Install **5G base stations** including 5G infra-sharing equipment and began to share telecommunications facilities.
- 5G services by four MNO** gradually started from October 2020.

September  
2021  
Onwards

- Concluded an agreement with the Tokyo Metropolitan Government **on the expansion of installation of smart poles in Nishi-Shinjuku area.**
- 3 companies (JTOWER, TEPCO Power Grid, NTT EAST) will collaborate to build **20 new types of smart poles.**

**Promote acquisition of new orders, such as collaboration with local governments with smart poll demand aiming for expansion**

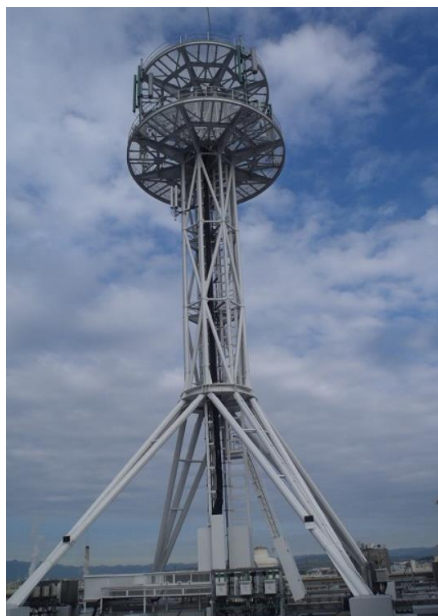
### 3 Tower – Progress of tower carve-outs with NTT West

# JTOWER

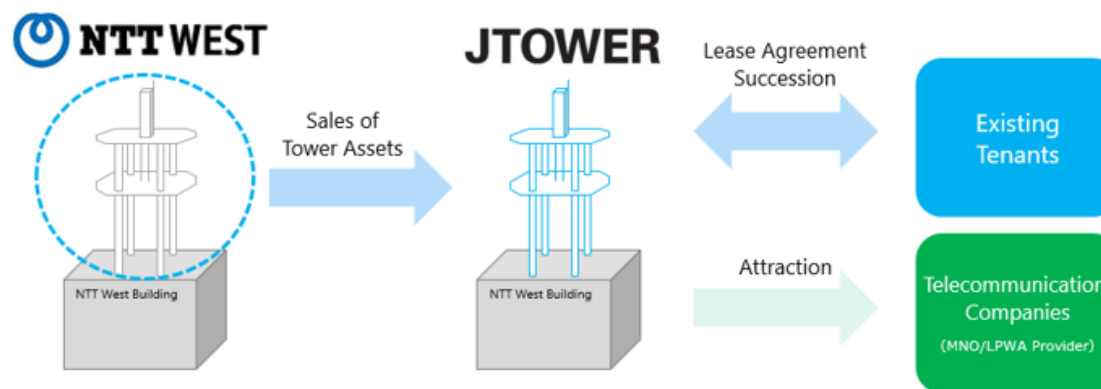
#### Progress of transaction

- Began discussions with NTT West and existing tenants for the transfer. The contract transfer is expected to be implemented gradually, but the transfer is expected to begin from January 2022.
- After the contract transfer is completed, we plan to work to attract new tenants to telecommunication companies and others for sharing.

Image of telecommunications tower



#### Image of tower carve-outs transaction



**Purchase Price (Total):**  
Approx. **700 million yen**

**Number of Towers: 71**

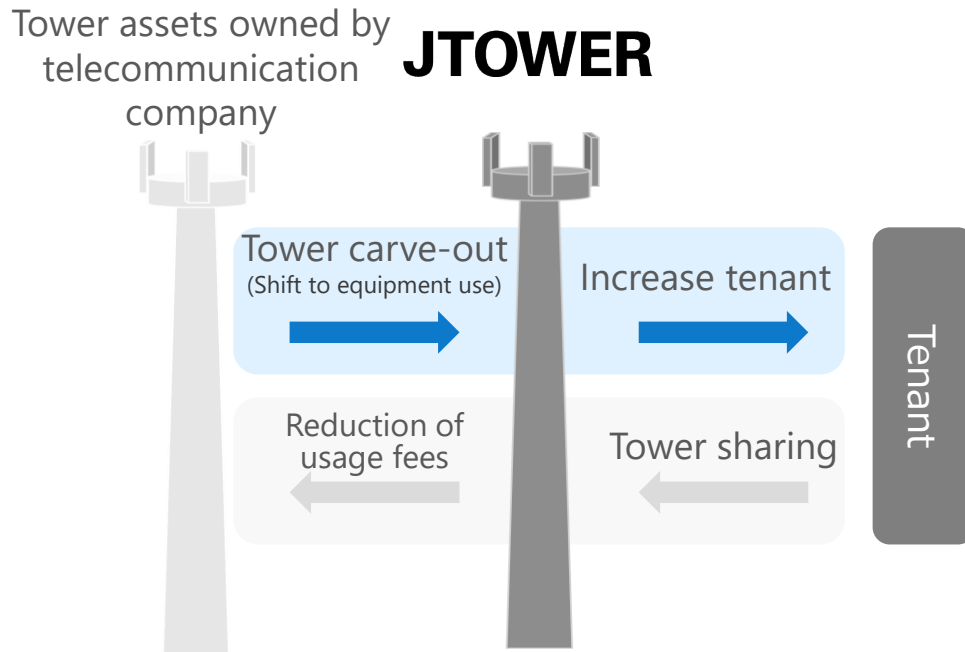
**Transfer of ownerships:**  
**Start gradually from January 2022**

\*The contracts of the existing tenants of each tower will be successively transferred

**Revenue contribution:**  
Approx. **200 million yen**

\* If this transaction contributes for the full fiscal year

## Image of existing tower carve-outs



## Significance of existing tower carve-outs

### Economic benefits (telecommunication company)

Reduction of  
OPEX by  
tower sharing

Improvement of  
financial base  
through disposal  
of assets

### Social significance

Reduction of  
environmental  
impact

Effective use  
of social  
infrastructure

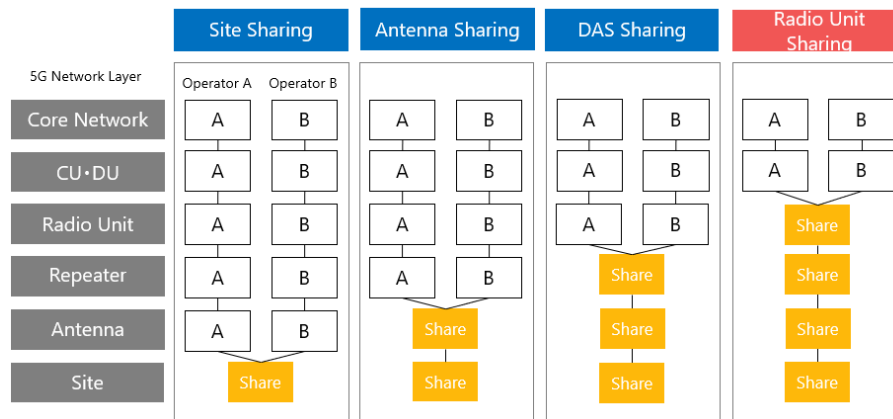


### 3 Tower - 5G mmWave Shared Radio Unit

# JTOWER

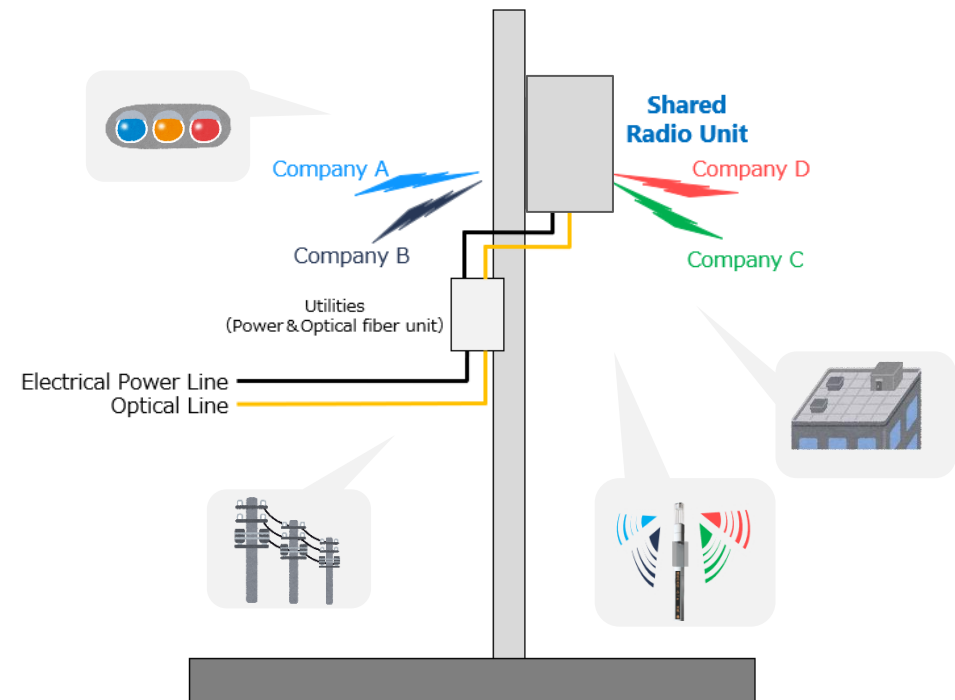
- In 5G mmWave spectrum, we have begun developing shared radio units (base stations), aiming for sharing in the high layer compare to previous sharing. Development is scheduled to be completed in FY2021 and plan to start commercial services in spring 2022.

#### Realization of RU sharing in the high layer



- **Sharing of Radio Unit (base station) in the high layer** compared with previous sharing of DAS and antenna.
- Compatible with 5G mmWave (28GHz band) allocated to 4 MNOs.
- Complying with **O-RAN** and **compact and lightweight**.

