



# Gemtek Technology Investor Conference 2021



# Agenda

1

## **Opening**

Speaker - Chairman Howard Chen

2

## **Operating Report**

Speaker – CEO James Lee

3

## **Market Trend**

Speaker - Exec. Board of Director & Spokesman

4

## **Q & A**

5

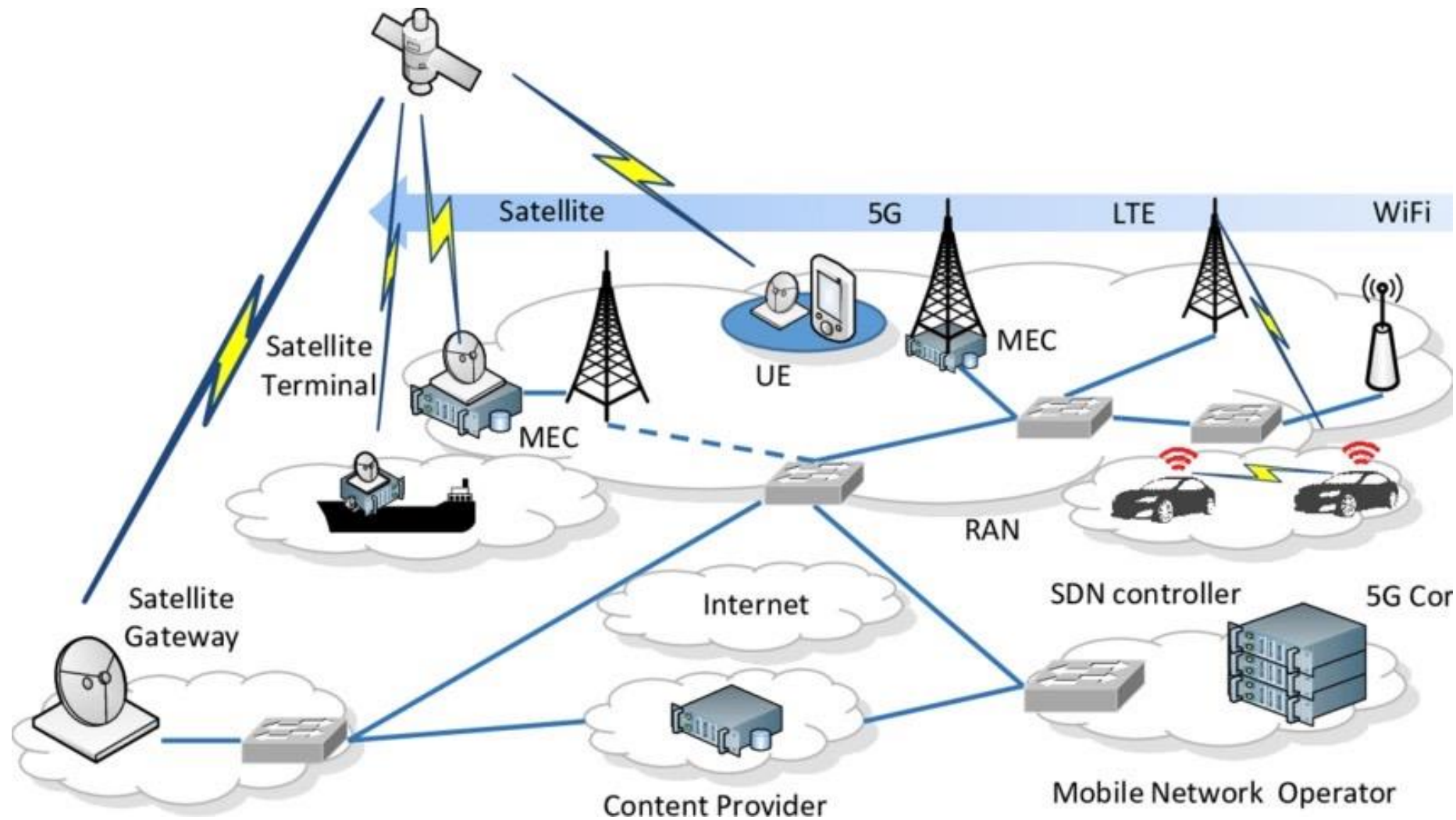
## **Live Demo and Refreshment Time**

The background of the image is a dark, deep blue space. In the center, a portion of the Earth is visible, showing the Americas and parts of Europe and Africa. Overlaid on the Earth and extending into the surrounding space is a complex, glowing network of blue lines and dots, representing a global telecommunications or data network. The lines connect numerous nodes, some of which are highlighted with small, bright blue or white lights. The overall effect is one of high-tech connectivity and global reach.

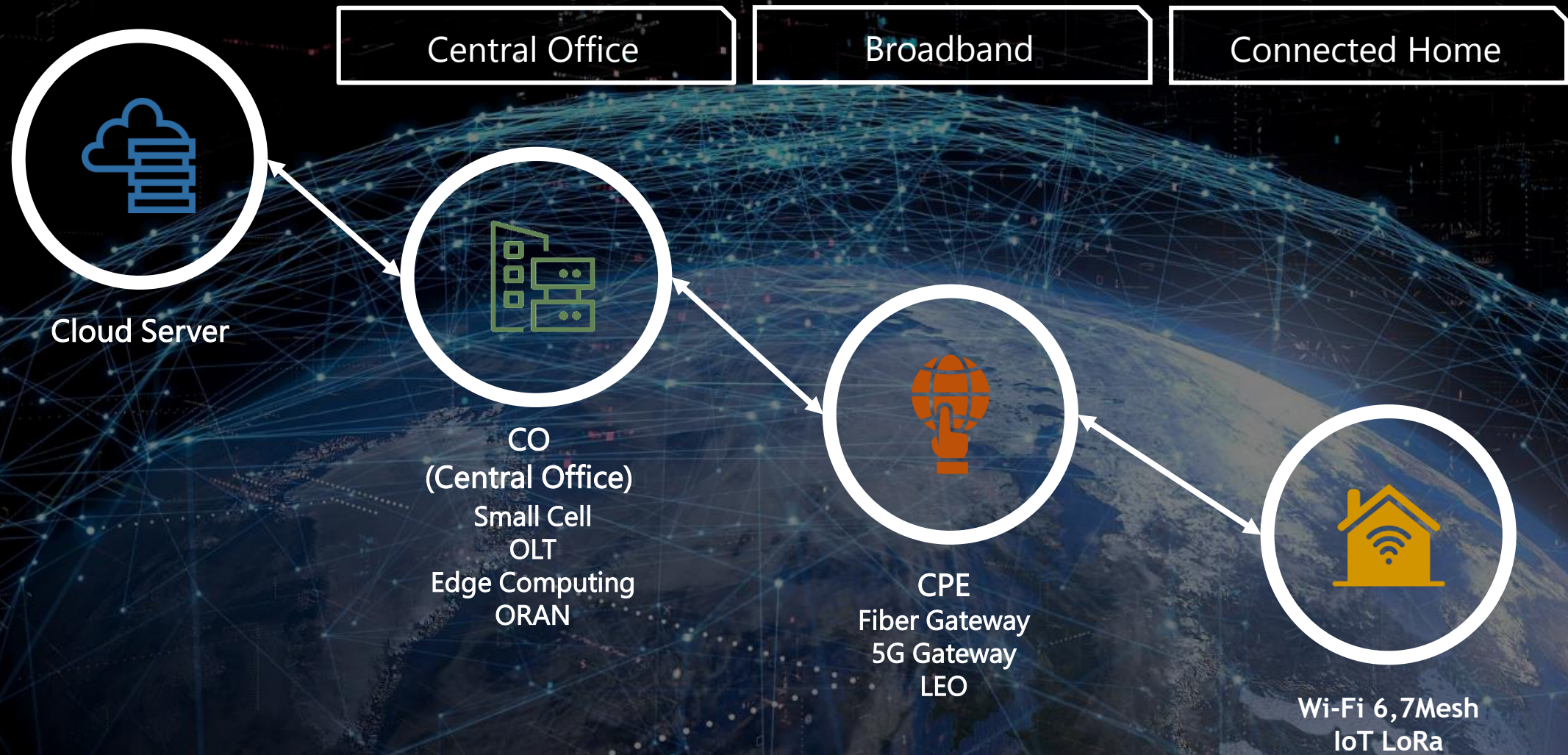
# A New Era of Telecommunication



# A New Era of Telecommunication



# Business Opportunity for Gemtek





A photograph of Xi Jinping and Joe Biden seated at a table during a press conference. Xi Jinping is on the left, wearing a dark suit, a red tie, and a headset with a microphone. Joe Biden is on the right, wearing a dark suit, a white shirt, and a striped tie. They are both looking towards the right. In the background, the United States flag is on the left and the Mexican flag is on the right. The text "US – China Confrontation" is overlaid in large white letters across the center of the image.

# US – China Confrontation

Trade

Technology

Financial

## US-China confrontation accelerate shift in global supply chains



# US government is cracking down on Chinese telecom and tech companies

- **Trump's Executive order**

Cut the supply chain of Huawei.  
(ex TSMC 、 Samsung 、 Qualcomm, etc.)

- **Clean network program**

Aligned with other countries to boycott HW and SW from China.

- **The Secure Equipment Act**

Reduce the presence of Huawei and ZTE equipment in U.S communications networks.







