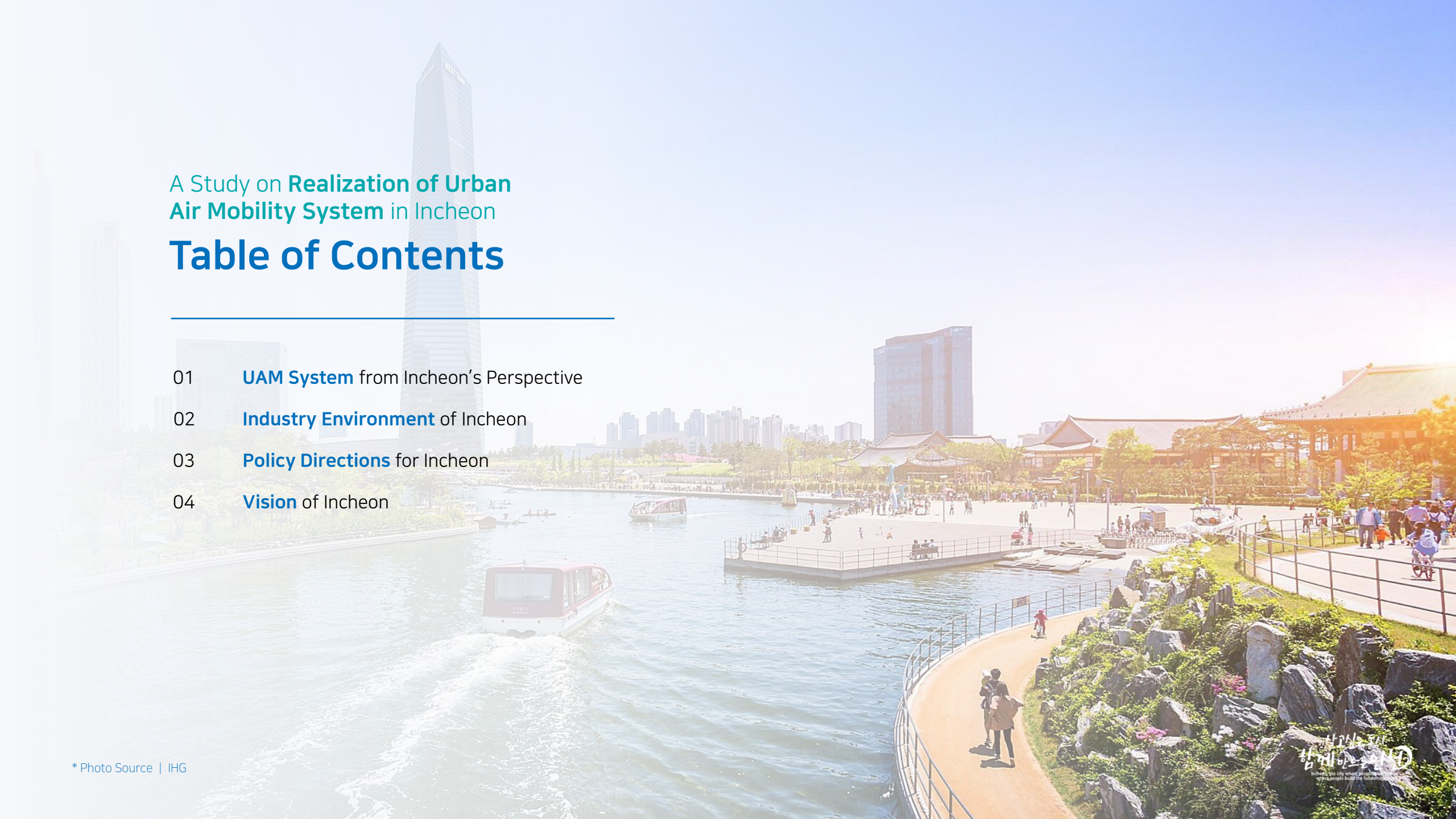




A Study on Realization of
**Urban Air Mobility
System**
in INCHEON





A Study on **Realization of Urban
Air Mobility System** in Incheon

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01

UAM System from Incheon's Perspective



01

UAM system from Incheon's Perspective

What is UAM System?