#### Image of installation



Anticipate installation in a wide range location both indoor and outdoor, including concrete poles, electric poles, signals, smart poles and inside of buildings

- in addition to ongoing expansion of existing 4G IBS, launch new services including 5G IBS.
- Aiming for further expansion in existing buildings, which has significant potential.

[Image of 4G/ 5G IBS \(main target buildings\)](#)



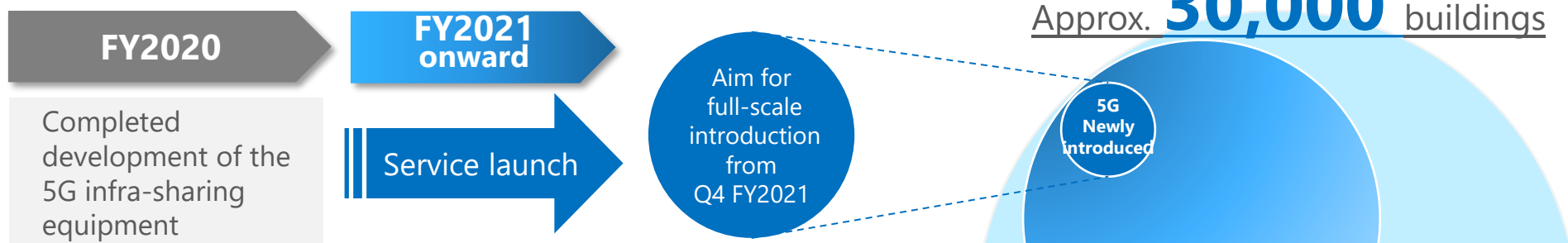
### 3 Domestic IBS – New Initiatives

# JTOWER

- New initiatives, the replacement of existing 4G networks to 4G IBS in existing buildings and the rollout of new 5G IBS, will be introduced from FY2021 onward. Aiming to expand in the existing building market, which has significant potential, over the medium to long term.

#### <5G IBS>

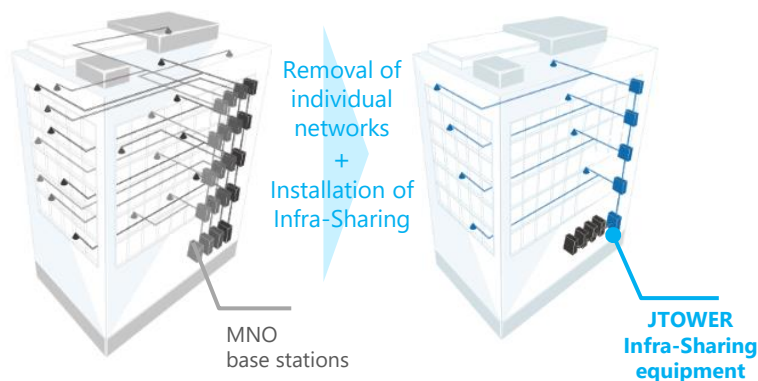
#### Introductions in new/existing buildings



#### <4G IBS> Replacements in existing buildings

Individual Installation  
by MNO  
(Existing building)

After replacing with  
Infra-Sharing

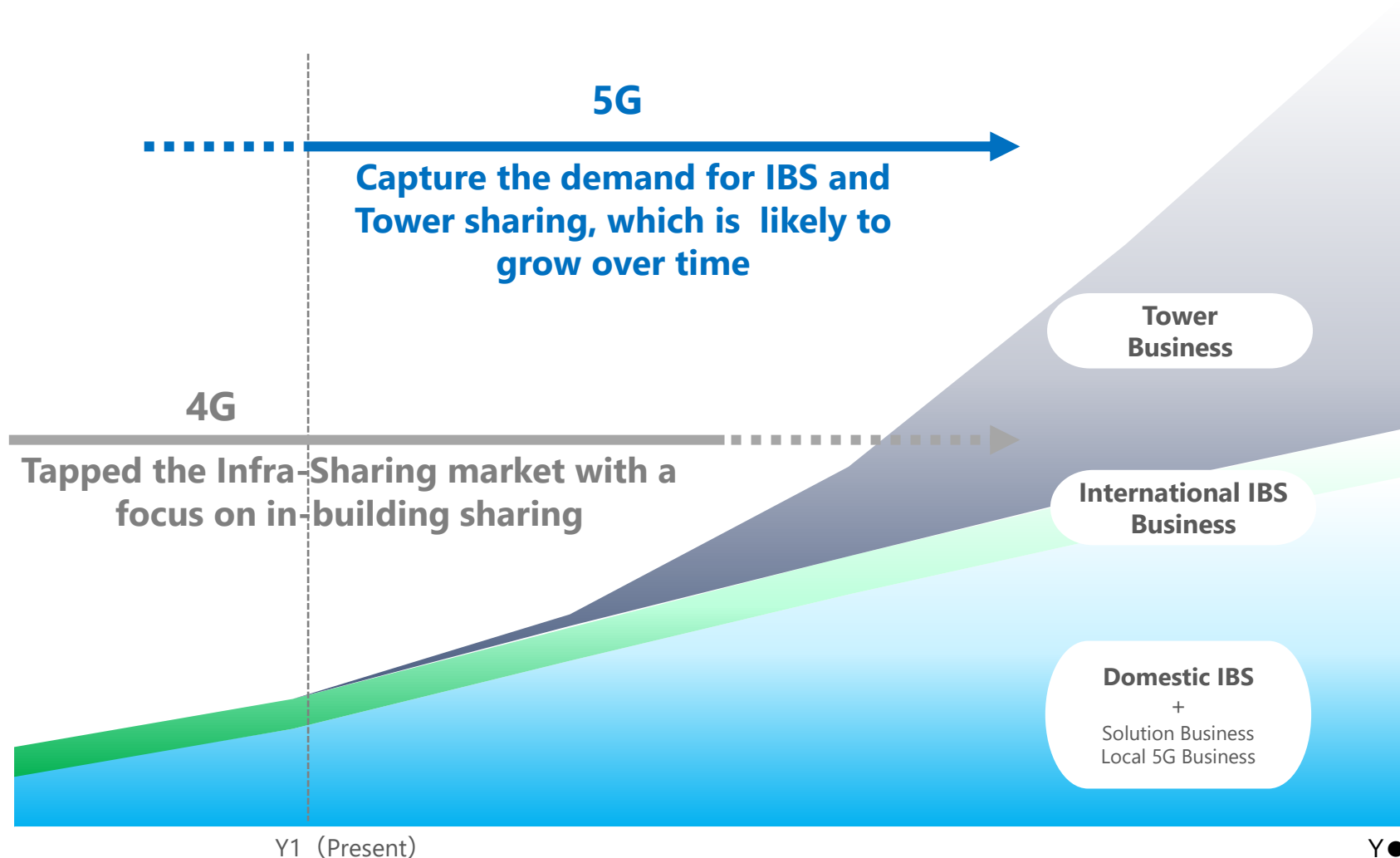


Started discussion on several dozen buildings as specific needs

Potential for further expansion in the existing buildings market over the medium to long term

### 3 Mid-to Long-Term Growth Strategy

- Aiming to expand the Domestic IBS business and the Tower business supported by the increasing 5G demands for the efficient capital investments in telecom infrastructure area.



Note: For illustrative purposes only

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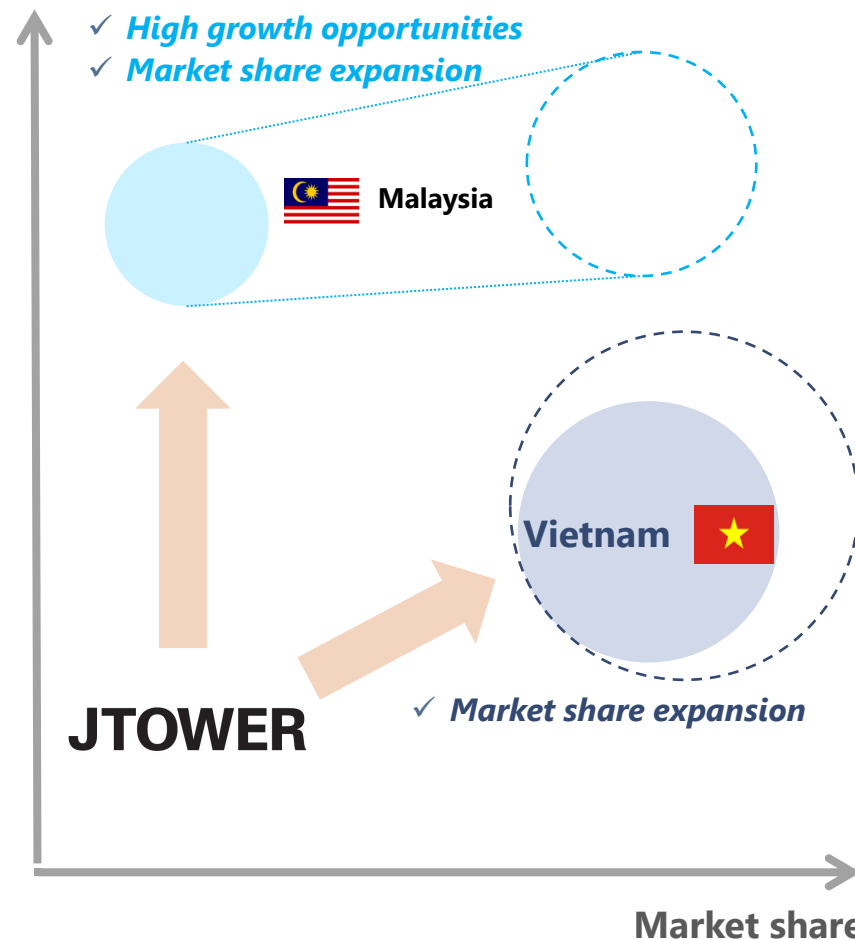
Stable and predictable business model

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Appendix

- Expansion mainly in Southeast Asia by partnering with influential local players.