# Challenge & Opportunity

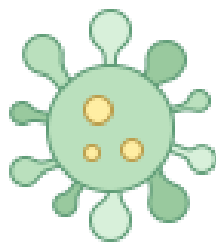
# Challenge



Tariff



Worsen  
Condition of  
China  
Manufacturing



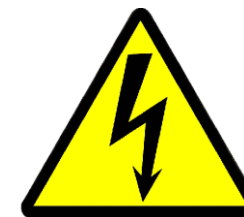
COVID 19



Currency Risk



Material  
Shortage



Electricity  
Restriction  
In China



# Opportunity – Clean Network Program

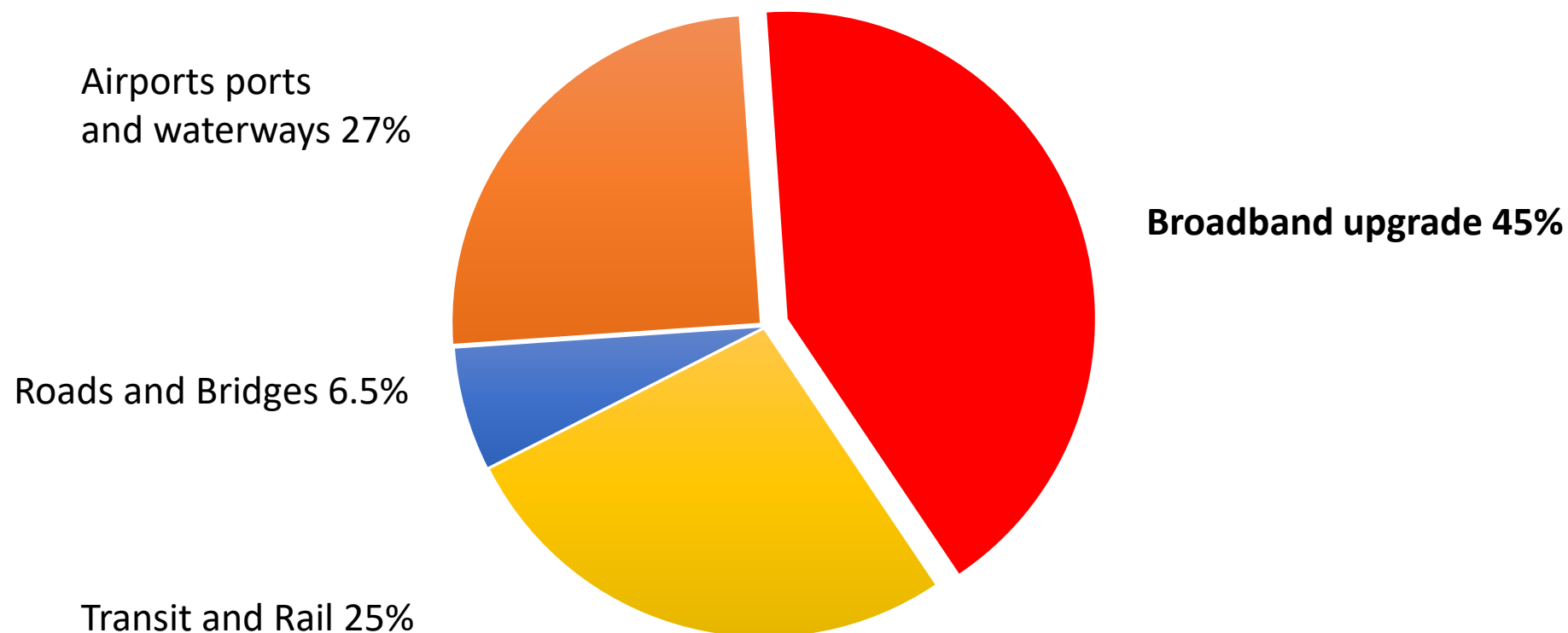
## SELECT 5G CLEAN TELECOMMUNICATIONS COMPANIES



- Clean Carriers
- Clean App Stores
- Clean Apps (Exclude TikTok, WeChat, etc.)
- Clean Cloud
- Clean Cable (Exclude Hong Kong. Connect Taiwan and the Philippines)

## Opportunity – Biden government's \$1.2 trillion USD Infrastructure bill

**\$65 billion USD will be used to improve States's internet equipment**

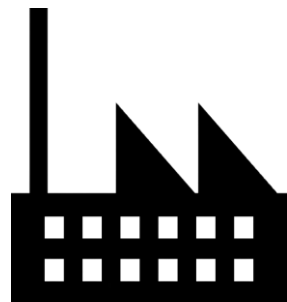




## Opportunity - Transfer Order Effect



The Orders place in China product line



Orders from Big EMS company

Transfer



Gemtek Can Do

- Shipment / Manufacture outside of China.
- Highly customize production

## Opportunity - Declining competitiveness of China



Then - China is a International Factory

- Producing cost in China has been rising
- Automated production become mainstream
- Pandemic & Political issue increase uncertainty
- Electricity restriction order



Now – Factories located globally

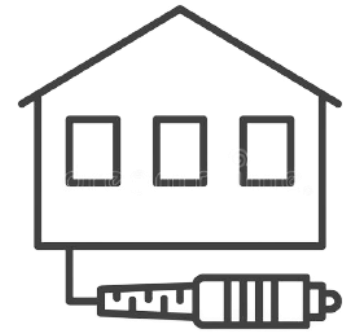




## Opportunity – New Technology



**LEO**



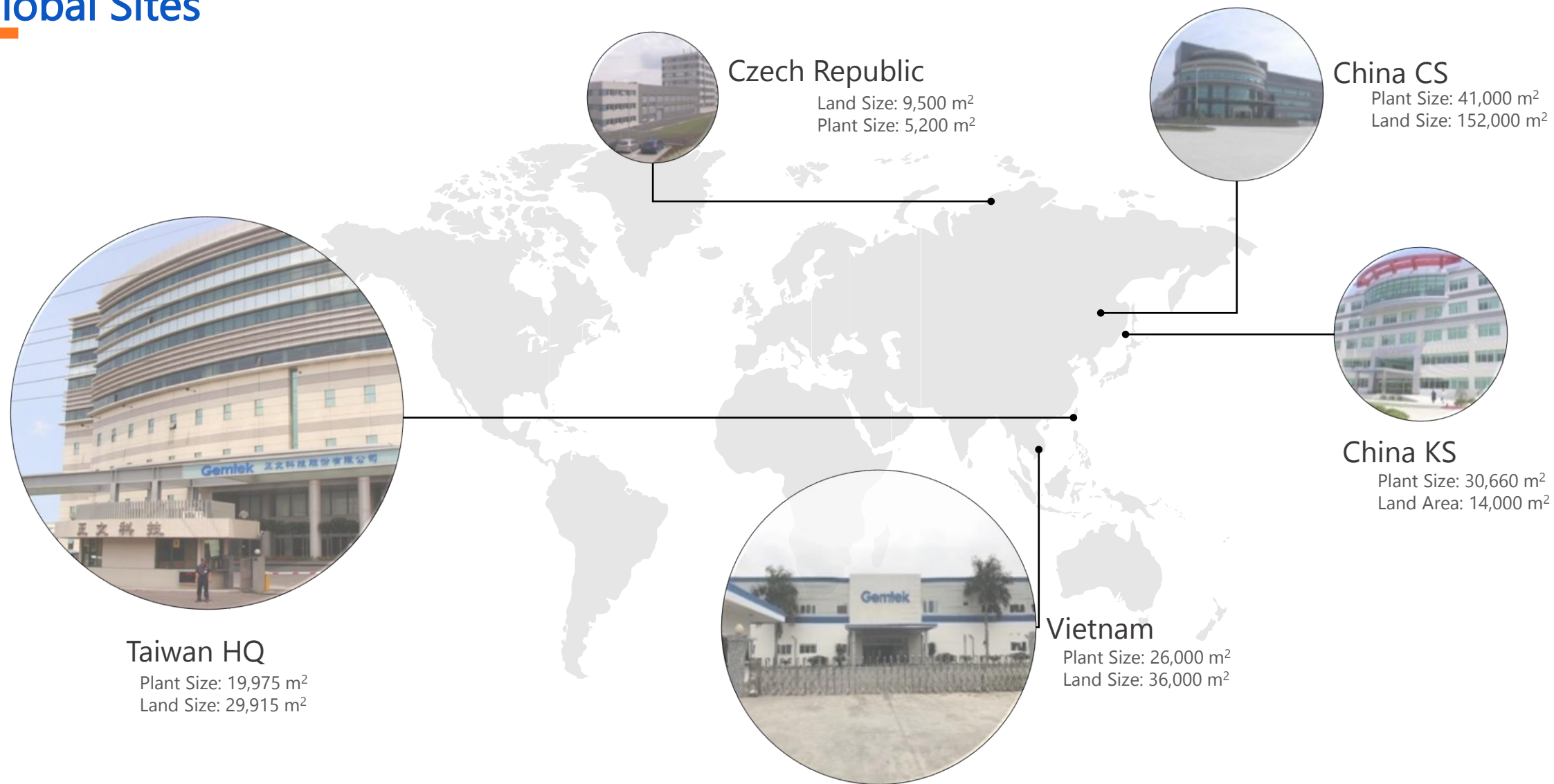
**Fiber**



# Operating Report

CEO James Lee

# Global Sites





# Manufacturing Capacity



Hsinchu, Taiwan



Ha Nam, Vietnam



Kunshan & Changshu, China

Capacity  
(by product)

≈ 12%

≈ 38%

≈ 50%

Capacity  
(by revenue)