Air transportation system, connecting urban or near-field areas

Aircraft

- Using variety of aircrafts that match the conditions of low noise and vertical take-off / landing for urban flight with low altitude airspace of the city center

Needs

- Terminals in the city (Urban Planning), Public transportation in the city & Various service needed (Platform Business)



01

UAM system from Incheon's Perspective

Transportation System between Intercity

New means of transportation are needed as solutions,
As population concentration / ground traffic congestion in
the city is getting worse

The rise of UAM

- **Gyeyang ↔ Incheon Int'l Airport** | Abt 7 min
[Straight Line Distance 30 km, 250km/h]
- **Gyeyang ↔ Songdo** | Abt 5 min
[Straight Line Distance 20 km, 250km/h]
- **Gyeyang ↔ Yeouido, Seoul** | Abt 4 min
[Straight Line Distance 15 km, 250km/h]





01

UAM system from Incheon's Perspective

Convergence of Aviation & Automobile



Flying Car

- Capable for both road and air travel

More expensive than Car, but less than Airplane

Expected to grow as future industry

- Market growth expected to grow as 731 Trillion Won by 2040



01

UAM system from Incheon's Perspective

Relative Service Industry | Aviation



- Airframe/Parts Fabrication, MRO _ Maintenance, Repair and Overhaul
- Operation, Control, Infrastructure
- Service & Insurance

Comprehensive impact on Industrial ecosystem

* Photo Source | Google & Hanhwa Systems



01

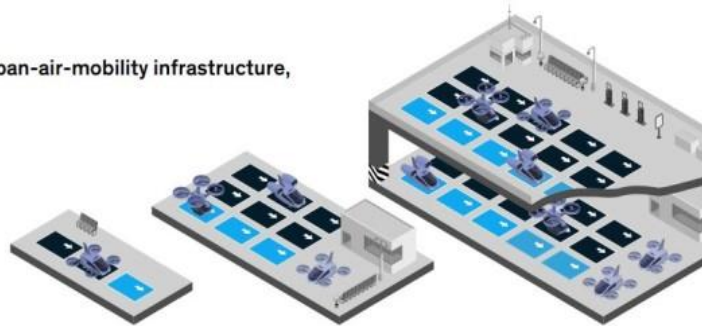
UAM system from Incheon's Perspective

New Paradigm for Urban Planning

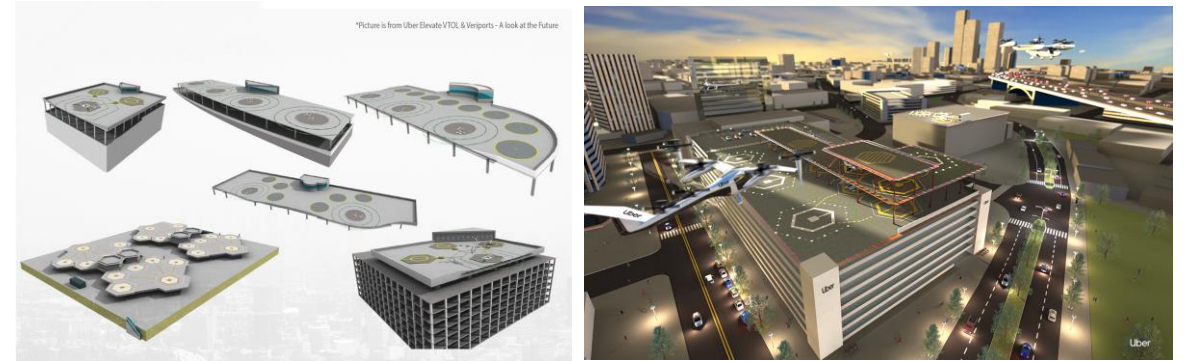
Vertiport in the center of city

Changes and Impact expected on urban planning and architectural planning

Potential archetypes for urban-air-mobility infrastructure, illustrative



	Vertipad (new or retrofit)	Vertibase (new or retrofit)	Vertihub (new)
Dimensions	100 × 60 feet	230 × 100 feet	400 × 175 feet (2 floors)
Landing/takeoff pads	1	3	10
Parking/charging spots	2	6	20
Capital expenditures, \$ million	0.2–0.4	0.5–0.8	6.0–7.0
Operating expenditures, \$ million	0.6–0.9	3.0–5.0	15.0–17.0