Market growth



- Entry : July 2017
- Local entity name : SOUTHERN STAR TELECOMMUNICATION EQUIPMENT JSC (SPN)
- Market leader in Vietnam
- **178 installations<sup>\*1</sup>**
- Wholly-owned subsidiary

- Entry : January 2019
- Local entity name : JTOWER MALAYSIA SDN. BHD. (Non-consolidated subsidiary)
- Preparing the business foundation

\*1: As of September 30, 2021

- On November 17, 2020, the overseas subsidiary SPN engaged in the IBS business in Vietnam, has executed IBS Asset Purchase Agreement with Thien Viet Company Limited one of the IBS operators in Vietnam.



**International  
IBS**

SPN executed IBS Asset Purchase Agreement with Thien Viet Company Limited one of the IBS operators in Vietnam.  
(Announced on November 17, 2020)

**Purchase Price (Total)**  
**Approx. 240 million yen**

**Number of Projects**  
**63 projects**  
(Approx. 1.8 million m<sup>2</sup>)

**Transfer of ownership expected to be  
completed**

**at the end of December, 2021**

\* Transfer of ownership will be conducted on a property-by-property basis

**Revenue contribution**

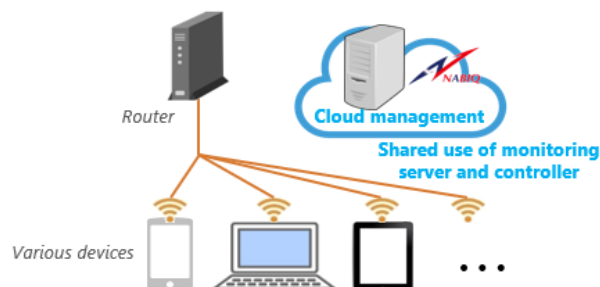
Approximately **150 million yen**

\* If this transaction contributes for the full fiscal year

**Further promoting growth strategies in Vietnam, including M&A of local competitors and the purchase of existing operating assets**

- Provide related services as an up sell for Infra-Sharing.

### Cloud-managed Wi-Fi Solution



Provide Cloud-managed Wi-Fi Solution as an up sell for Infra-Sharing

### Site Locator



Provides a database for matching the rooftop space leasing demands with the BTS installation demands

### Local 5G



Promote development and participation in demonstration tests as a preparation for the launch of commercial services in FY2022



- Launched initiatives for commercialization by leveraging management resources cultivated in Domestic IBS.

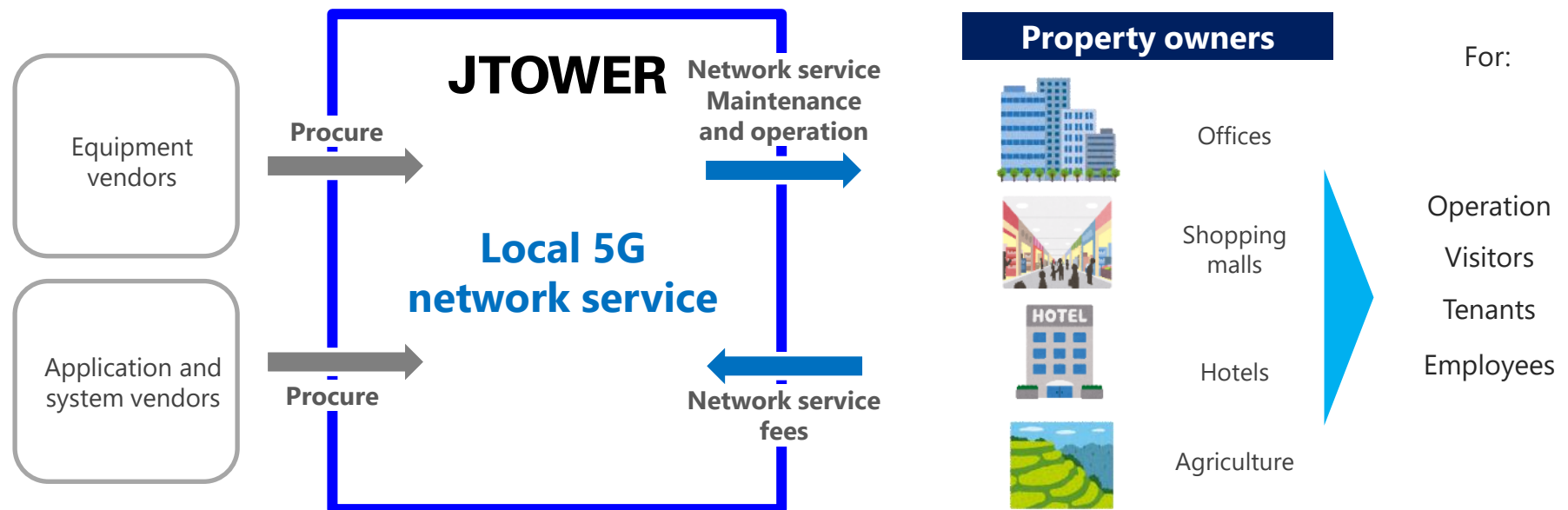
### Local 5G

Obtained license for testing  
(December 21, 2020)

The verification of Local 5G started after **obtaining a license** from Kanto Bureau of Telecommunications for testing Standalone (SA) Local 5G using Sub6 frequency band.

### ✓ The Image of Our Local 5G Services

Expect to provide B2B2C and B2B2B services to property owners



1

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Appendix

## 5 Positioning of alliances with mobile network operators

**JTOWER**

- By strengthening relationships through alliances with mobile network operators, we will strengthen our position as Infra-Sharing provider aiming for further growth and expansion.

### Our capital structure

### Significance for us

2019/7/4

Capital and Business Alliance

**2021/5/14**  
**Additional allocation**



20.2% → **21.7%**

**2021/5/14**  
**Capital and Business Alliance**



0% → **2.5%**

**October 2021**  
**Capital Alliance**

**Rakuten Mobile**

**Build a new alliance**

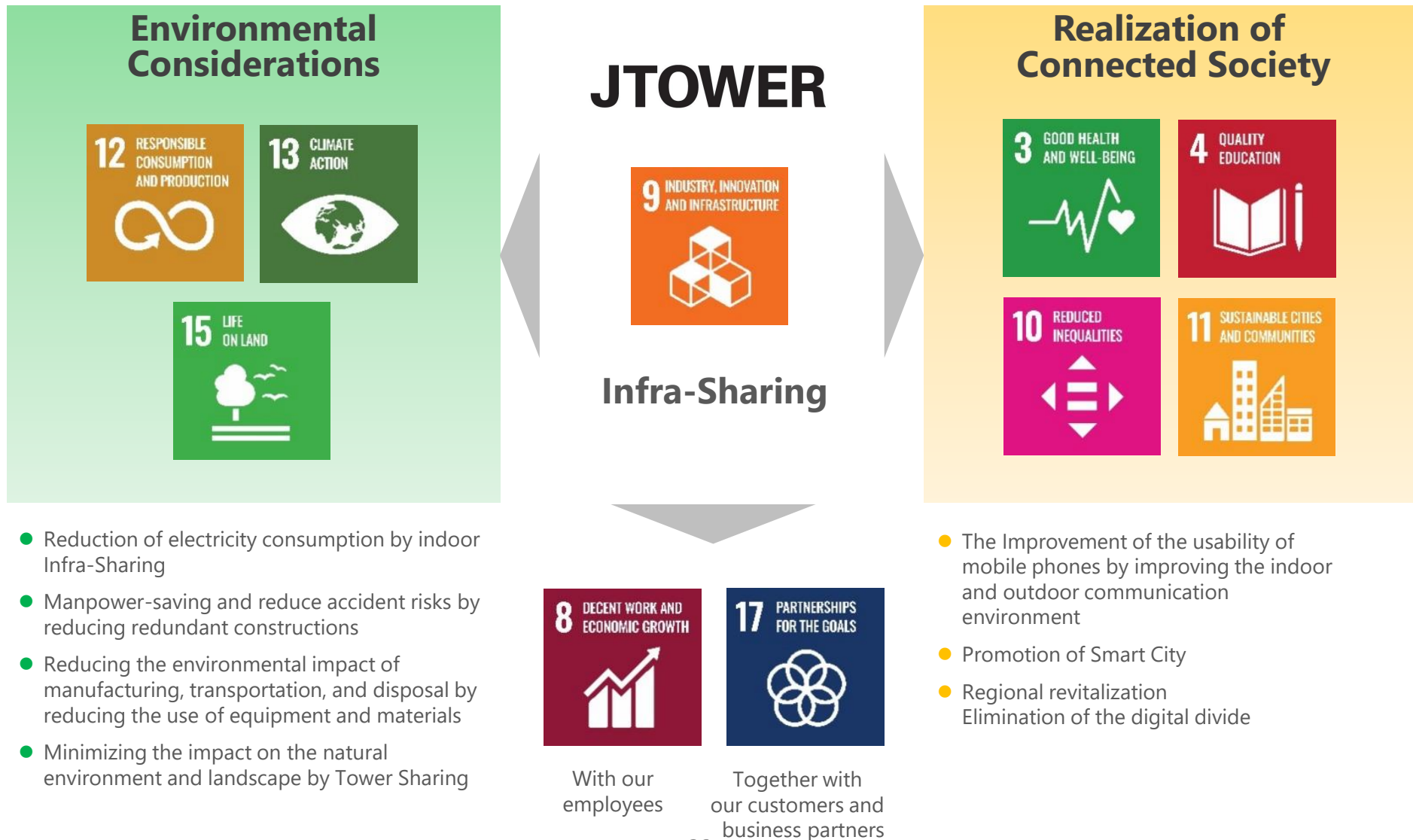
**Further strengthen existing partnership**

**Build a new alliance**

**JTOWER**

- Strengthening our position as a leading company of Infra-Sharing
- In Tower Business, where the relationship with mobile carriers is important, we aim to expand the business based on the strengthening of the relationship under this alliance.
- Going forward, we will continue to consider alliances that contribute to enhancing corporate value as an important measure.

