



# The Implementation of 5G & Wi-Fi Collaboration as Mobile Operator

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# AGENDA



- FET Intro
- Converged Network Architecture
- Reference Cases
- Other slight converged solutions

Far Eastern Group was founded in 1937, starting from textiles and with 80 years of continuous investments and expansions, the Far Eastern Group has achieved vertical and horizontal integrations, and has spanned over 10 major industries, and with 10 listed IPO companies in Taiwan.

Retail And  
Department  
Store



Financial  
Service



Communications  
and Internet



Philanthropic  
Organizations



Hotel



Construction



Petrochemical  
I and Energy



Polyester and  
Synthetic Fiber



Cement and  
Building  
Material



Sea/Land  
Transportation



# Key Milestones

## 2024 - 2019

Wifi convergence  
 w/ Private NW **5G**

- 2023/12 FET merger with APT
- 2022/02 Announced the completion of the merger contract signing with APT
- 2021/12 FET established the first 5G Metaverse Accelerator in Taiwan
- 2021/10 FET and Ericsson Completed the World's 1st 5G End-to-End Multiple Network Slicing
- 2020/09 FET/APTG announced strategic alliance in 5G
- 2020/07 **FET started 5G service selling**
- 2020/02 Acquired 5G Spectrum for commercial launch
- 2019/03 Brand re-emphasis of the "Closing the Distance" slogan with " For Every Thought, We Go Further" to also close the distance between people and new technology

## 2018 - 2014

Deep indoor  
 Oversea

**4G**

- 2019/01 Chee Ching was appointed as the new President
- 2018/12 5G Pioneer Team leading the development of 5G Internet of Vehicles industry chain in Taiwan
- 2018/05 Completed NB-IoT network deployment across Taiwan
- 2018/04 Launched LINE MOBILE with LINE
- 2017/01 Launched 20th anniversary brand campaign "Connect with Heart, Spread the Love."
- 2016/09 5G laboratory was set up
- 2016/03 Operated 4G service with 700/1800 /2600 MHz tri-band network
- 2014/08 **Launched 4G service**

## 2013 - 1996

Wifi off-load  
 3G data

**2G**  
**3G**

- 2005/08 Officially listed on the Taiwan Stock Exchange
- 2001/11 IPO Priced at NT\$30 per share
- 2000/04 Launched GPRS 3G service
- 1998/01 Launched 2G service with GSM900/1800 dual-band network
- 1997/04 FET was established
- 1996/10 FET strategic venture formed by Far Eastern Group and AT&T

# Focus on 5G-Enabled with Heterogeneous Network Convergence

- Communication Technologies (CT) + Information Technologies (IT) + Operations Technologies (OT)
- FEG spans across multiple verticals for 5G Adoption



**Smart  
Health Care**



**Smart  
Manufacturing**



**Smart  
Transport**



**Smart City**

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# Converged Network Architecture

## Wi-Fi Access with HSS Authentication

To empower Wi-Fi capability but to diminish existing Wi-Fi cons, we deal with the following issues:



Unified Authentication



Session control

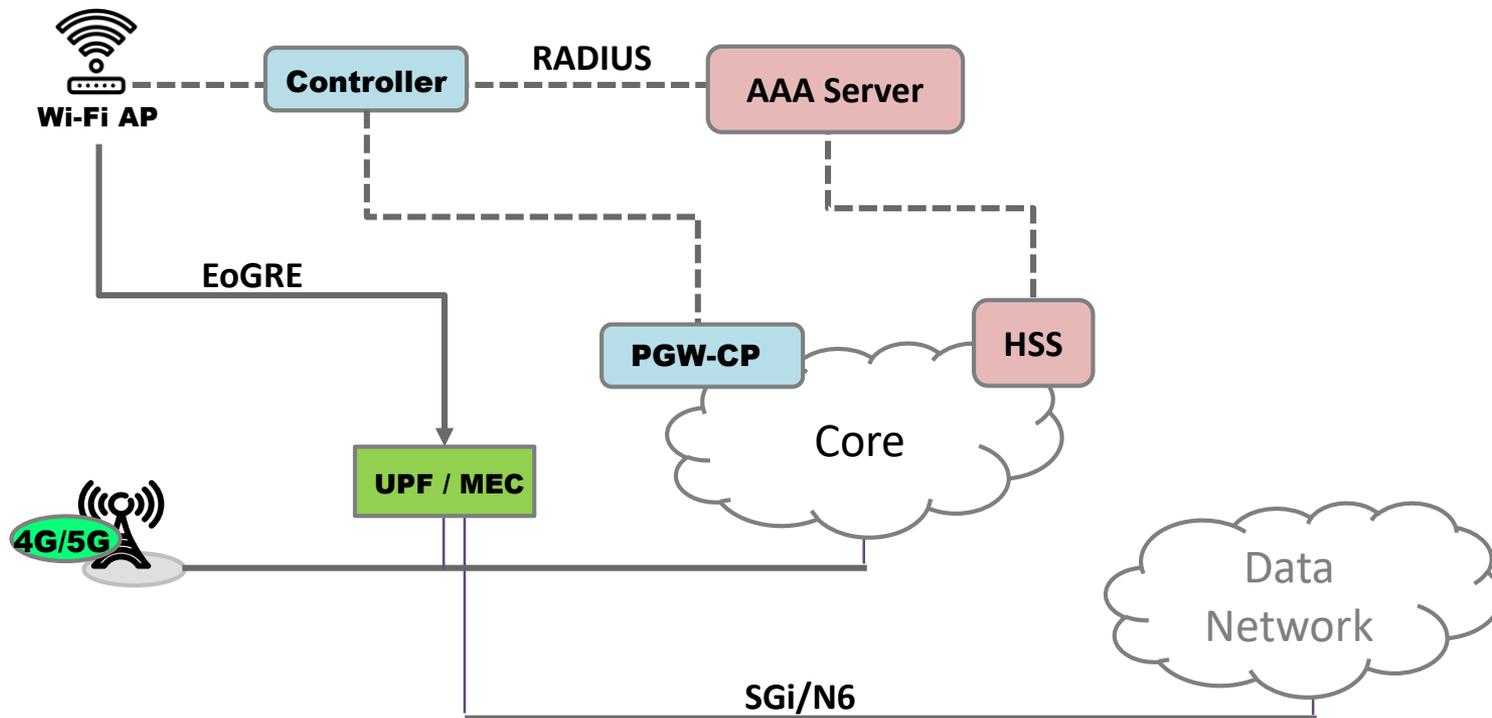


Same Target Network

Mobility issue could be enhanced due to that authentication is converged, so service recovers fast when handover occur.