≈ 5%

≈ 45%

≈ 50%

Product

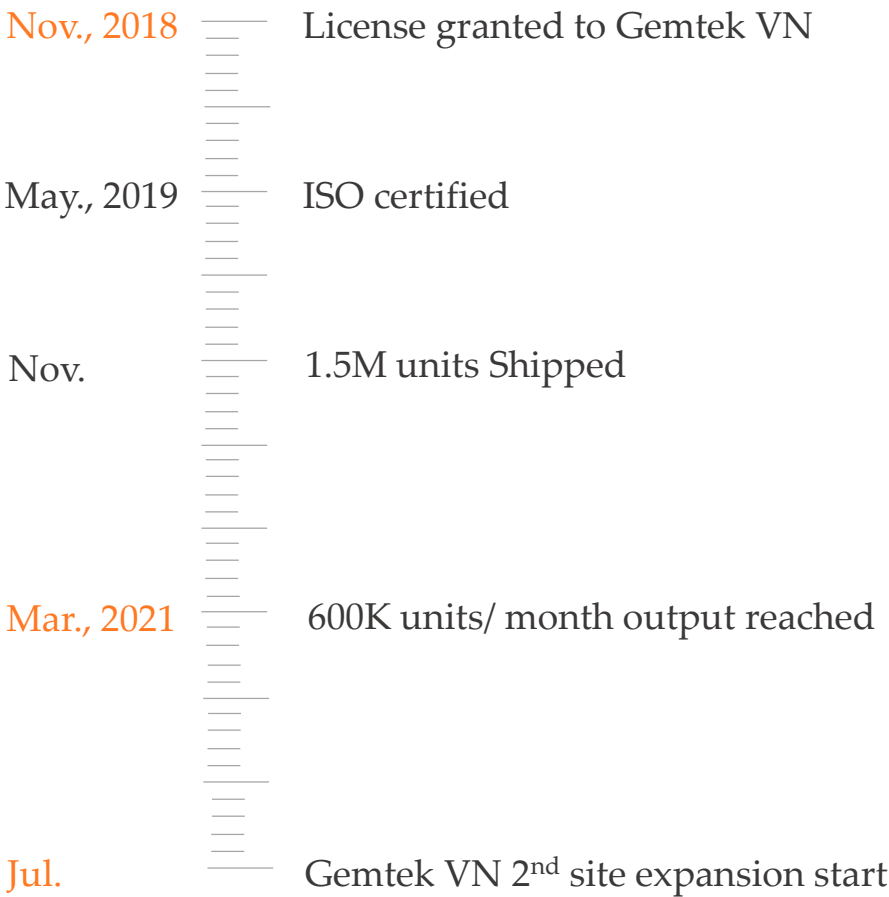
Pilot Run

Wi-Fi Product, LTE, Gateway,  
GPON, Module, Sip Module

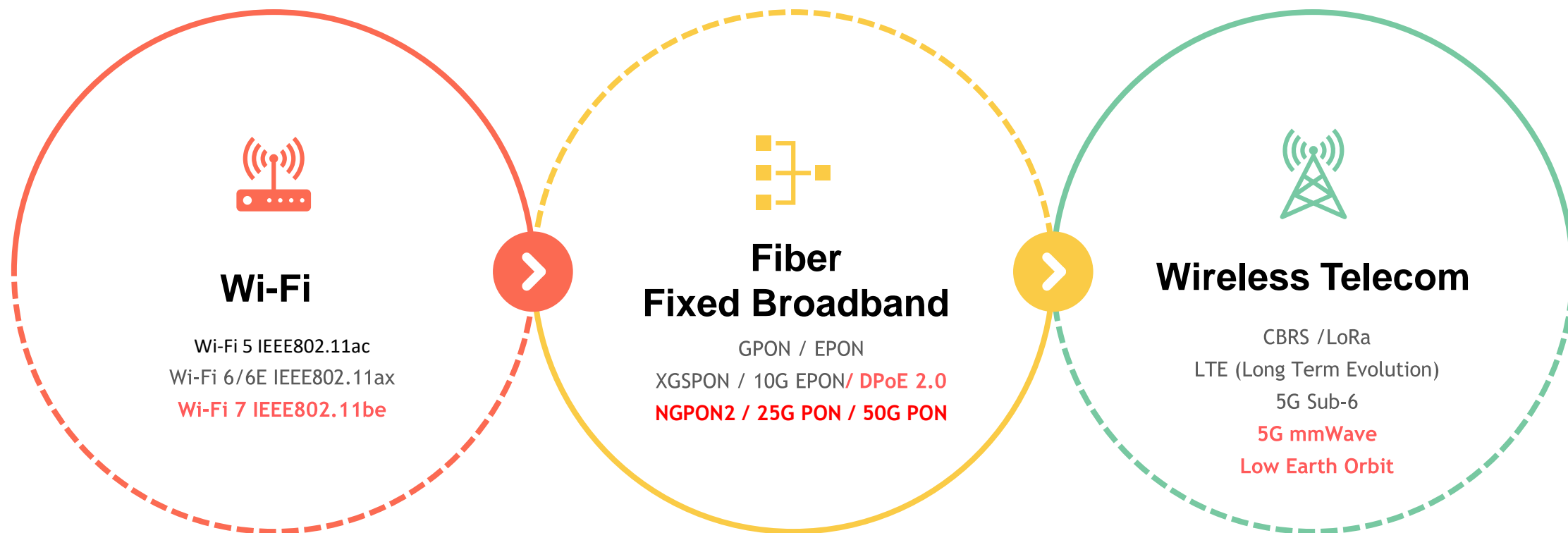
Wi-Fi Product, LTE, Gateway,  
GPON, Module, Sip Module



Đồng Văn II Industrial Park  
Bach Thuong Commune, Duy Tien District,  
Ha Nam Province, Vietnam



# Key Technology Focus



# RF Band Experience

Application \ Band	Band							
	Low (450MHz - 1GHz)	Mid (1 - 2.1GHz)	High (2.3 - 2.7GHz)	Very High (3.3 - 7GHz)	n258 (26GHz)	n257& 261 (28GHz)	n260 (39GHz)	ADAS (77 - 81GHz)
Portable	✓ LoRa LTE	✓ LTE	✓ LTE					
Indoor	✓ LoRa LTE / 5G Sub-6	✓ LTE / 5G Sub-6	✓ Wi-Fi LTE / 5G Sub-6	✓ CBRS Wi-Fi LTE / 5G Sub-6				
Outdoor	✓ LoRa LTE / 5G Sub-6	✓ LTE / 5G Sub-6	✓ Wi-Fi LTE / 5G Sub-6	✓ Wi-Fi LTE / 5G Sub-6	✓ 5G mmWave	✓ LEO 5G mmWave	✓ 5G mmWave	✓ Automotive

Gemtek expertise



# Top US broadband providers surpass 100 Million subscribers

Wireline Phone Companies	Subscribers at end of 2Q 2021	Net Adds in 2Q 2021
AT&T	15,481,000	46,000
Verizon	7,263,000	70,000
CenturyLink/Lumen	4,666,000	-62,000
Frontier <sup>^</sup>	2,798,000	-22,000
Windstream	1,131,800	9,500
TDS	513,600	11,900
Cincinnati Bell	437,800	200
Consolidated <sup>^^</sup>	393,480	-4,522
<b>Total Top Telco</b>	<b>32,684,680</b>	<b>49,078</b>

<sup>^</sup> In 2Q 2021, Frontier no longer included wholesale subscribers

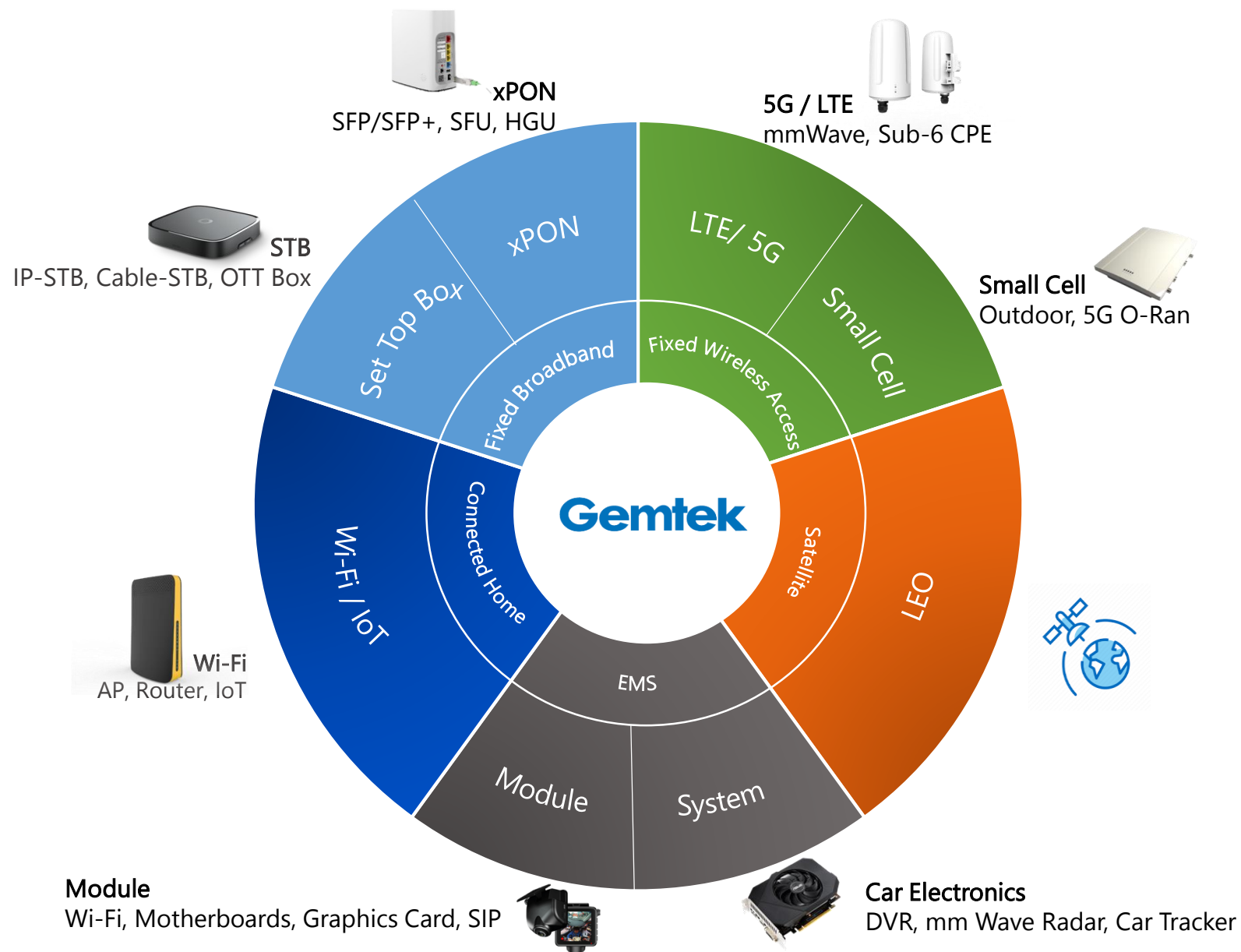
<sup>^^</sup> In 2Q 2021, Consolidated began reporting only residential subscribers

Cable Companies	Subscribers at end of 2Q 2021	Net Adds in 2Q 2021
Comcast	31,388,000	354,000
Charter	29,634,000	400,000
Cox <sup>*</sup>	5,485,000	50,000
Altice <sup>**</sup>	4,401,300	200
Mediacom	1,468,000	14,000
Cable One <sup>**</sup>	1,017,000	14,000
WOW (WideOpenWest)	826,300	3,400
Atlantic Broadband	517,851	6,847
<b>Total Top Cable</b>	<b>74,737,451</b>	<b>842,447</b>