- Infra-Sharing in itself leads to the realization of Sustainable Society

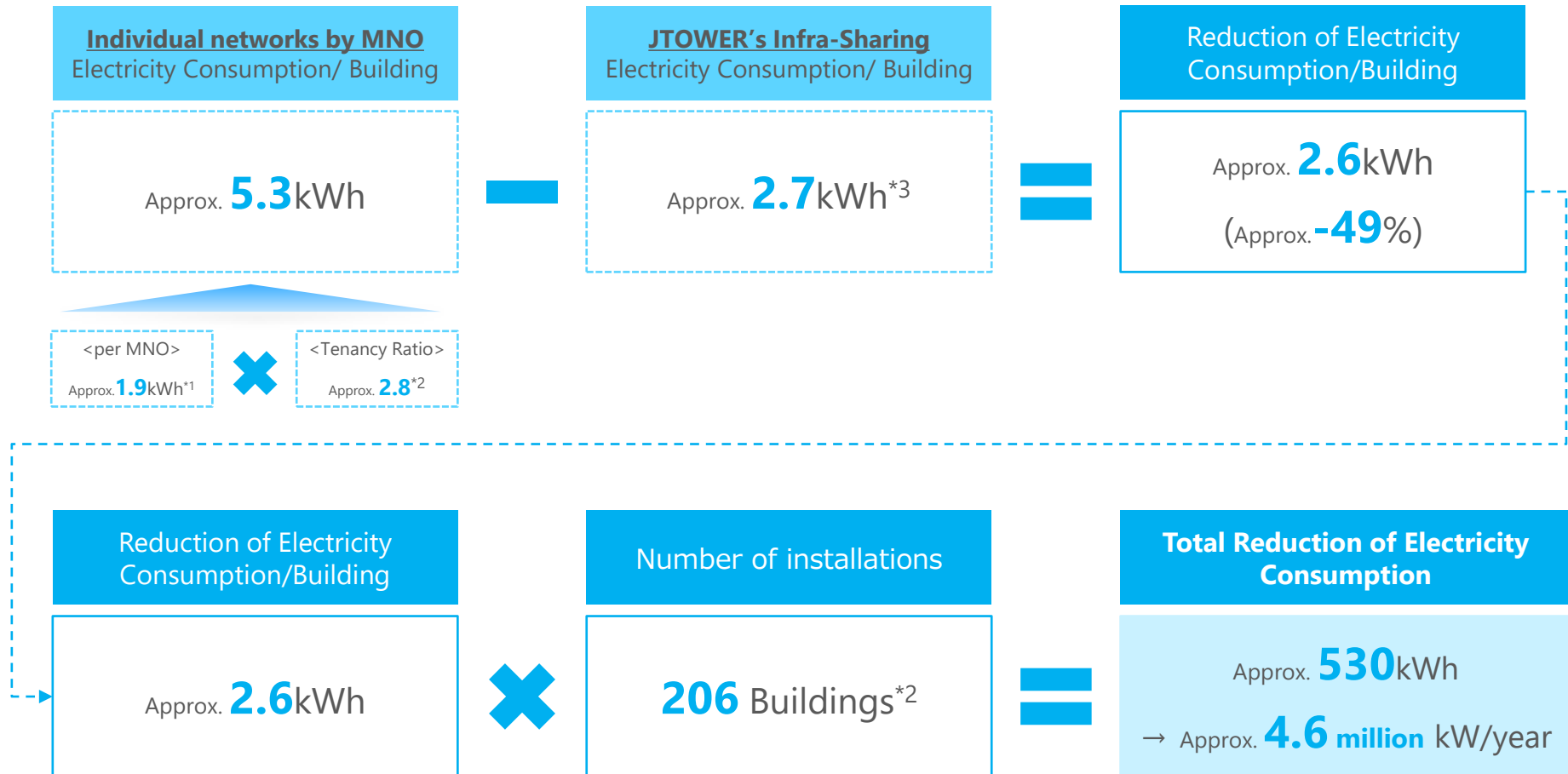


# Our Approach to SDGs

## 5 - Reduction of Electricity Consumption (Domestic IBS)

**JTOWER**

- In Domestic IBS business, the installation of indoor Infra-Sharing contributes to reducing electricity consumption by **approximately 4.6 million kW/Year** (our calculation).



\*1: (Estimated electricity consumption/Building) × 70%  
70% is our assumed calculation and does not indicate actual electricity consumption

\*2: As of December 31, 2020

\*3: Estimated based on the calculation:  
(The average number of units used at IBS installed properties) × (The estimated electricity consumption of our Infra-Sharing equipment based on specification) as of December 31, 2020.

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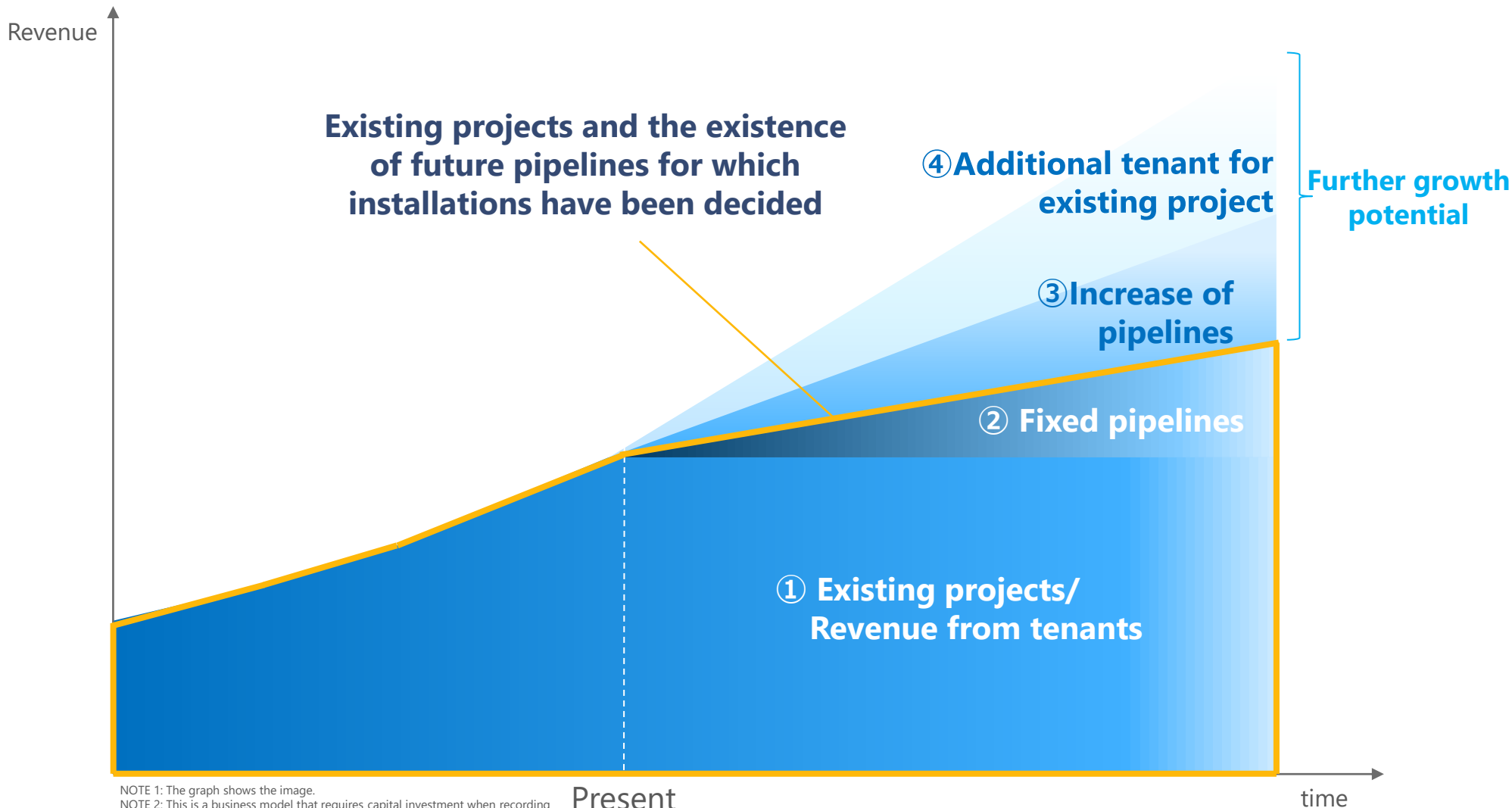
**Stable and predictable business model**

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Appendix

High revenue growth due to stability based on long-term contracts and the existence of future pipelines

(Growth image)