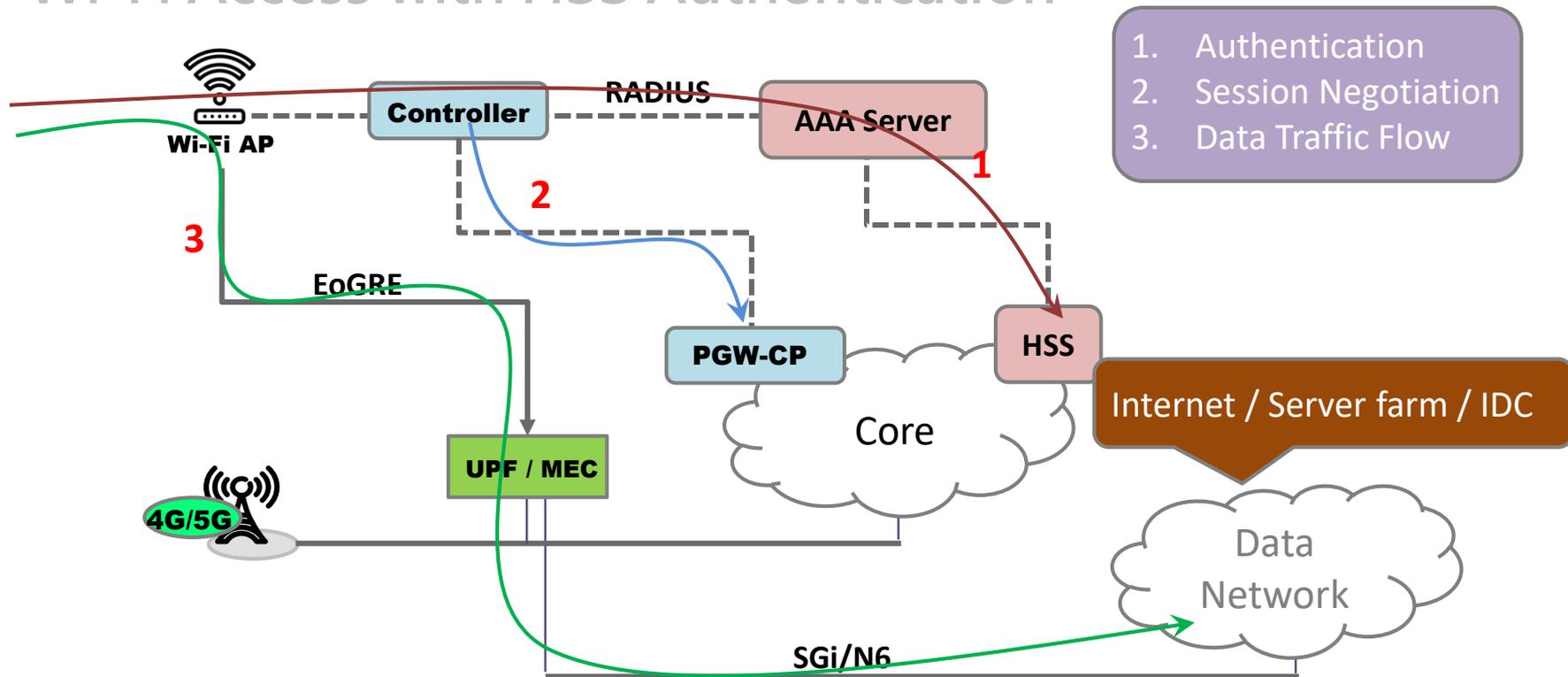
# Converged Network Architecture

## Wi-Fi Access with HSS Authentication



# Converged Network Architecture

## Wi-Fi Access with HSS Authentication



# AGENDA



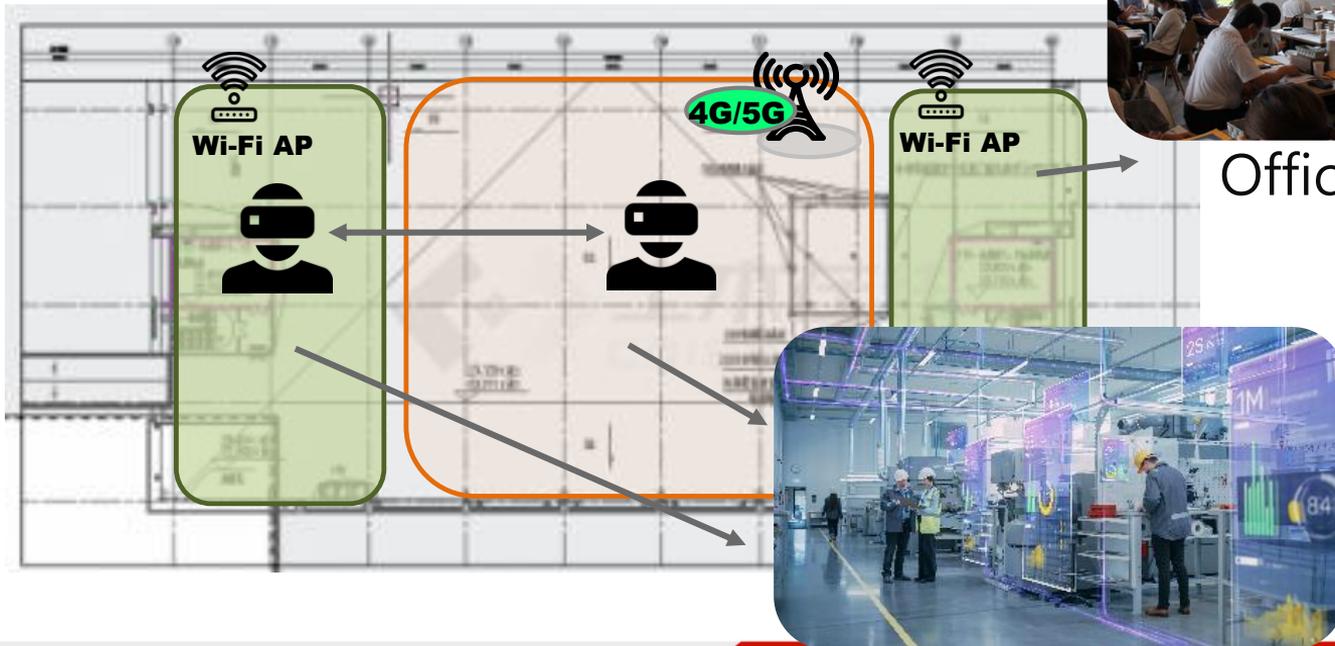