<sup>\*</sup> LRG (Leichtman Research Group) estimate

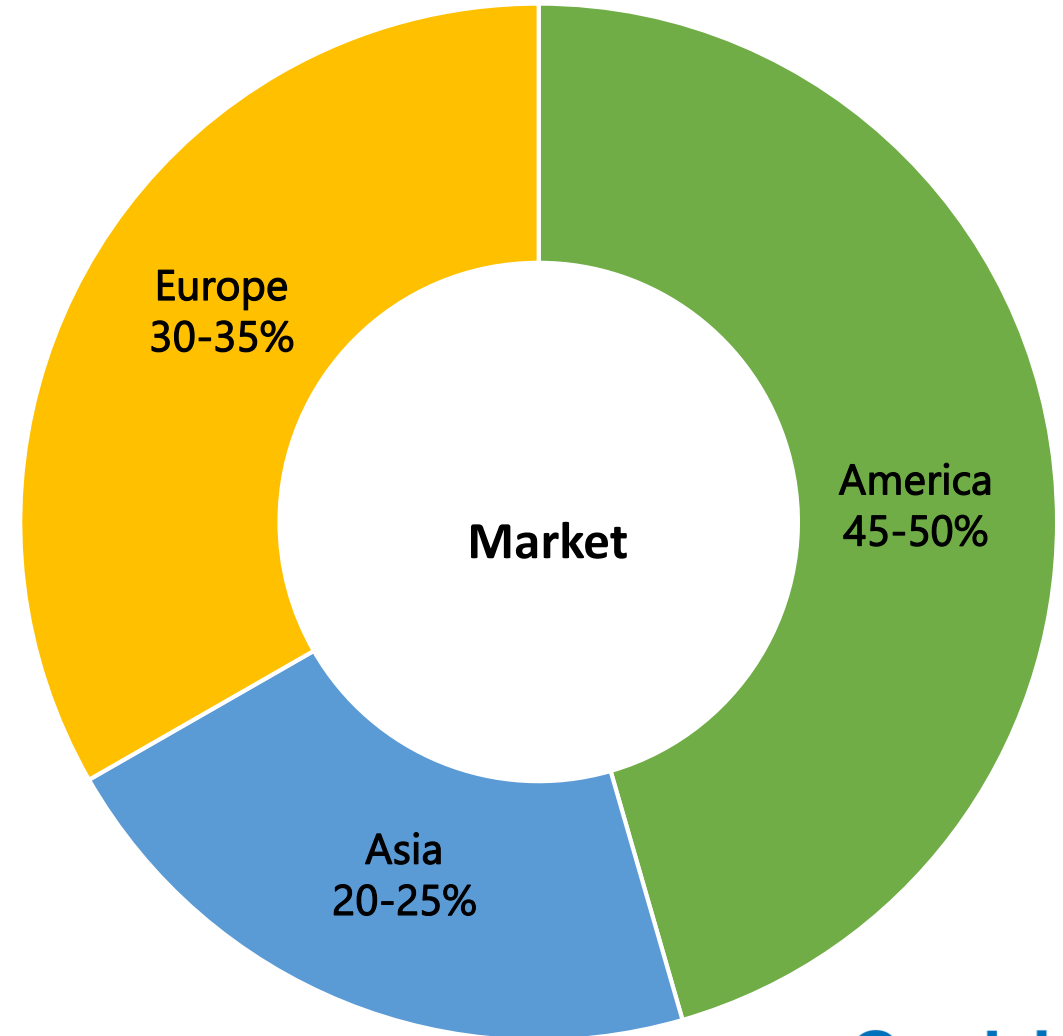
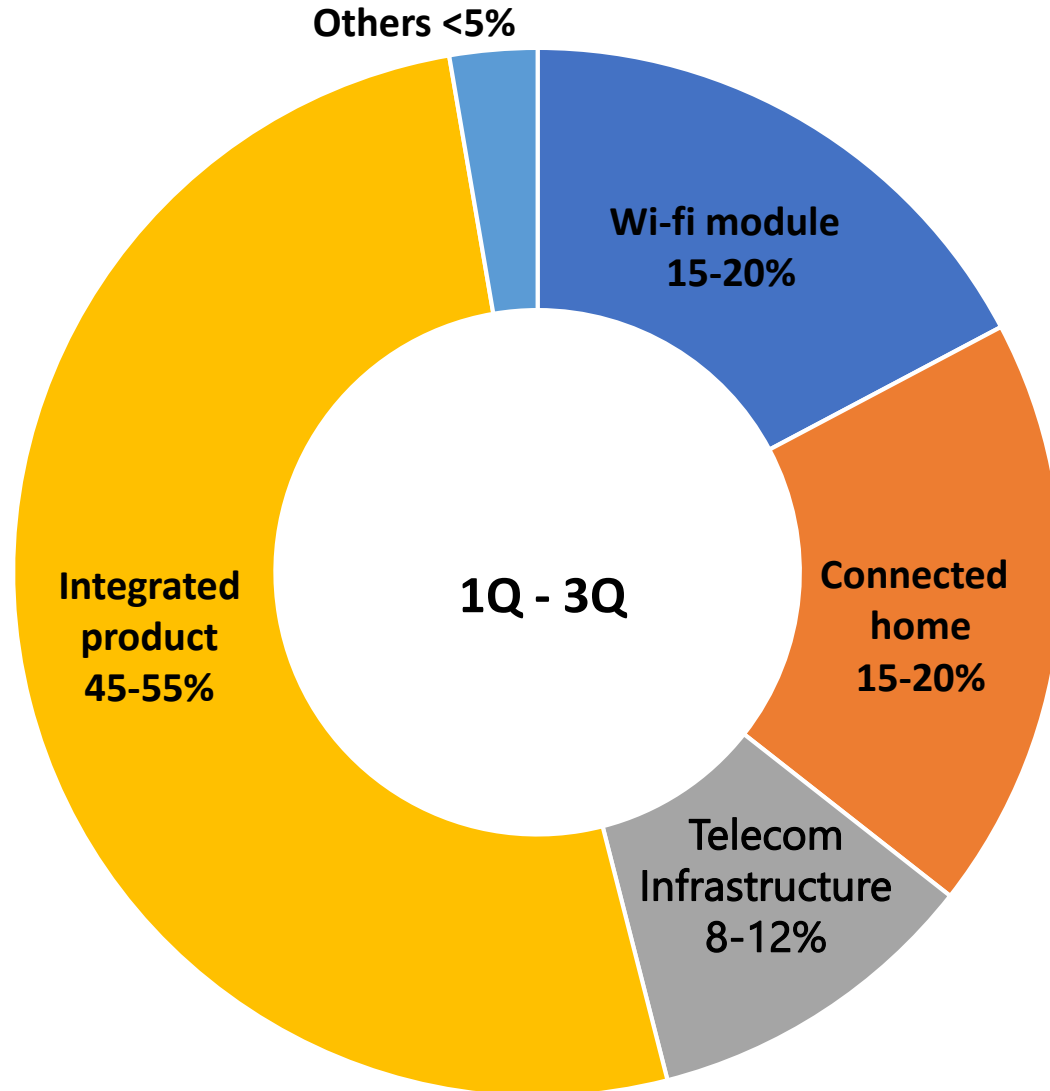
<sup>\*\*</sup> Includes recent acquisitions and LRG pro forma estimates of net adds

# Product Line

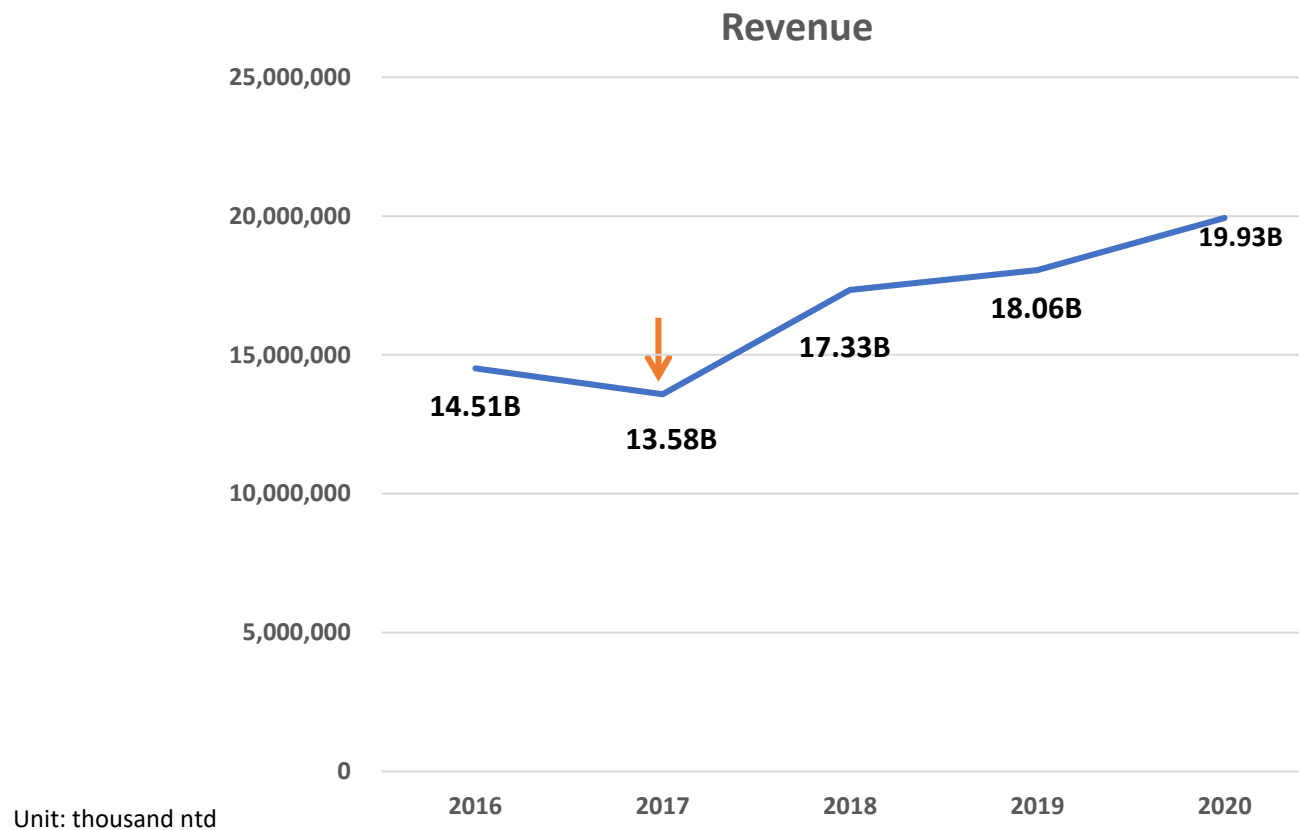




## Product Breakdown By Revenue



## Continue Trending Up



- Revenues grew 10.37% in 2020 as compared to ( NTD \$19.93B )
- 2021 Revenue Target : YoY+13%



## Consolidated Comprehensive Income (IFRS)

In NTD (thousand)	1Q-3Q 2021	1Q-3Q 2020
Operating Revenue	17,302,318	15,040,706
Gross Profit	1,586,274	1,729,702
Operating Expenses	1,224,544	1,349,577
Operating Income	361,730	380,125
Non-Operating Income and Expenses	123,646	1,075,967
Net Income	410,512	1,298,764
Net Income Rate	2.37%	8.63%
Basic EPS (NTD)	1.14	3.55

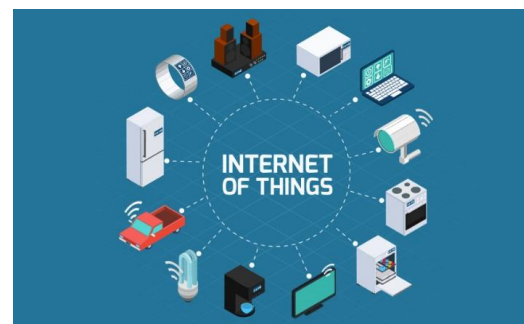
# 2022 Outlook



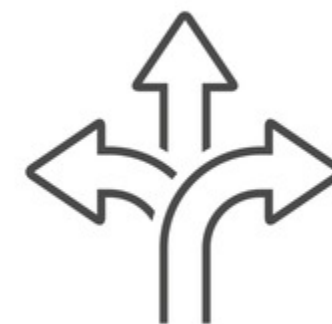
**New Technology**



**New Customer  
New opportunity**



**New Applications**



**Uncertainties**

COVID-19  
Electricity Restriction  
Material shortage

# Summary



## Revenue

- More customer firm orders in 2022.
- Increase the proportion of high-margin products.



## Technologies

- Catch the leading position in Wifi, 5G, Fiber...
- higher value technologies: Small Cell, OLT, Software value added. LEO (Low Earth Orbit)



## Business Model

- ODM/OEM for 1<sup>st</sup> tier brand name.
- Direct supply to strategic operators.
- Global Distribution.
- Provide End To End Networking product.