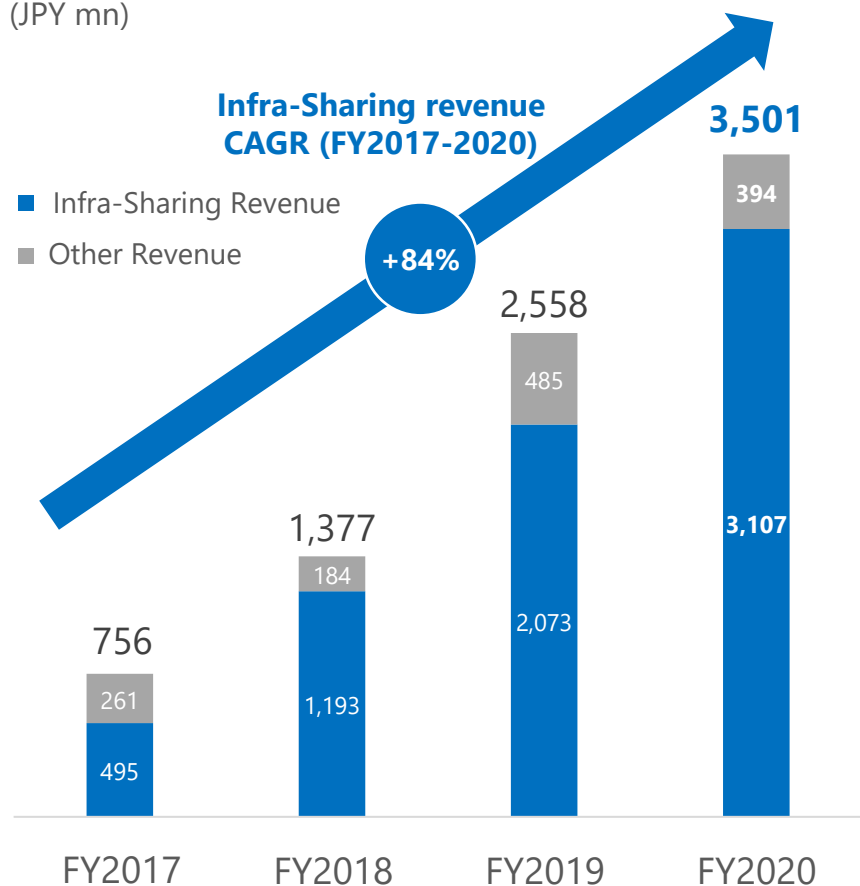
NOTE 1: The graph shows the image.

NOTE 2: This is a business model that requires capital investment when recording Infra-Sharing revenue (at the time of service launch). Such capital expenditures are distributed and expensed over the depreciation period.

## Growing Infra-Sharing revenue drives EBITDA growth

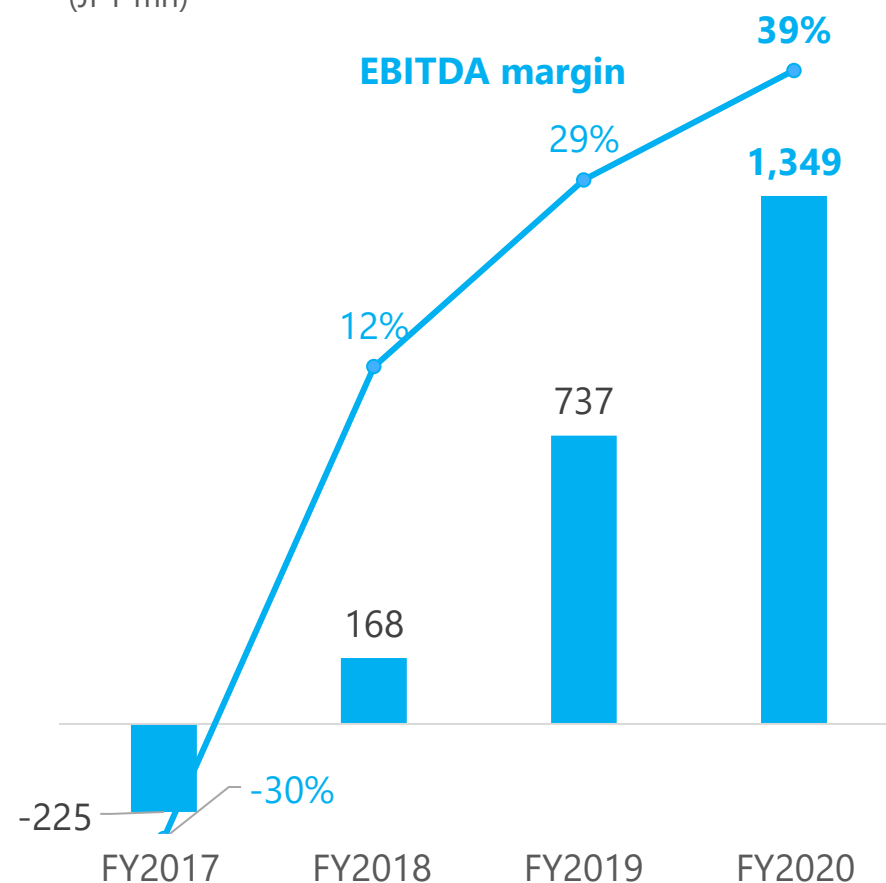
## Consolidated Revenue

(JPY mn)



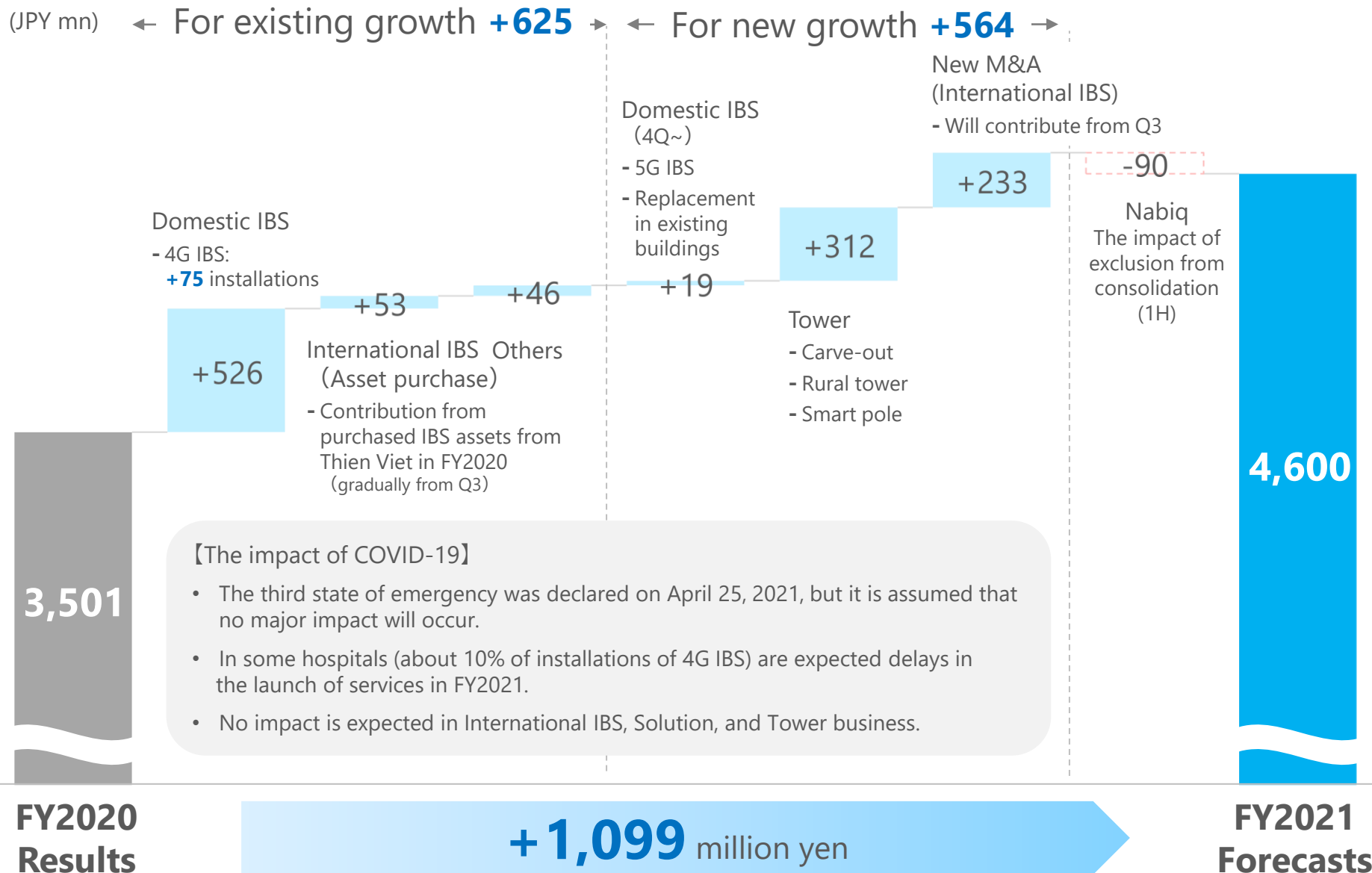
## Consolidated EBITDA \*1

(JPY mn)



\*1: EBITDA=Operating profit + depreciation + goodwill amortization + amortization of long-term prepaid expenses