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# Smart Manufacturing – MR Coordination

1. 5G support MR in new product line area
2. Wi-Fi support MR in old product line & office area



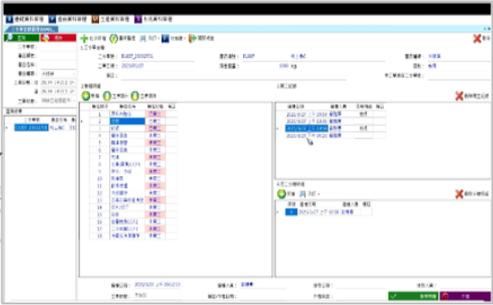
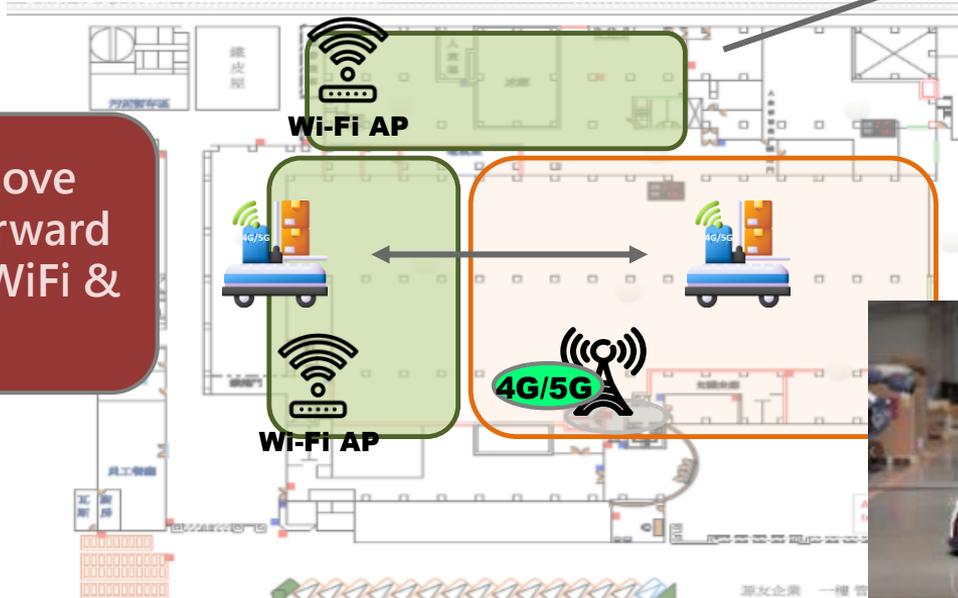
Office Area



