Economic Megatrend of South Korea & Case Study

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Korean Consul

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Economic Megatrend of South Korea

□ Vibrant R&D

• Investing in R&D the 4.2% of GDP and activating in tech start-ups
• Producing the most PhD level experts, compared with the population
• Having an opportunities of intellectual property rights, licensing and partnership

□ Expanding FDI to USA

• Korean FDI to USA *(\$40 billion in 2016)* is 13th in all over the world, and 3th in Asia *(1st Japan, 2th Australia)*

  Ex) Samsung Electronic invest in Austin, SK innovation in Georgia and San Diego

□ Huge Consumer Market

• E-commerce has been raised 2 times under the Korea-US FTA
• Duty free goods under $200, such as supplements, handbag and food, enriched 95% of imported goods

  E) Costco store at Yangjae in Seoul is the biggest sales all over the world
Case Study

- PANGYO ZERO-CITY -

Autonomous Driving Pilot City
History

2013

AEV (Autonomous Electric Vehicle)
- Fully Electric Vehicle
- SAE Automation Level 3

2014

SPM (Smart Personal Mobility)
- Fully Electric Vehicle based Unique Model
- In/Outdoor Autonomous Driving

PANGYO ZERO Shuttle
- Fully Electric Vehicle based Unique Model
- SAE Automation Level 4
- V2X based Connected Autonomous Shuttle

2015

PANGYO ZERO CITY
- ICT based Autonomous Driving Pilot City
- Designed for Pilot Stage Research and Development
‘PANGYO ZERO CITY’ Project Overview

Location

- Pangyo 1st & 2nd Techno Valley, Seongnam City, Gyeonggi Province
- International and Industrial Complex, IT, BT, CT, NT co. (2020)
- Area: 1,100,000m²
  - 660,000m² (Pangyo 1st TV) + 440,000m² (Pangyo 2nd TV)
- Floating Population: 136,324 person
  - 63,504 person (Pangyo 1st TV) + 72,820 person (Pangyo 2nd TV)
- After 2020, Many commuters will ride Public transportation

Development Schedule

- Period: 2015 ~ 2019
- Infrastructure Construction: 2017 ~ 2019
- Test Operation: Jul. 2018 ~ Mar. 2019
- Public Service Provision: Apr. 2019
Goal of Autonomous Pilot City, ‘PANGYO ZERO CITY’

**ZERO “Accident”**
Real World & ICT based Autonomous Driving Test bed

**ZERO “Carbon”**
Electric Vehicle Service Pilot City

**ZERO “Cost”**
Open Platform based Support to Industry Ecosystem

**ZERO “Regulation”**
Build a regulatory sandbox

**User**
AV, IoT, AI, Big-data, ...

**5G**

**V2X**

**HD Map**

**IoT Road Infra**

**Integrate Control Center**

**EV Autonomous Shuttle**

**Subsidy + Charging Infra.**

**Start Up Incubating**

**Government + Private Governance**

**Regulation Sandbox**

**Business**

**Global Standard**

**Government**

Pilot Projects

Autonomous Shuttle Service / V2X based Cooperation Urban Autonomous Driving / 5G based Autonomous Driving Public Service / ...
Like My Doggy!
Test Operation Plan of ZERO SHUTTLE

• Operating Period and Time
  • 2018 ~ 2019
  • Weekday, AM 10-12, PM 2~4
  • Operating in day time

• Driving Information
  • Vehicle: 2 ZERO SHUTTLEs
  • Passenger: 11/vehicle
  • Cruising Speed: 25km/h
  • Travel Distance: 9km
  • Traffic Signal: 15 times
  • Left Turn: 4 times
  • Right Turn: 2 times
  • Lane Change: 12 times