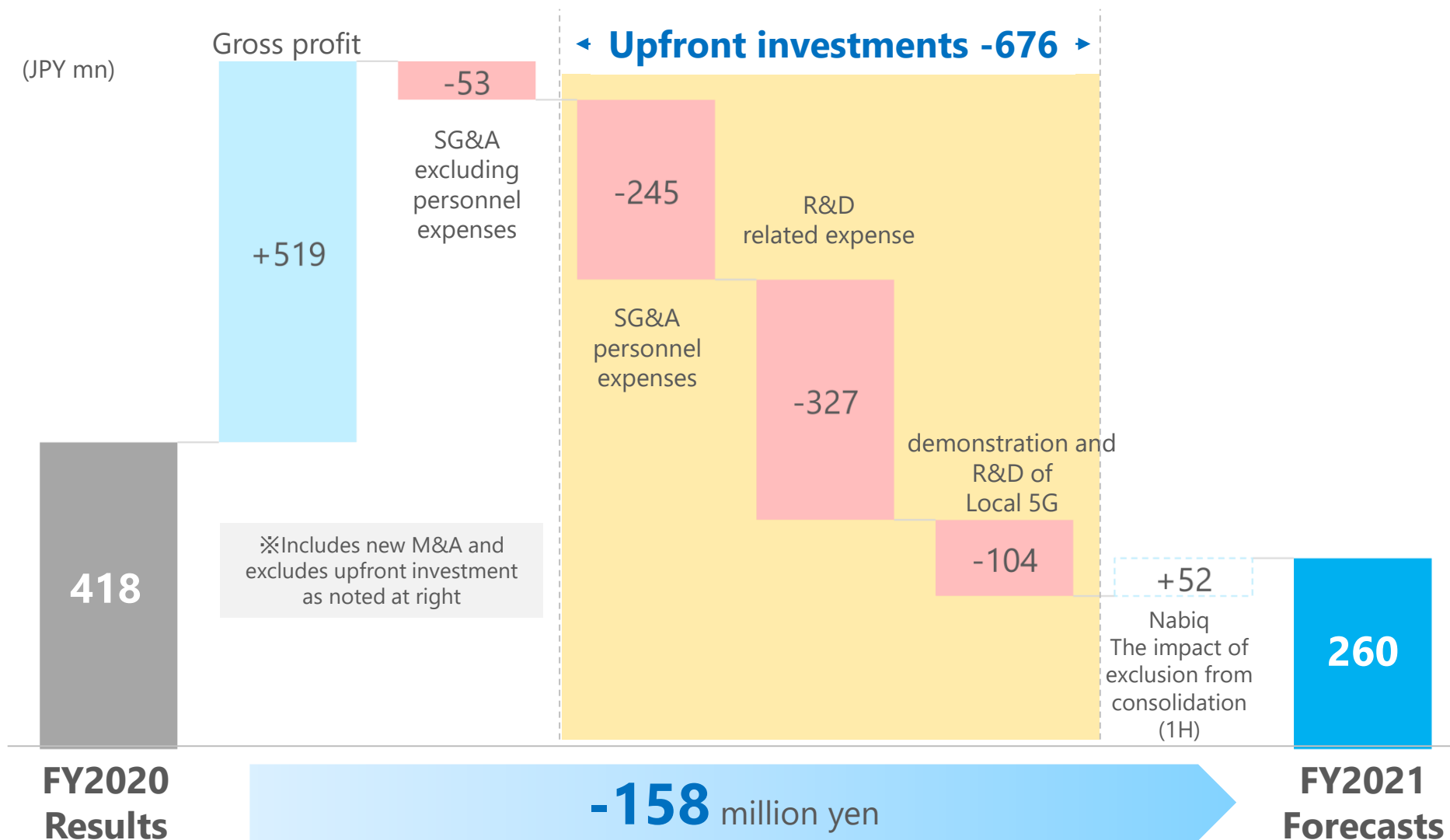
# <Reference> FY2021 Forecast:

6

## Factors Behind Changes in Consolidated Operating Profit

**JTOWER**

- Focus on upfront investments for future growth and expansion, including the structural enhancement centered on Domestic IBS and Tower, R&D expenses including the development of 5G mmWave shared radio units, and demonstration and R&D related expenses for local 5G.



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Appendix

## Board of Directors

Representative  
DirectorAtsushi  
TanakaSenior Managing  
DirectorYusuke  
KiriyaManaging  
Director  
CFORyosuke  
Nakamura

Outside Director

Naoki Ota



Outside Director

Yoshitaka  
Hiramoto

Outside Director

Yoshiaki  
Uchida

Outside Director

Mutsuko  
ObaYears of  
Telecom  
Industry  
Experience

24

18

14

22

27

40

3

Previous  
Experience**Goldman Sachs**  
(Equity analyst /  
Telecom sector)**eAccess**  
(Head of corporate  
planning div.)**eMobile**  
(CFO / Head of  
corporate planning  
div.)**M'sWorks**  
(Senior engineer)**PwC Arata**  
(Audit / Advisory)**eAccess**  
(Group head of  
business planning  
div.)**Boston  
Consulting Group**  
(Senior partner /  
Managing director)  
**Ministry of Internal  
Affairs and  
Communications**  
(Advisor to Minister)**DOCOMO CS  
Kansai**  
(GM / Network  
Construction  
Promotion dept. )**NTT(Holding  
Company)**  
(GM / Technology  
Planning dept.)**NTT DOCOMO**  
(GM / Radio Access  
Network Engineering  
dept.)**KDDI**  
(Executive Vice  
President,  
Representative  
Director, Executive  
Director of  
Technology  
Sector )**KDDI  
Engineering**  
(Chairman)**KPMG AZSA**  
(Audit / Advisory)**Mutsuko Oba  
CPA Office**  
(Founder and  
Representative)

## Advisors



Advisor  
Nobuo  
Nezu



Advisor  
Eiji  
Hagiwara

Years of  
Telecom  
Industry  
Experience

53

47

Previous  
Experience

**KDDI**

(Managing executive officer /  
Full time auditor / Advisor)

**NTT DOCOMO**

(Director)

**Panasonic Mobile  
Communications**

(Senior Managing Director)

**SAMJI  
ELECTRONICS**

(Advisor)

# Important Indicators to Improve Enterprise Value and Upside Potentials

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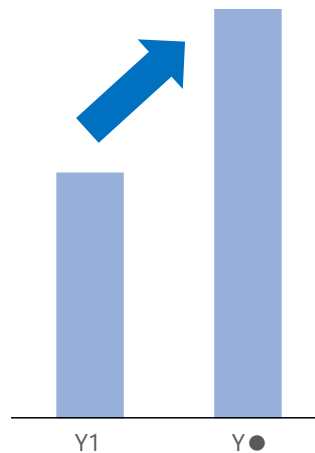
JTOWER

## Number of Installations



- ✓ 4G IBS in existing property and new introduction of 5G IBS
- ✓ Strengthen business foundation through alliances

## Tenancy Ratio



- ✓ Increase in the entry of mobile network operators such as further participation on existing properties

## Unit Price



- ✓ Introduction of shared equipment for 5G to the existing and new properties
- ✓ Additional value for IBS Business – Provide Wi-Fi solutions
- ✓ Provide local 5G-related solutions

Note: Graphs are for illustrative purposes only

## Advancement to be Enabled by 5G

4G (LTE)

5G

100 Mbps

High speed/  
volume

> 10 Gbps\*2

Baud rate will be more than 100 times faster

0.01 sec

Strong reliability/  
low latency

≤ 0.001 sec

Delay time will be shortened by up to one tenth

10,000  
devices/km<sup>2</sup>

Massive  
connectivity

1 million  
devices/km<sup>2</sup>

Concurrent device connection limit will increase by more than 100 times

**Demand for infrastructure will increase due to the significant impact of 5G related services**

## Estimated Market Size of the Radio Industries in the 5G Era

(JPY tn)

120

100

80

60

40

20

0

2015

2020

2030

2040

Radio-related industries

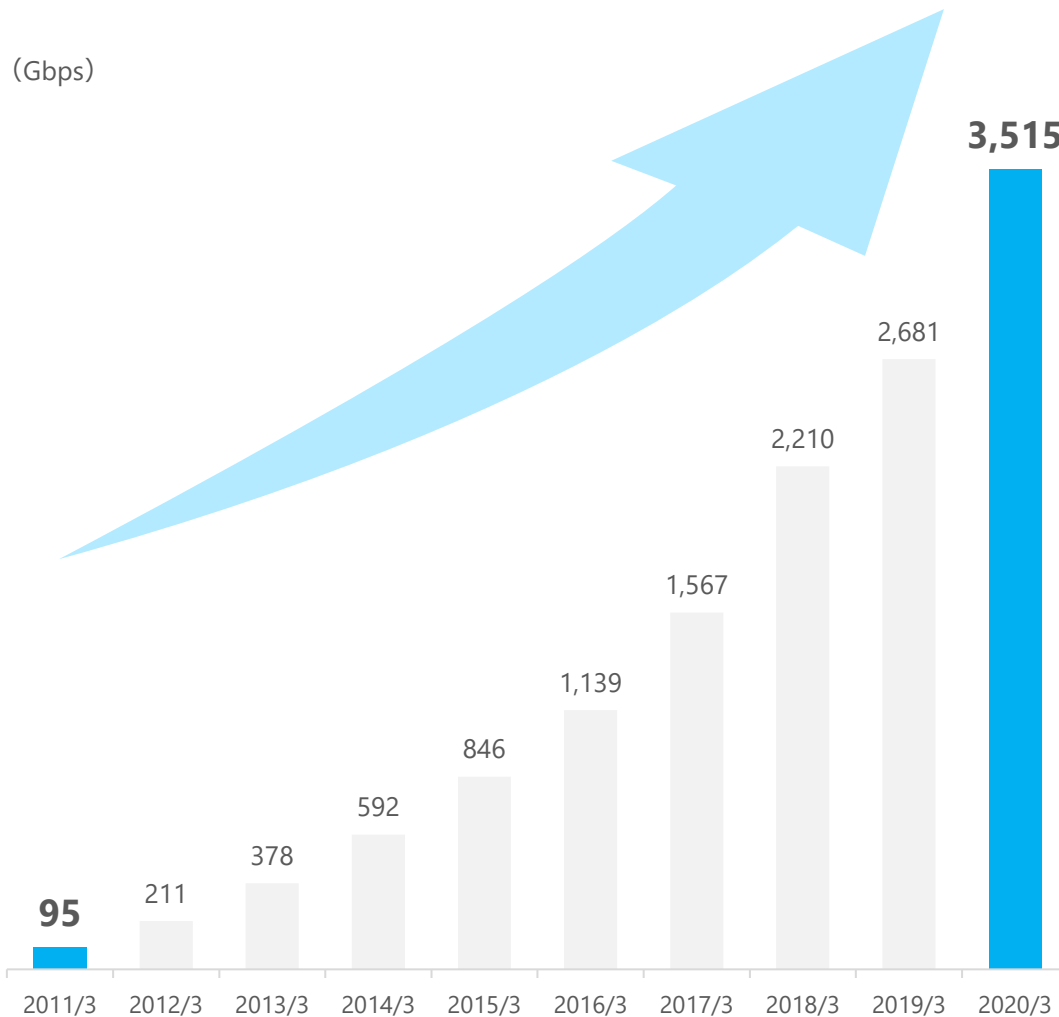
Radio-usage industries

Automotive infrastructure  
Manufacturing (robot),  
Distribution,  
Info-communications  
(excl. radio),  
etc.