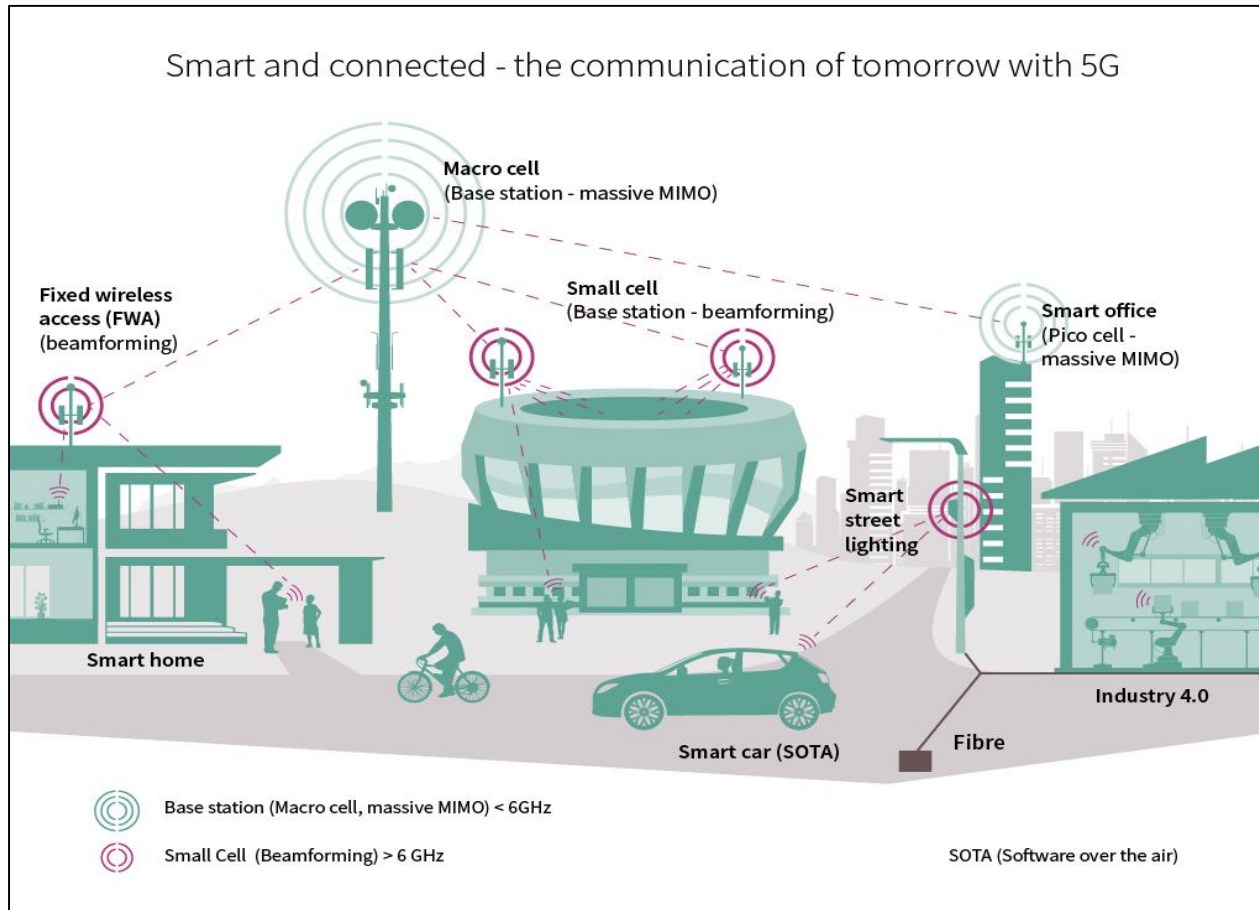


# Market Trend

Founder & executive broader Dr. Young



# 5G Telecom Infrastructure



Base station

Small Cell

Mobile Terminal  
Equipment

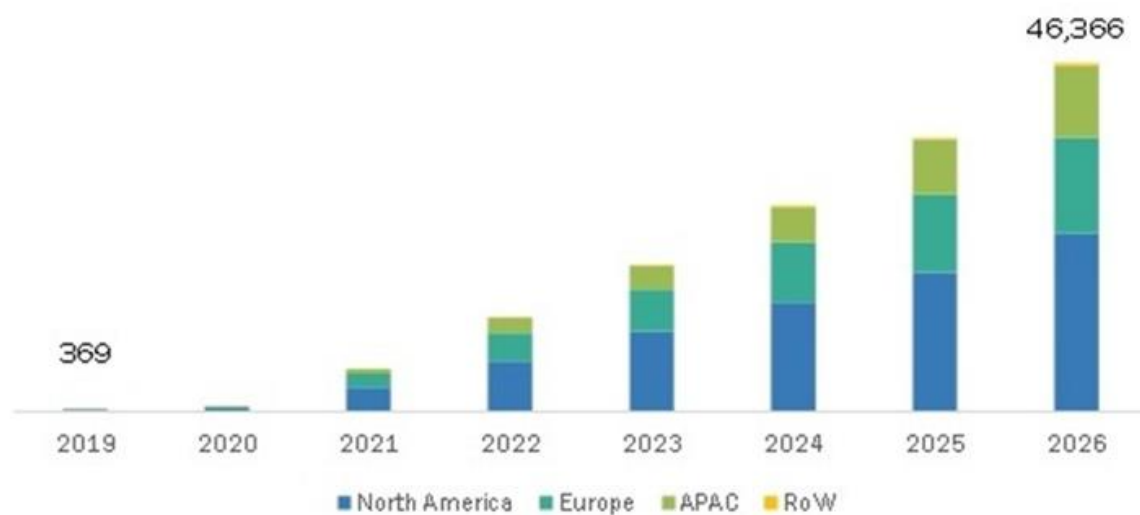
Fixed Terminal  
Equipment

MERC

Switch

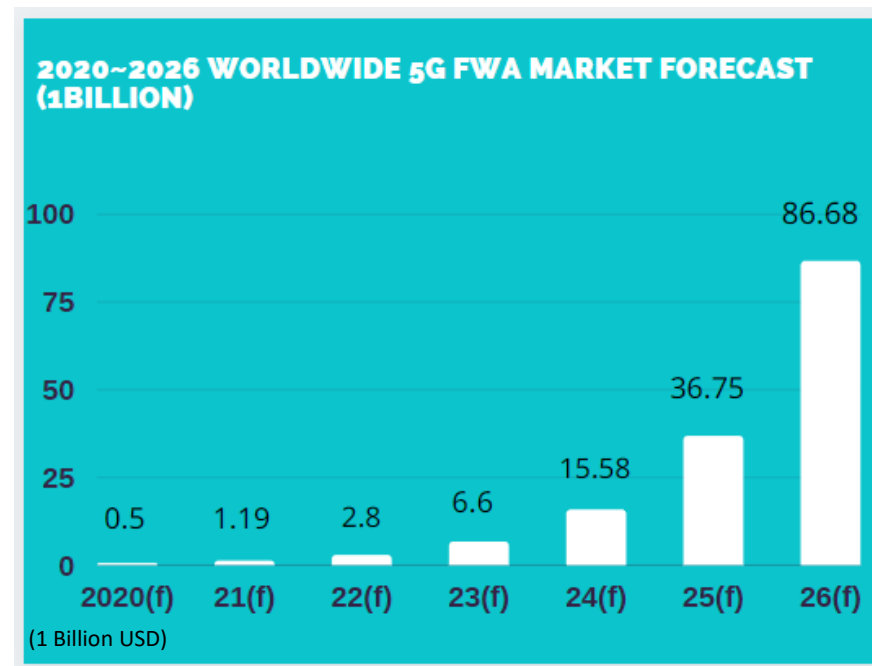
# 5G Forecast

5G FWA Market by region (USD million)



Source: Market and market

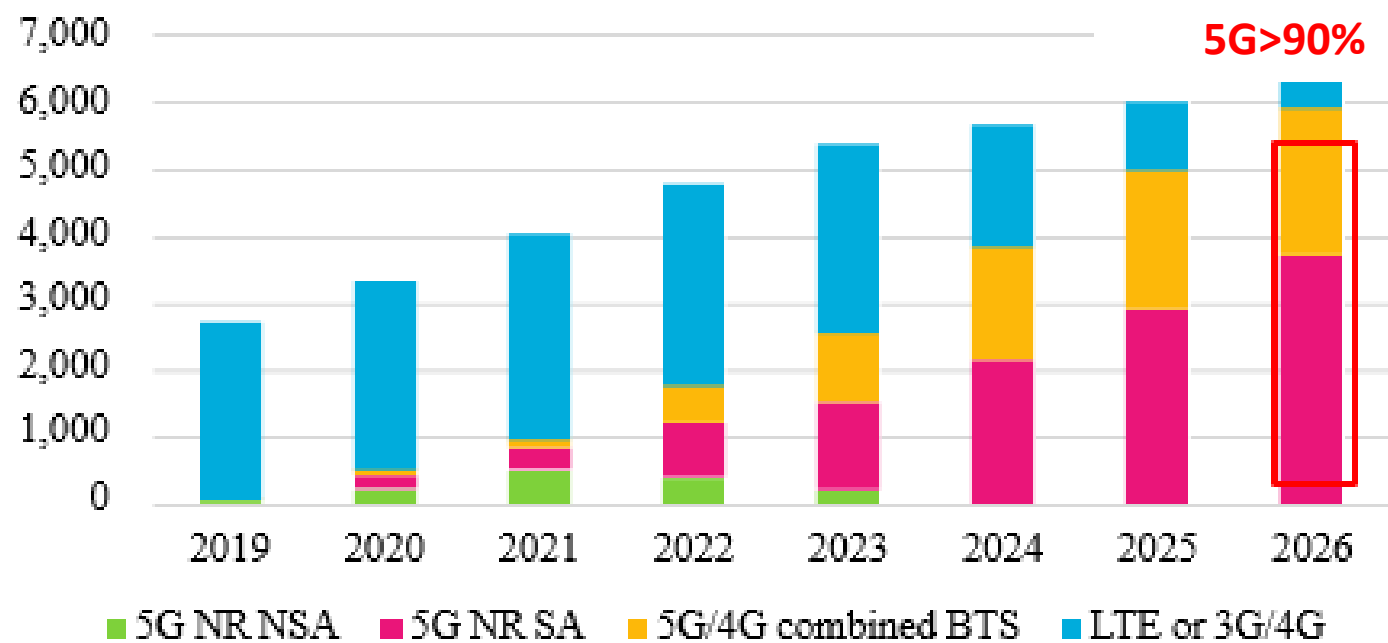
5G FWA: Game Changer for Fixed Broadband



Source: Digitimes

# 5G Forecast

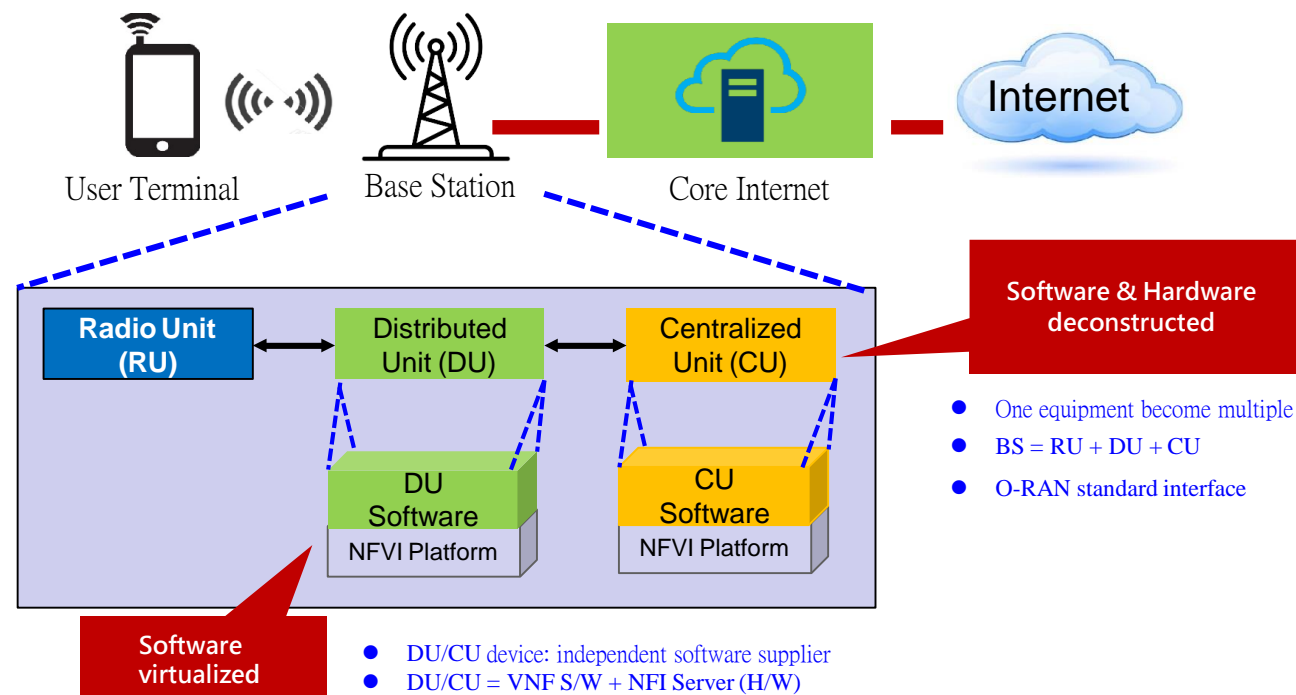
Global small base station market forecast