* Photo Source | Google

02

Industry Environment of Incheon



02 Industry Environment of Incheon

The Origin of International City

■ Outport to International exchange

- Ancient Sea trade Route

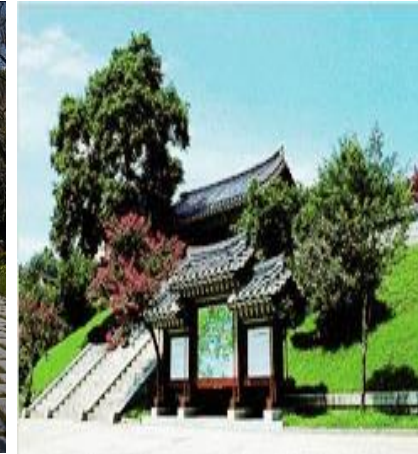
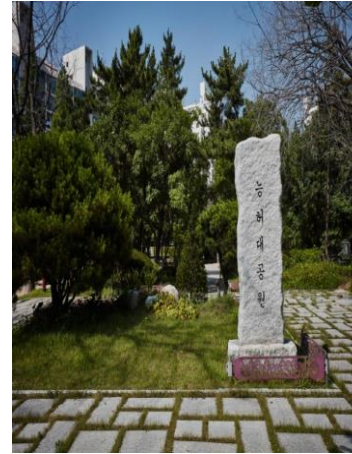
Neung-heo-dae

- Hub for maritime transportation

Annam-Dohobu

■ Starting point of modern culture and industry

- Gyeongin Line(Korea first railroad, Connecting capital areas)





02 Industry Environment of Incheon

Variety

City of various cultures

- Foreign residents
China-town, Foreigners' Cemetery, etc
- Foreign residents in Free Economic Zone



Variety of population

- City where people of various cultural characteristics gathered from all over the country
Seoul, Gwangju, Daejeon, Gyeonggi, etc



* Photo Source | Google



02 Industry Environment of Incheon Leading City

Leading in Aerospace industry

- First research & experiment of aerospace in Republic of Korea(1958)



Modern Industrialization through Incheon

- Namdong·Bupyeong·Juan Industrial Complex





02 Industry Environment of Incheon Prepared City

Prepared City

- Incheon Int'l Airport & Incheon Port
- the center of Northeast Asia's exchange (China, Japan, DPRK etc.)
- Megalopolitan with 25 million population (11,856.02km²)
- First Free Economic Zone
- National Drone Flight Test site
National Drone Certification Center



* Photo Source | Google

03

Policy Directions for Incheon



03

Policy Directions for Incheon

Establish Multi-Platform for UAM

2021

Stage I UAM Virtual Digital Twin System

2022
2023

Stage II UAM Process Demonstration

2024
2025

Stage III UAM Big Data Platform Implementation & Testing



03

Policy Directions for Incheon

Business Plan for 2021

UAM Virtual Digital Twin System

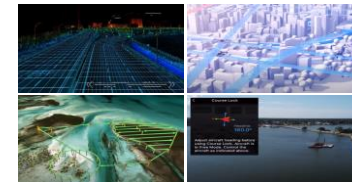
- Analysis & Design of UAM Line based on urban information in Incheon
- 3-D Infrastructure system based on spatial information in Incheon
- UAM simulation development
- UAM Digital Twin Platform Design & Scenario development
- UAM Digital Twin Integration System & Workstation implementation



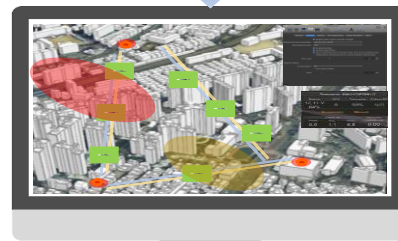
[Data] Digital Twin 3D spatial information

Fusion

[Technology] UAM Simulation



Incheon GIS platform service



UAM Virtual Digital Twin System



Verification of UAM demonstration route



* Photo Source | Incheon City



03 Policy Directions for Incheon

UAM Supporting Business

Running UAM Startup Academy

- Working with leading accelerator in aerospace industry, STARBURST, for collaboration in finding new companies for global market
- TF Team for UAM Global Challenge Program
Support Global acceleration
- Aerospace-specified global network

UAM Global Conference _ sched Nov. 2021

- Inviting official from domestic/int'l companies related to UAM for conferences to carry out keynote speeches on future development directions and plans

UAM Startup Academy Showcase



STARBURST KEY FACTS AND OFFICES



8 CUSTOM WORK STREAMS TO PREPARE YOUR STARTUP FOR ITS SERIES A



STARBURST DEDICATED TEAM ENSURES YOUR COMPANY BENEFITS FROM OUR PROGRAM AND NETWORK

Role	Name	Background
Program Director	Benjamin Zeitoun	5 years at Starburst accompanying 60+ startups Master degree in CS & Junior MBA from ESSEC Business School
Startup Account Managers	Adam Wong	2 years experience at seed stage space start up in regulatory affairs, commercial BO, and strategy B.A. Harvard University with a focus in Space Policy
AMERICAS	Quentin Calleja	2 years in the aerospace innovation ecosystem (startup, accelerator, CVC fund) Double MSc in Engineering and Finance from ENSTA Bretagne and Audencia
EUROPE	Jungwon Park	14 years of consulting at SRI International 2 years of founding and leading a deep technology startup accelerator 3 years of leading global growth of a cyber security startup
ASIA		