Mobile communication,  
IoT infrastructure  
Wireless content,  
etc.

Note: "Radio-related industries" is defined as industries in which companies use radio in their main business  
"Radio-usage industries" is defined as industries in which companies use radio to enhance or streamline their services (excl. radio-related industries)  
Source: Mitsubishi Research Institute

\*1: As of September 30, 2018  
\*2: "Gbps" is defined as Gigabits per second. 1Gbps is equal to 1,000,000,000 bits per second  
Source: Ministry of Internal Affairs and Communications, Softbank



over the past 10 years

Annual increase

about 50%

(approx. 37 times)

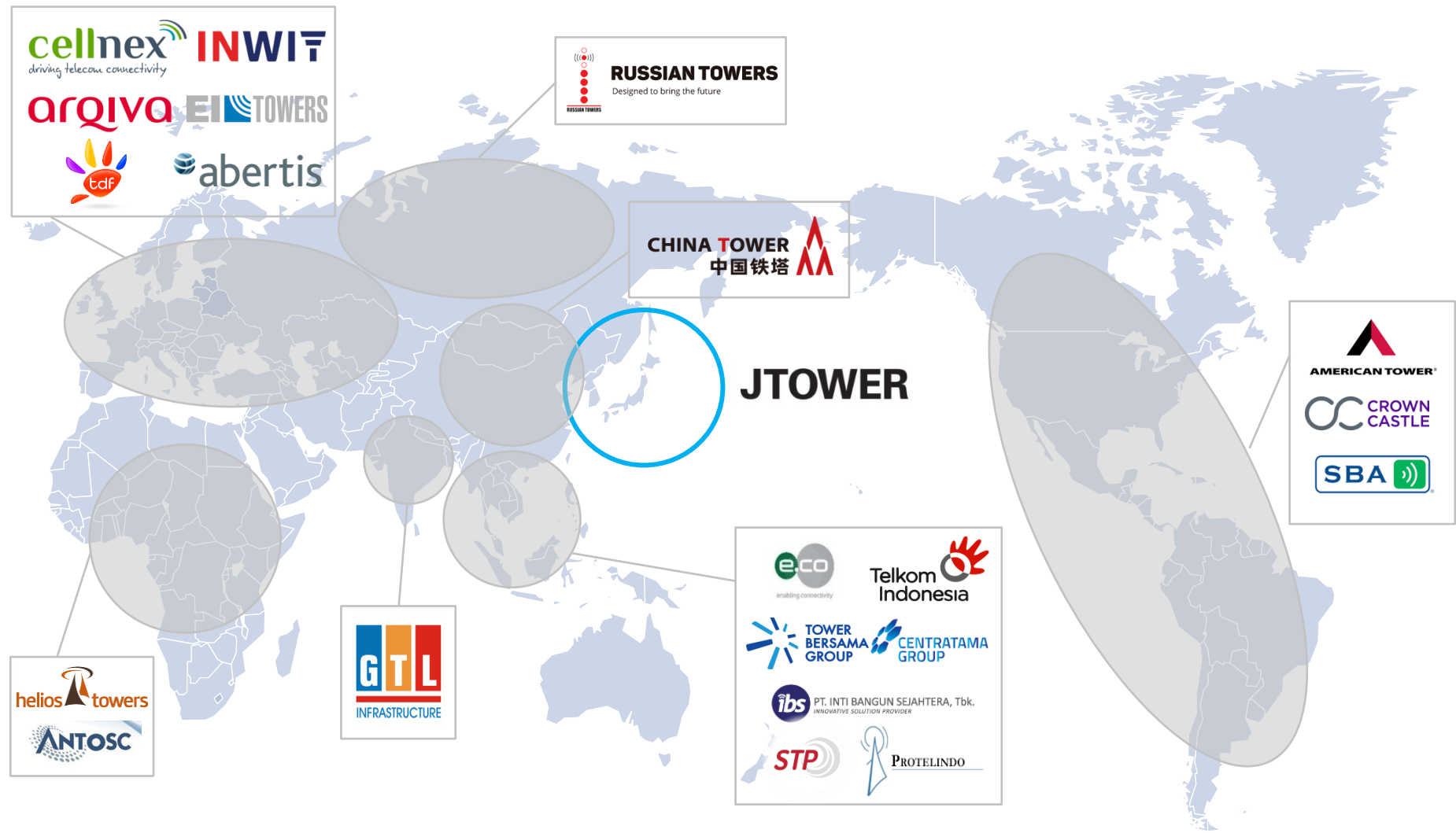
### Future Potential

- ✓ Accelerate further growth in traffic through 5G
- ✓ Further use of 5G frequency band

Source: Information and Communications Statistics Database of Ministry of Internal Affairs and Communications

\*1: The average of monthly traffic (download)





Notes: Based on the announcement regarding main business operating area by each global tower company

Source: Company Materials

		Developer	Business model	Organization /Company
Type1	Network by each MNO	<ul style="list-style-type: none"> <li>MNO or a division of MNO</li> </ul>	<ul style="list-style-type: none"> <li>Internal use</li> </ul>	MNO
Type2	Network by public interest incorporated association	<ul style="list-style-type: none"> <li>Public interest incorporated association with the MIC and MLIT as the competent government agency</li> </ul>	<ul style="list-style-type: none"> <li>Targeting facility sharing in highly public areas such as subways and tunnels</li> </ul>	JMCIA
Type3	Network sharing among MNO (based on Guidelines on the use of poles, pipelines by public utilities)	<ul style="list-style-type: none"> <li>MNO or a division of MNO</li> </ul>	<ul style="list-style-type: none"> <li>Network sharing among some MNO</li> </ul>	MNO
Type4	Infra-Sharing by independent Infra-Sharing service provider	<ul style="list-style-type: none"> <li>Independent Infra-Sharing service provider</li> </ul>	<ul style="list-style-type: none"> <li>Multiple MNO are the target of tenants</li> <li><b><u>Highly efficient in use</u></b></li> </ul>	<b>JTOWER</b>

- In order to rationally and efficiently promote network development in Japanese telecommunications industry as a whole, demand for Infra-Sharing has been increasing.
- Currently, competition for Infra-Sharing services by independent operators is limited.

	Item	Major Risk	Possibility/ Timing	Impact	Countermeasures against risks
Business Environment	Trend of competitor	Possibility of loss of competitive edge, if competitors with sales capabilities, price competitiveness, quality and brand value that exceed our group enter the market.	Medium/ Medium-to long-term	High	In addition to improve technology and services, strengthen our position as a Infra-Sharing provider by strengthening relationships with MNO and real estate developers.
	Technological Innovation	The potential loss of demand from the market if new technological innovations or market trends occur and our group's current businesses do not fit the demand and we are unable to deploy technologies and services that are in line with circumstances.	Low/ Medium-to Long-Term	High	In addition to strengthen the in-house technology team, expand information sharing through capital and business alliances with MNO, including information for technical requirements and base station development plan.
	New Businesses	Possibility that results will not be achieved as originally planned, due to changes in the business environment and other factors in the development of new businesses.	Medium/ Medium-to long-term	Medium	Realize new business plans by strengthening proposal and relationships with MNO, real estate developers, and local governments.
	Dependence on certain suppliers	Significant changes in the business activities or bankruptcies of large suppliers may affect the provision of our group's services.	Low/ Medium-to Long-Term	Medium	Promote multi-vendor and decentralized procurement.
	Overseas Business	Possibility that country risks, such as the inability to conduct business may materialize due to the impact of political, economic and social conditions in countries with overseas operations.	Medium/ Unknown	Medium	Promote M&A of existing Infra-Sharing companies and equity participation with business partners in markets with a high growth potential.
	COVID-19	The launch of services may be delayed in the event of disruptions in sales activities and construction works due to the spread of infections such as COVID-19.	Low/ Unknown	Medium	Establish flexible response flow, such as online meetings and remote work.
Business Structure	Recruit and develop excellent human resources	If we are unable to recruit and develop enough human resources, or if the loss of human resources progresses, our business development and operating results may be affected.	Low/ Medium-to Long-Term	High	Strengthen proactive recruitment activities and initiatives to improve employee satisfaction.
	Reliance on an individual person	If our representative director, founder and major shareholder Atsushi Tanaka becomes difficult to continue the operations in our group, our business performance may be affected.	Low/ Unknown	Medium	Information sharing among Board of Directors and strengthen management organization.

※ Within the contents of Business and Other Risks section of the Annual Securities Report, major risks that affect the realization of growth and the execution of business plans are extracted. For other risks, please refer to Business and Other Risks in the Annual Securities Report.