Source: MIC

# Open-RAN

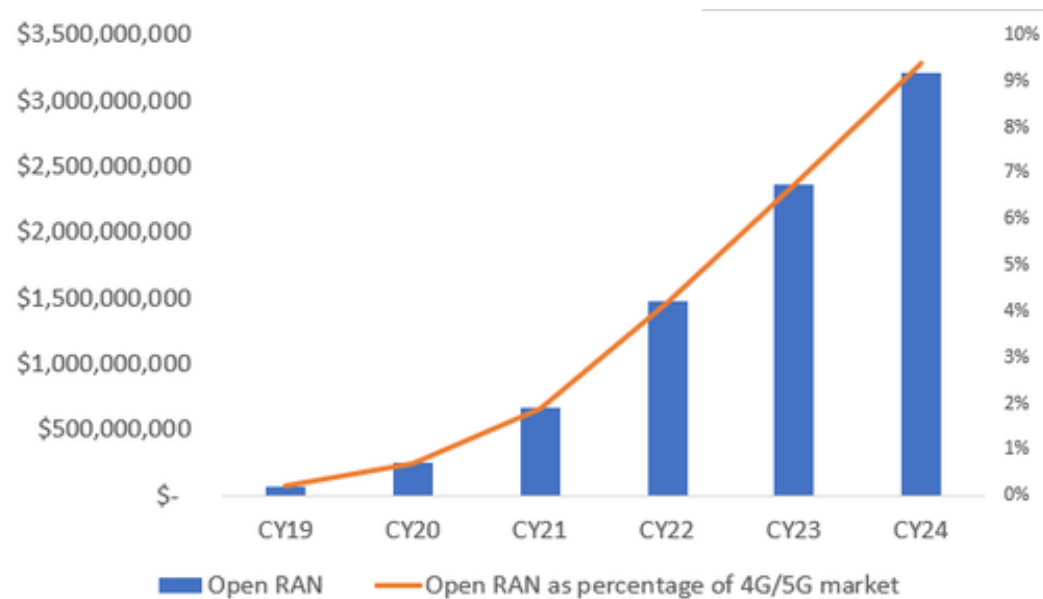
One base station supplier become multiple.





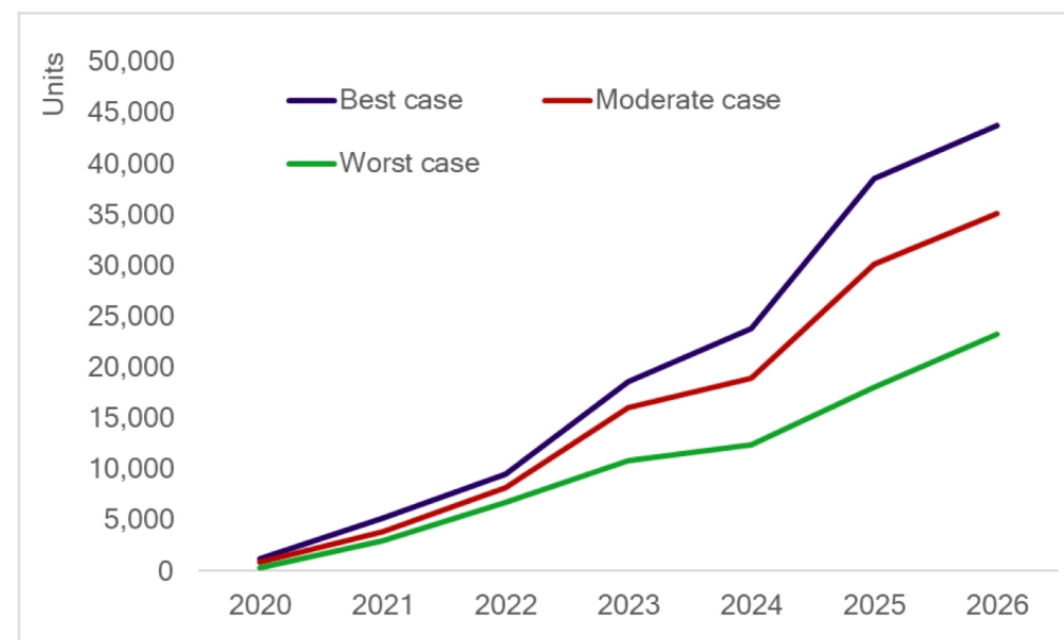
# Open-RAN Forecast

Open-RAN market will reach 3.2 Billion USD in 2024

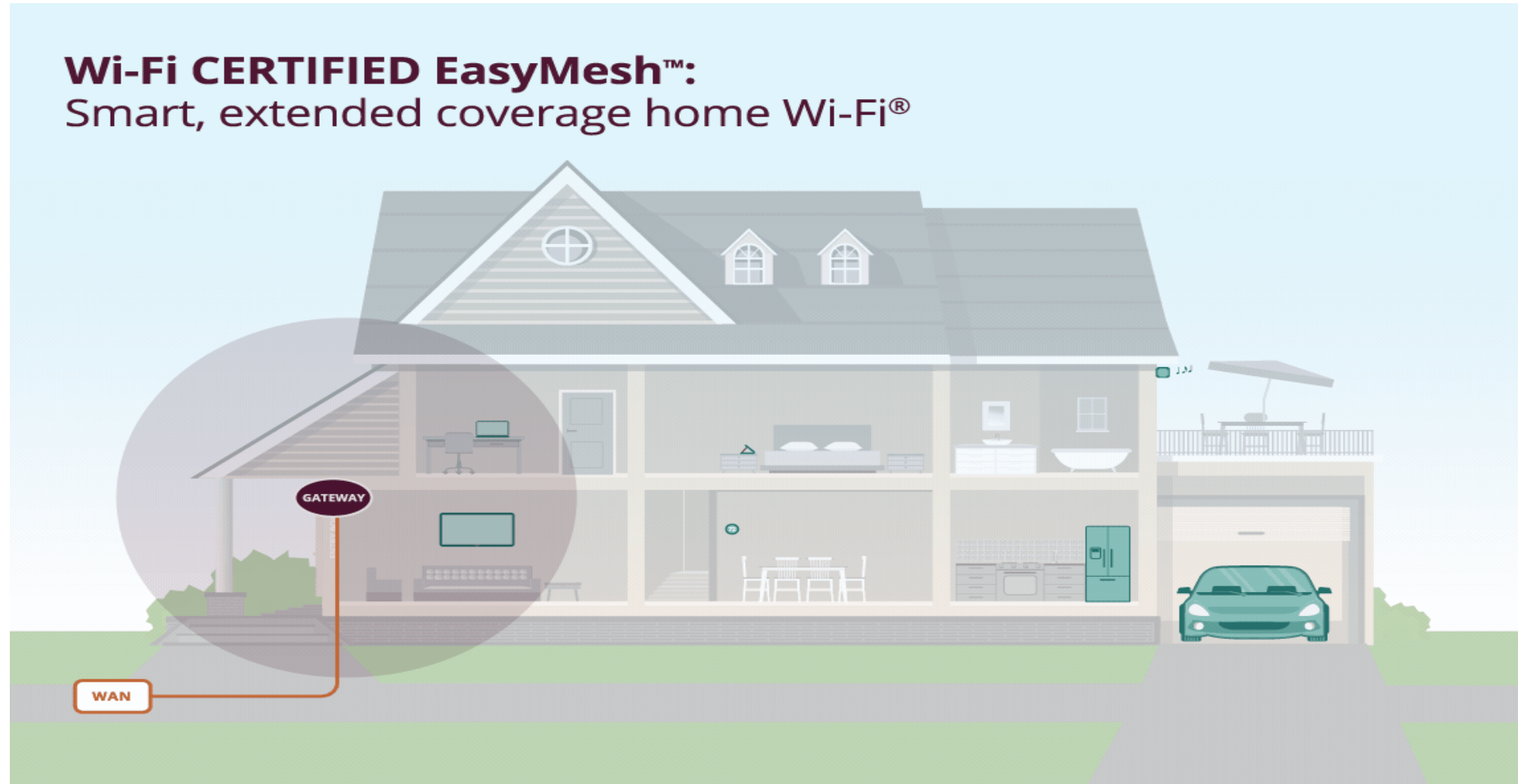


Source: Omdia

Open-RAN small cell infrastructure in different situation



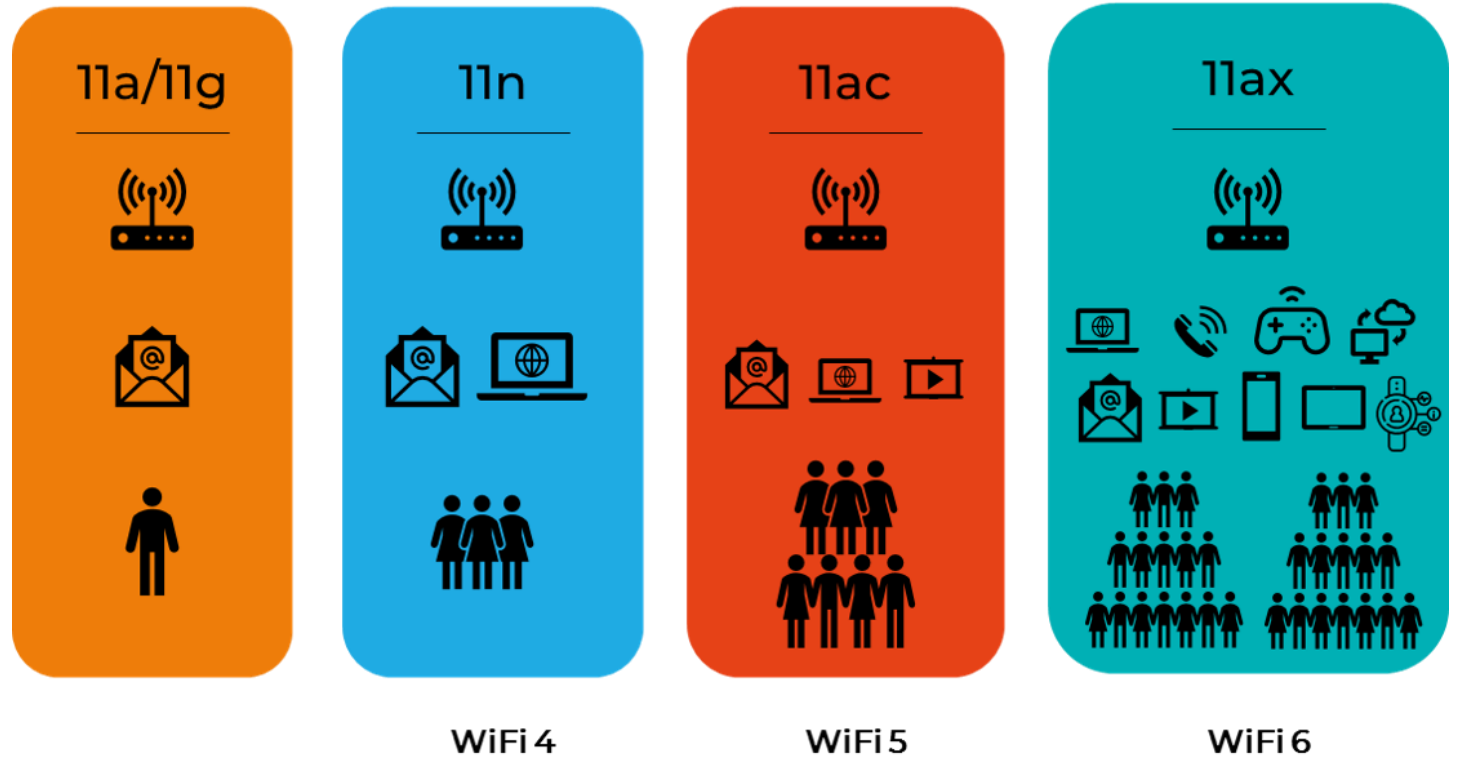
## Wi-Fi Technology – Easy Mesh (Wi-Fi 6 / 7)