Actions

- Bi-monthly meetings to monitor acceleration program progress
- Propose relevant mentors and meetings with Starburst senior leadership
- Manage the corporate introductions and relationships
- Organize the feedback from mentors, Starburst leadership & corporates intros
- Coaching regarding presentation materials relevant for each targeted audience and introductions

* Photo Source | Incheon City





03

Policy Directions for Incheon

Future Mobility | Innovalley



UAM Urban Planning

- Connecting Airport and Cities

Incheon Int'l Airport (Yeongjong) – Cheongra – Landfills – Gyungin – Gimpo Airport (Gyeongang)

DNA* Innovalley

- Jemulpo Campus and Gyeongang Techno valley will be activated as high-tech industrial hub

* D.N.A _ Data, Network, AI

* Photo Source | LH



03

Policy Directions for Incheon

Future Mobility | Innovalley

Complex Construction System in conjunction with Smart Transportation

- Link UAM Vertiport & Smart Transportation

Connected Car, I-MOD Bus, Magnetic Invitation train, etc



- Smart City

Complex cities, such as commercial / business,

Industrial / logistics, housing / leisure, etc




* Photo Source | LH, Naver





국토교통부 인천광역시
/ 국토교통부 스마트시티 실증사업 /

앱으로 호출하는 버스 서비스 'I-MOD 버스'

아이모드 (Incheon-Mobility On Demand)









이용안내

운영기간 2020년 10월 26일 ~ 2022년 12월 31일
 운영지역 영종국제도시 (버스정류장기반)
 이용시간 05:30~23:30 (23:00까지 호출예약 가능)

이용요금 기본요금 1,800원 (최단거리기준 7Km까지)
 * 청소년 1,200원 / 어린이 700원
 추가요금 100원 (7Km 초과시 1Km마다)
 * 추가요금은 '21년 2월 부터 적용

이용방법
 애플 앱스토어와 구글 플레이 스토어에서 'I-MOD' 또는 '아이모드'를 검색하고 앱 다운로드

1. 회원가입 및 로그인
2. 결제정보 등록
3. I-MOD 버스 호출
4. I-MOD 배차 확인 및 탑승

우리의 생활은 어떻게 달라지나요?
 새로운 스마트 모빌리티 서비스를 준비하고 있습니다

I-MOD
 승객 호출에 따라 노선과 차량으로 변형하여 운영
 ~ 차량별로 수요에 맞는 버스

I-ZET
 버스정류장에서 목적지 이동
 배차시간을 고려한
 ~ 한발차량운영

자율 주행 택시
 실시간으로 노선과 차량의 배차정보를 알려 제공
 ~ 맞춤형 운행

In-Car 서비스
 승·하차 및 탑승 서비스
 ~ 맞춤형 서비스
 ~ 시선 투명/예약결제

멀티모달 서비스

 이동수단 연계/연계로 여행계획과
 구매형 통합요금제 서비스 제공

이동계획 예약·결제 구매결제

* 본 서비스는 국토교통부 지원 2020년 스마트시티 발전지 분사업에 따라 실시합니다
 * 중앙재난안전대책본부의 생활 속 거리 두기 지침(대중교통)을 준수하여 방역을 하고 있습니다



04

Vision Of Incheon



04

Vision of Incheon

Future Appearance for Incheon

- UAM Industry
- I-MOD Bus
- UAM Line
- UAM Specialized City

Yeong -Jong

- D.N.A Innovalley
- UAM Flight Test Site
- UAM Global Conference

Cheong -Ra

Landfill

Gyeyang Techno Valley

- National Drone Flight Test Site
- National Drone Certification Center

UAM Specialized City

- Robot/Drone Industry
- Component Certification Center for Connected Car
- UAM Specialized City

Song -Do





04 Vison of Incheon Yeong-Jong Vertihub



* Photo Source | LH



인천광역시
Incheon Metropolitan City

살고싶은 도시
함께 만드는 인천

Incheon, the city where people want to live,
where people build the future together