# Smart Manufacturing – Shuttle Car

1. 5G support shuttle car requirement
2. Wi-Fi support control station

5G AGV move back & forward between WiFi & 5G area

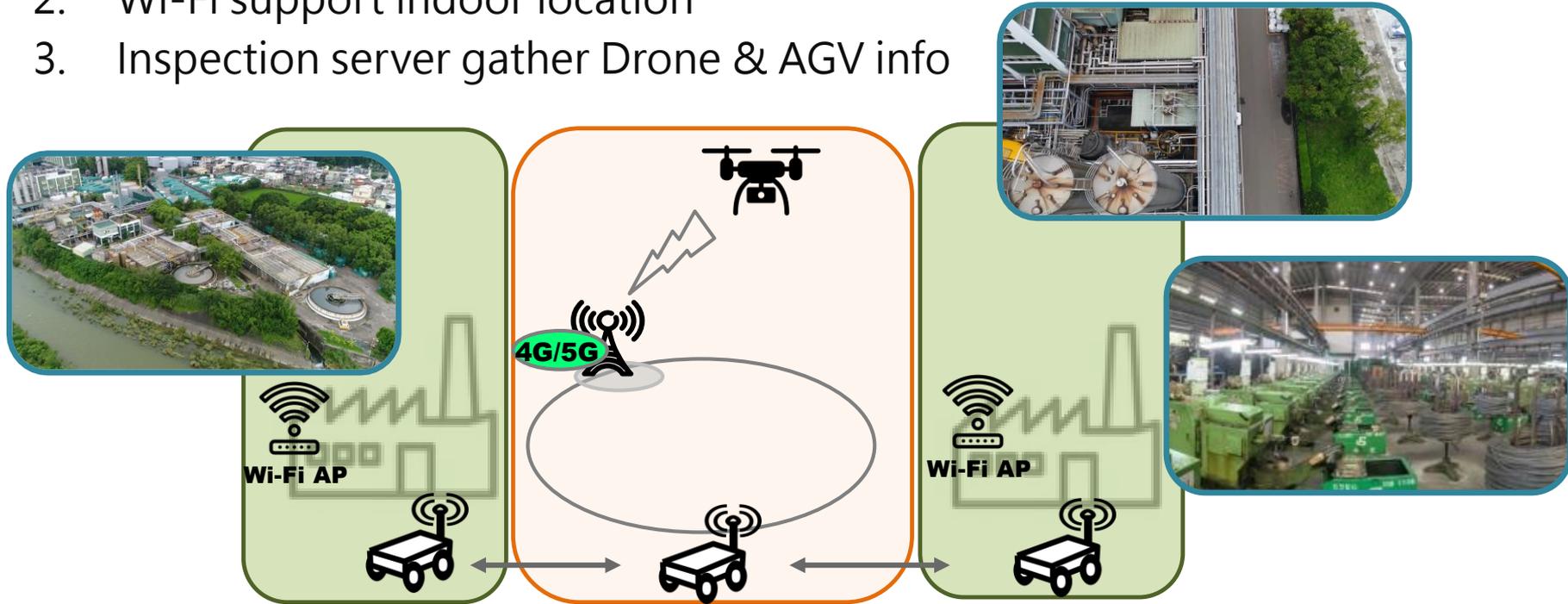


Control Center (Wi-Fi)



# Smart Manufacturing – AGV Patrol

1. 5G support outdoor patrol inspection
2. Wi-Fi support indoor location
3. Inspection server gather Drone & AGV info



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# Enhance Deep Indoor Voice Service - VoWiFi