# Wi-Fi Technology – Wi-Fi 6

## Strength of Wi-Fi 6

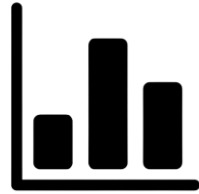
- **Efficiency upgrade**  
Wi-Fi ap/rt can communicate with multiple terminal equipment in the same time
- **Better performance**  
Transmission more data  
Internet speed get faster  
Lower power consumption



# Wi-Fi Technology – Wi-Fi 7



User Experience Data Rate



Spectrum Efficiency



Network Energy Efficiency



Connection Density

## Key Enhancement

320 MHz channels  
4096-QAM  
16 spatial streams

Multi-RU (puncturing)

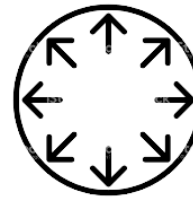
Multi-link operation  
Multi-AP operation  
Deterministic low latency



Peak Data Rate



Cost Effective

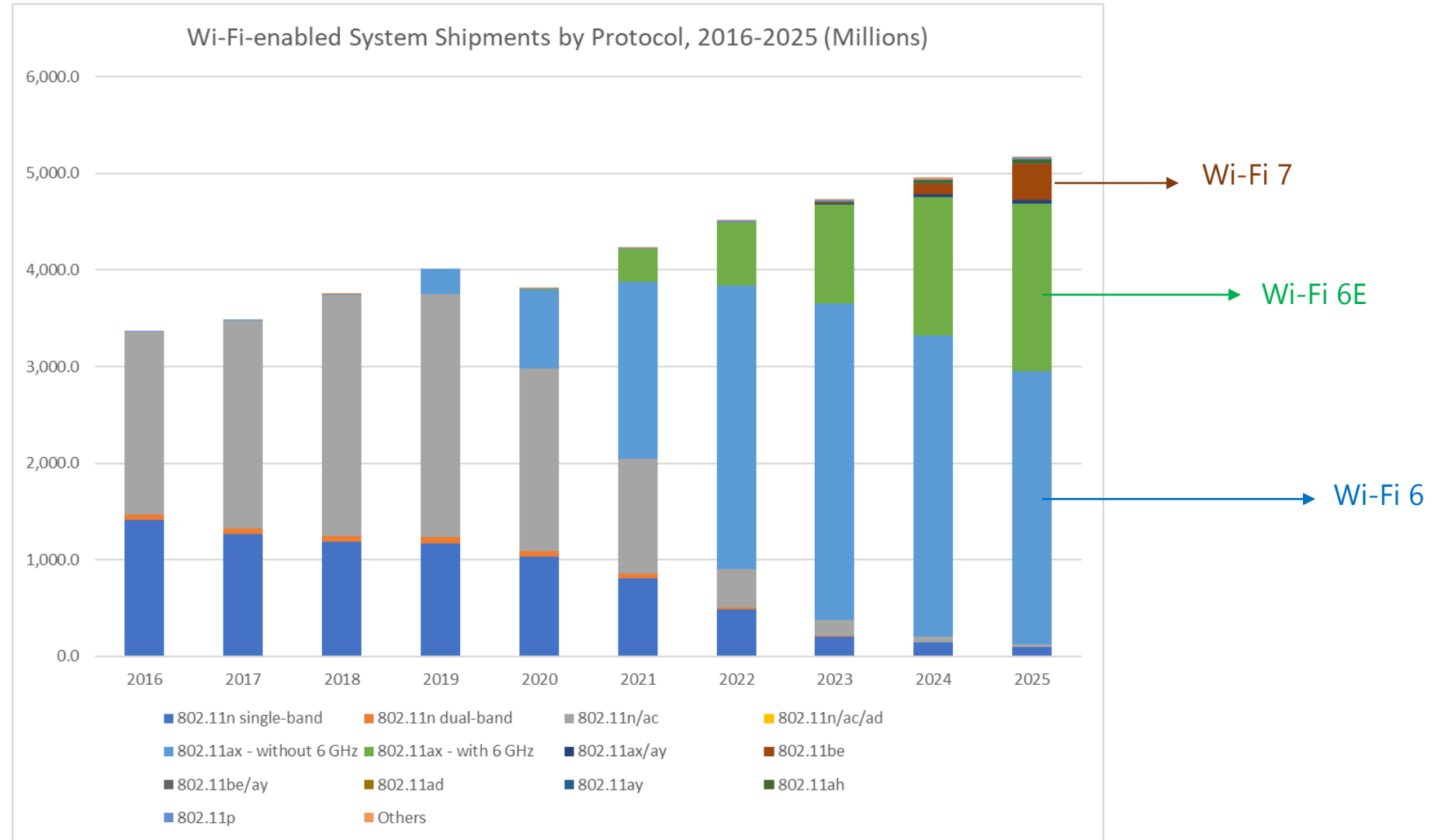


Area Capacity



Low latency

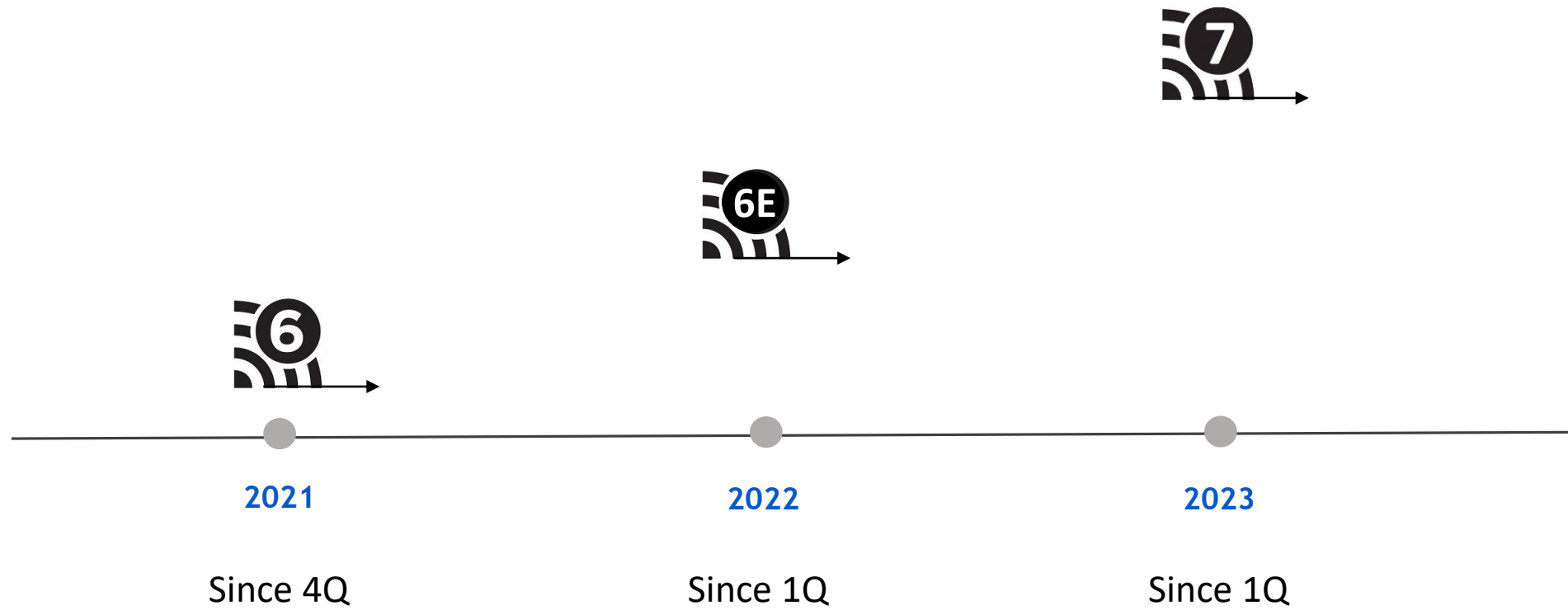
# Wi-Fi Market Trend



Source: IDC

©2021 Gemtek Technology Co., Ltd – Confidential & Proprietary