(JPY mn)	FY2017	FY2018	FY2019	FY2020
Revenue	756	1,377	2,558	3,501
Domestic IBS Business	510	863	1,783	2,784
International IBS Business	244	455	435	496
Solution Business	1	59	339	221
<i>Revenue Growth</i>	356%	82.1%	86.6%	36.9%
Cost of Goods Sold	587	730	1,278	1,685
Gross Profit	169	647	1,279	1,816
<i>Gross Profit Margin</i>	22.4%	47.0%	50.0%	51.9%
Selling, General and Administrative Expenses	643	817	1,209	1,397
<i>SG&amp;A Ratio</i>	85.1%	59.3%	47.3%	39.9%
Operating Profit	-474	-169	69	418
<i>Operating Profit Margin</i>	-	-	2.7%	11.9%
EBITDA* <sup>1</sup>	-225	168	737	1,349
<i>EBITDA Margin</i>	-	12.2%	28.8%	38.5%
Ordinary Profit	-479	-166	5	178
Net Income Before Income Taxes	-560	-166	-1	214
Net Income Attributable to Non-Controlling Interests	1	15	2	-
Net Income Attributable to Owners of the Parent	-577	-214	-13	506
Consolidated Number of Employees* <sup>2</sup>	72	116	138	136

\*1: EBITDA=Operating profit + depreciation + goodwill amortization + amortization of long-term prepaid expenses

\*2: Number of employees includes the average number of temporary workers (contract workers and workers from staffing agencies) in the past year.

(JPY mn)

	FY2017	FY2018	FY2019	FY2020
<b>Current Assets</b>				
Cash and Cash Equivalents	2,452	2,329	7,188	8,398
Notes and Accounts Receivable	195	379	482	397
<b>Total Current Assets</b>	<b>2,781</b>	<b>2,983</b>	<b>8,032</b>	<b>8,955</b>
<b>Non-current Assets</b>				
Tangible Fixed Assets	1,500	3,631	5,860	6,968
Goodwill	460	638	579	329
<b>Total Non-current Assets</b>	<b>1,994</b>	<b>4,412</b>	<b>6,614</b>	<b>7,790</b>
<b>Total Assets</b>	<b>4,776</b>	<b>7,396</b>	<b>14,646</b>	<b>16,745</b>

**Financial Indicators**

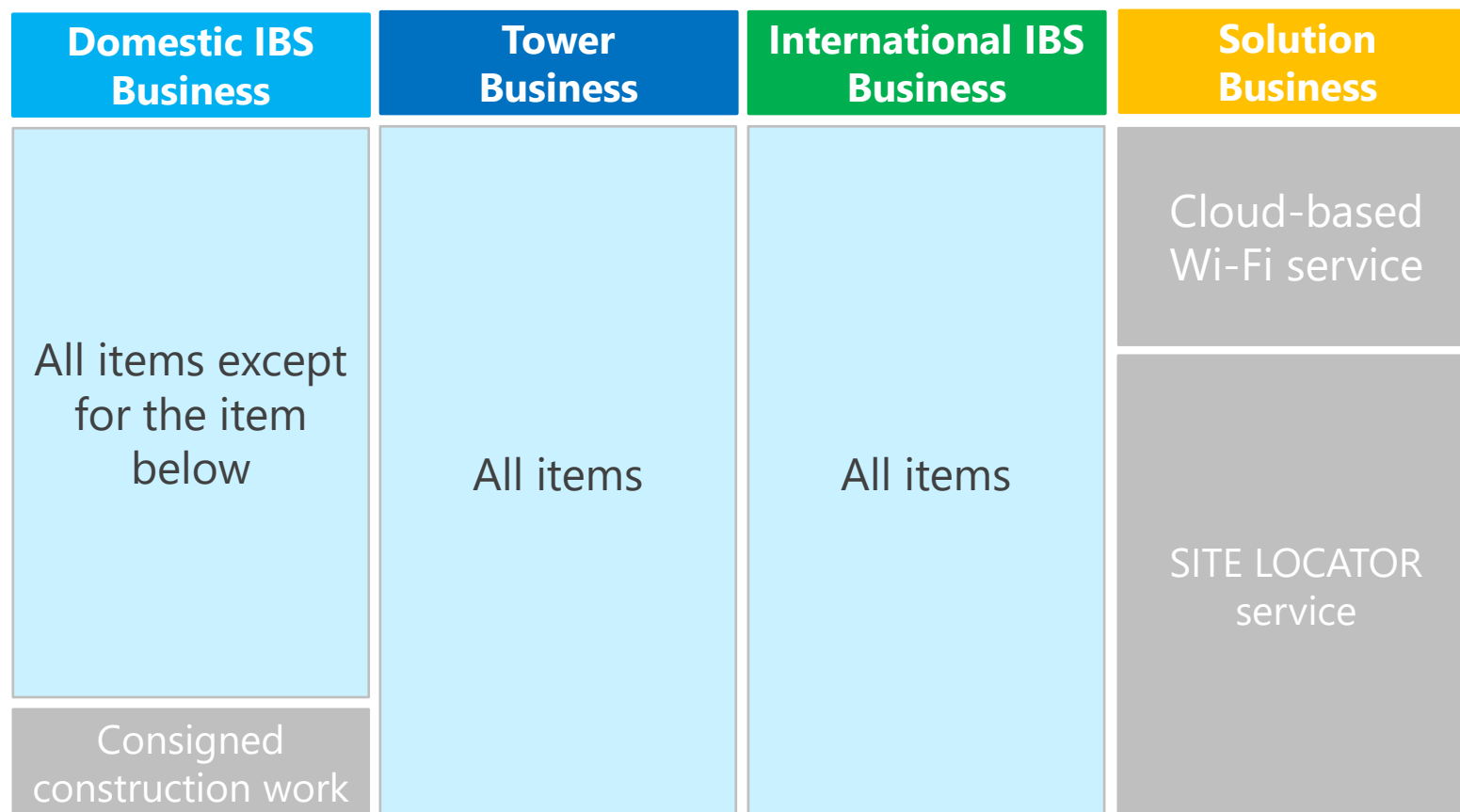
Debt	637	818	1,083	1,195
Net Debt	-1,815	-1,510	-6,104	-7,202
Capital Expenditure	913	2,441	2,787	2,098
<i>Equity Ratio</i>	<i>24.1%</i>	<i>21.0%</i>	<i>45.3%</i>	<i>42.6%</i>

	FY2017	FY2018	FY2019	FY2020
<b>Current Liabilities</b>				
Accounts payable - trade	68	172	193	129
Shor-term borrowings	15	12	45	210
Accounts payable - other	429	1,019	1,204	851
Unearned revenue (Contract liability*1)	318	737	1,525	7,156
<b>Total Current Liabilities</b>	<b>986</b>	<b>2,143</b>	<b>3,288</b>	<b>8,742</b>
<b>Non-current Liabilities</b>				
Long-term borrowings	150	300	300	210
Long-term unearned revenue	1,024	2,042	3,869	-
<b>Total Non-current Liabilities</b>	<b>1,580</b>	<b>2,744</b>	<b>4,723</b>	<b>865</b>
<b>Total Liabilities</b>	<b>2,566</b>	<b>4,887</b>	<b>8,011</b>	<b>9,608</b>
Share capital	1,049	1,399	4,272	4,300
Capital surplus	1,341	1,658	2,433	2,462
<b>Total Net Assets</b>	<b>2,209</b>	<b>2,508</b>	<b>6,635</b>	<b>7,137</b>
<b>Total Liabilities and Net Assets</b>	<b>4,776</b>	<b>7,396</b>	<b>14,646</b>	<b>16,745</b>

\*1: Under the revenue recognition standard, which was adopted in April 2021, the balances of Unearned Revenue (presented in Current Liabilities until FY2020) and Long-Term Unearned Revenue (presented in Non-Current Liabilities until FY2020) arising from contracts with customers are included in contract liability.  
(Changed from FY2020 results)

(JPY mn)	FY2017	FY2018	FY2019	FY2020
Cash Flows from Operating Activities	888	1,290	3,165	3,311
Change in Unearned revenue	1,002	1,437	2,565	1,881
Depreciation	233	300	612	887
Amortization of Goodwill	15	36	53	41
Cash Flows from Investing Activities	-1,900	-2,110	-2,699	-2,470
Purchase of investment securities	-	-91	-	-
Purchase of property, plant and equipment	-800	-1,775	-2,611	-2,401
Purchase of shares of subsidiaries resulting in change in scope of consolidation	-1,067	-99	-	-
Free Cash Flow	-1,011	-820	466	840
Cash Flows from Financing Activities	2,603	570	4,385	418
Net Increase (Decrease) in Short-term Borrowings	14	-2	32	-45
Proceeds from issuance of shares	1,095	697	5,725	56
Proceeds from Share Issuance to Non-controlling Shareholders	1,060	-	-	99
Proceeds from sale and leaseback transactions	488	145	392	303
Payments from changes in ownership interests in subsidiaries that do not result in change in scope of consolidation	-	-158	-1,604	-
Effect of exchange rate change on cash and cash equivalents	-27	-4	-0	-1
Net Increase (Decrease) in Cash and Cash Equivalents	1,563	-254	4,851	1,256
Net Increase (Decrease) in Cash and Cash Equivalents Due to Changes in Scope of Consolidation	-	-	-6	-117
Cash and Cash Equivalents at Beginning of Period	697	2,261	2,006	6,851
Cash and Cash Equivalents at End of Period (Q4)	2,261	2,006	6,851	7,990

■ Infra-Sharing Revenue    ■ Other Revenue



\*1: Breakdown as of September 30, 2021  
(Nabiq has been removed from the above categories due to deconsolidation from Q3 FY2020)

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The update of this material is scheduled to be disclosed around May after the full year results announcement.

Infra-Sharing Services from Japan Lead the World

**JTOWER**