## Scenario:

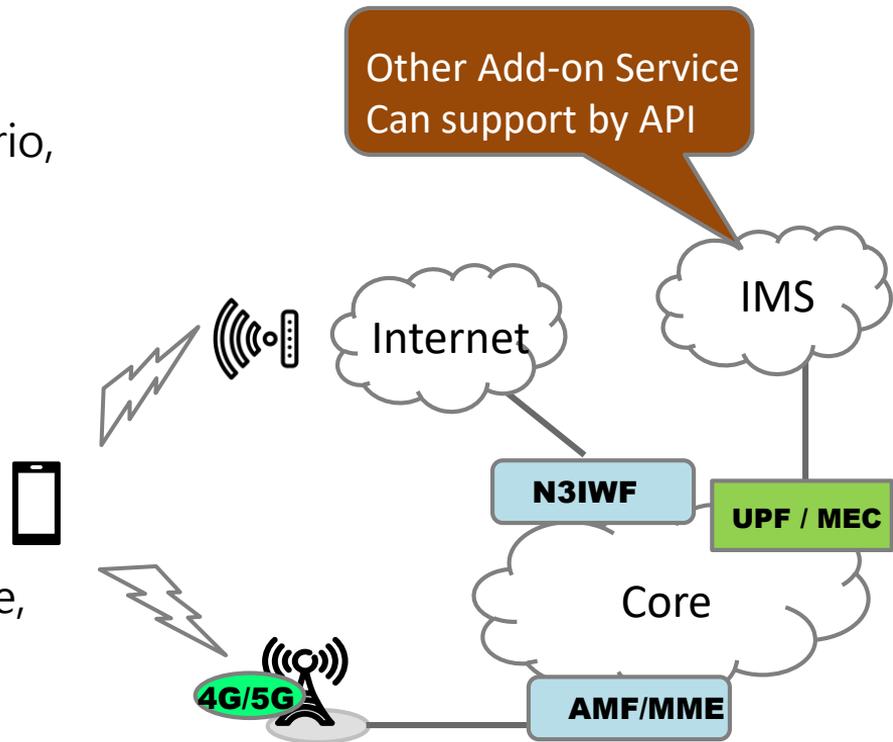
Wi-Fi already implemented in indoor scenario, leverage this access for IMS system.

## Used Wi-Fi advantages:

1. Widely deployed in consumer case

## Solution:

- Directed traffic from Wi-Fi to 4G/5G core, and use IMS as service center.



# Extend Cellular Coverage - FWA

## Scenario:

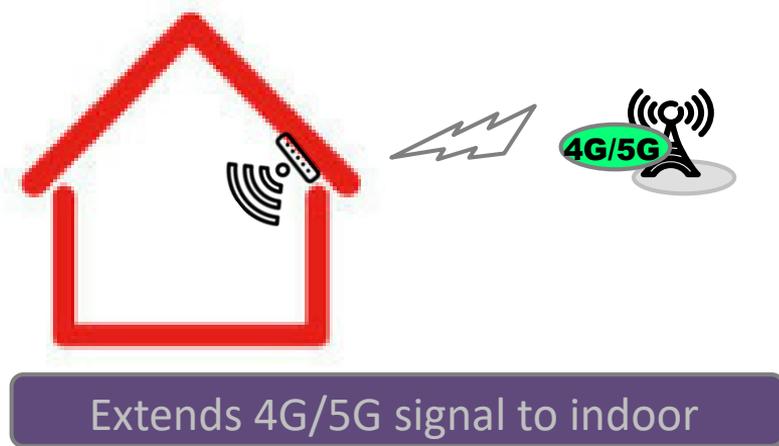
4G/5G has good outdoor coverage, but hard to do radio enhancement in an indoor scenario.

## Used Wi-Fi advantages:

1. Easy deployment & cost efficiency
2. High bandwidth in fixed/static scenes

## Solution:

- Cellular Signal Transfer to Wi-Fi Signal, extends 4G/5G into indoor area





只有遠傳 沒有距離

— Thank You! —