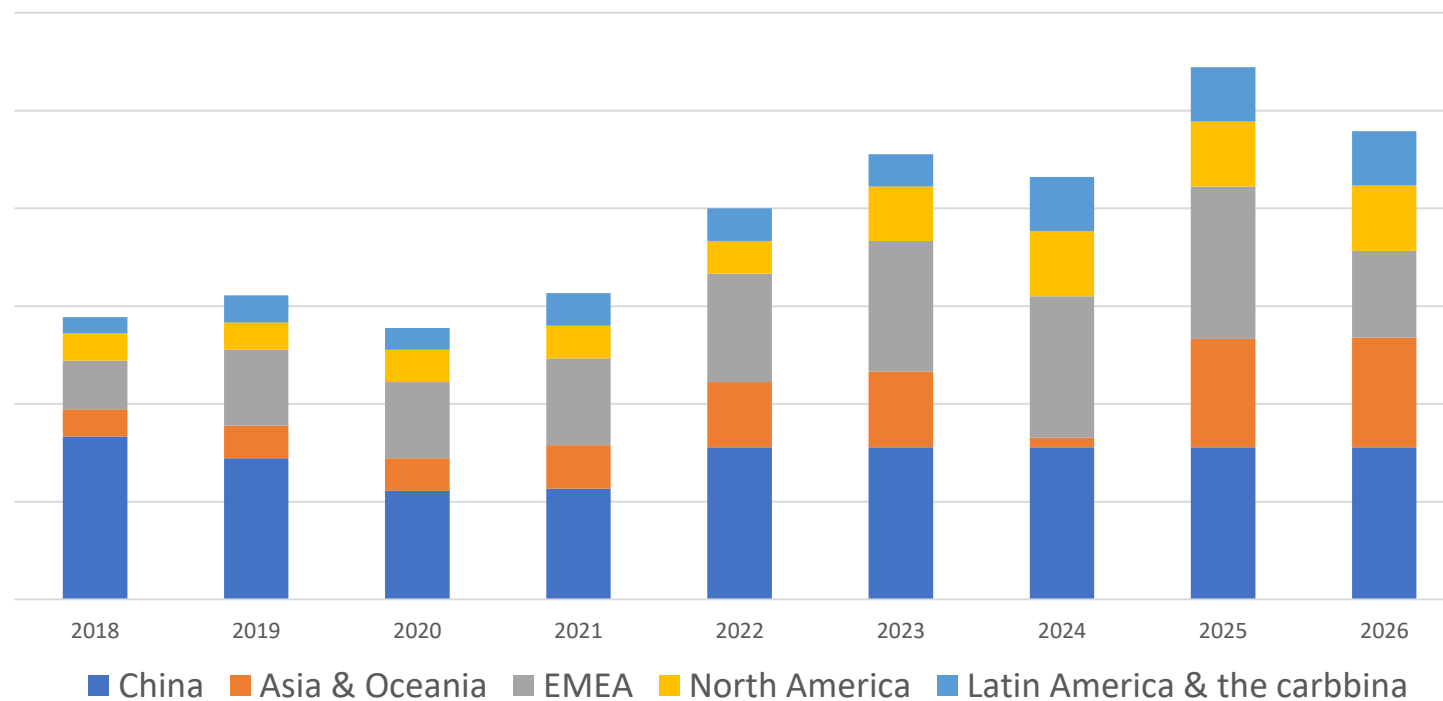
# Gemtek Wi-Fi Product Portfolio





# G-PON Market Trend

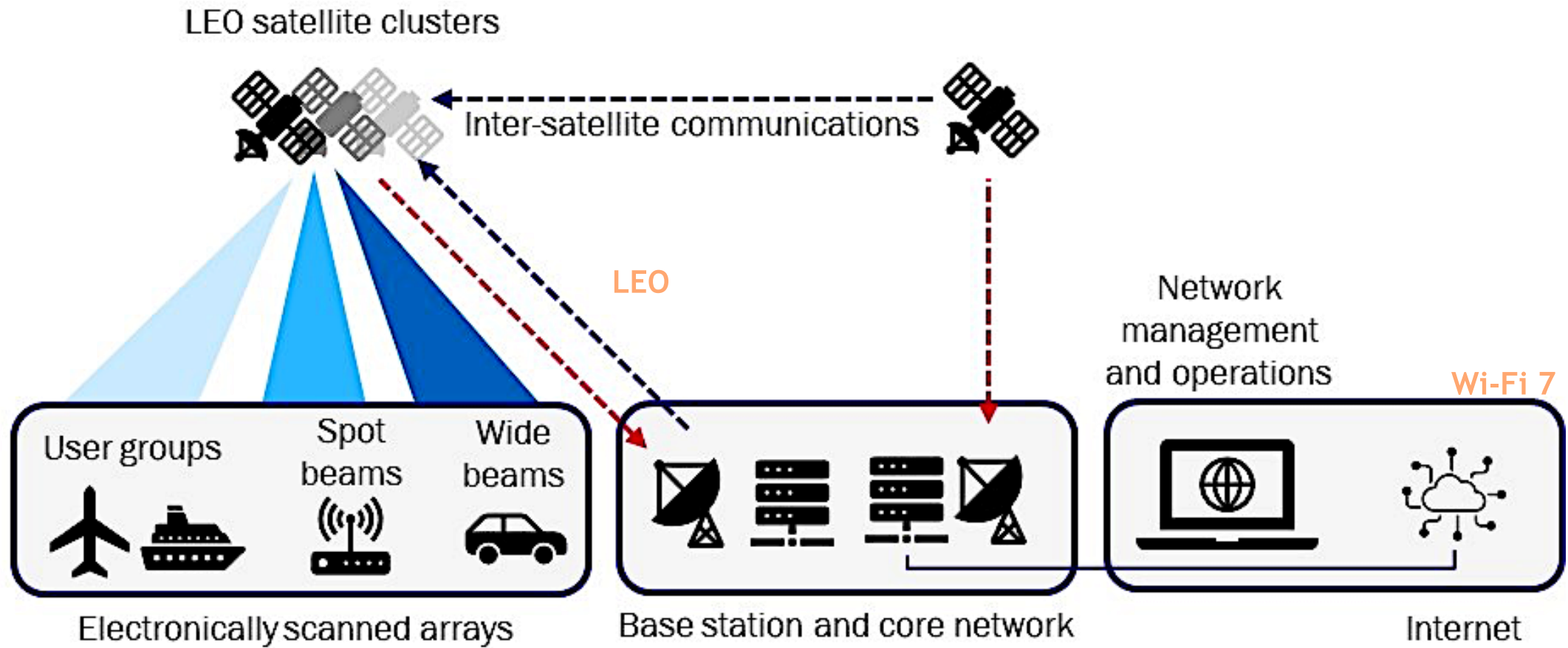
PON equipment revenue by region / country



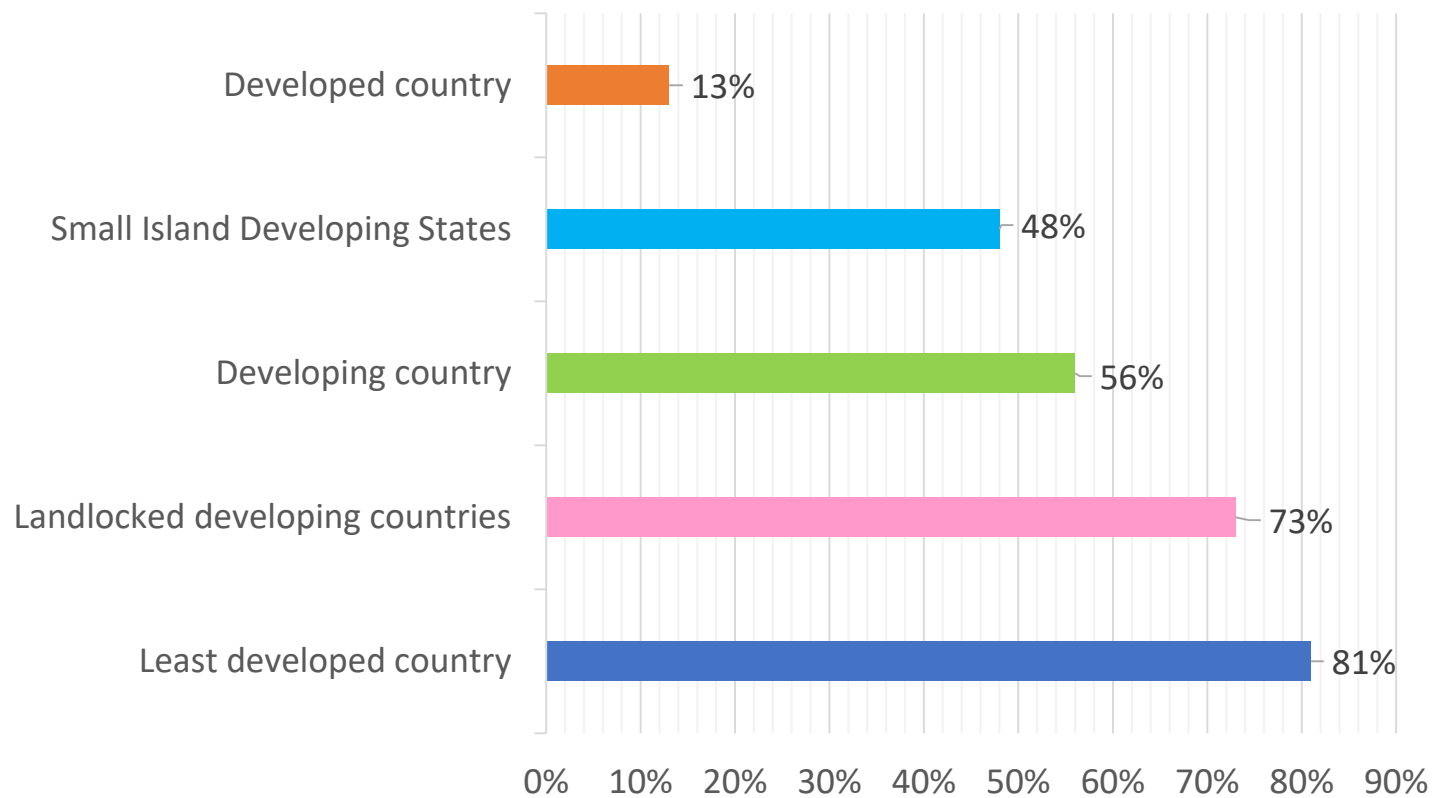
Source: MIC

North America and EMEA represent Top2 world's fast growing PON markets

# LEO New Business Model



## Potential market of LEO: Low internet coverage area

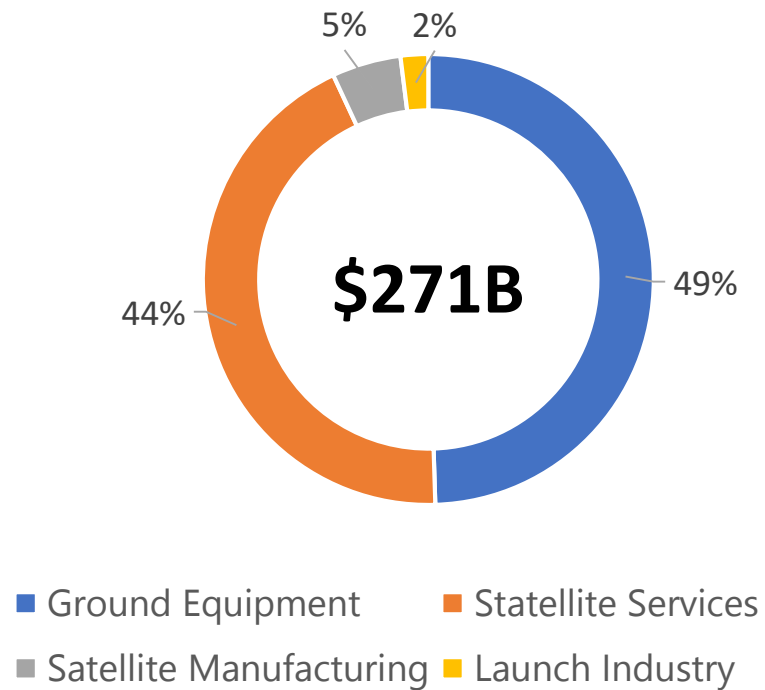


Source: MIC

- Until 2019 there are 49% population can't access to internet.
- Even in the developed country still 13% population can't access to internet.

## LEO – Opportunity For Taiwan

The 2021 State of the Satellite Industry Associate Report: 2020 Global  
Satellite Industry Revenue \$271B



Source: TIER

### Gemtek can do

- ✓ Ground Equipment.
- ✓ User Terminal, including phased array antenna module, system design, verification as well as manufacture. .