TOURISM and Technology:
Understanding and Managing Technological Change

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### HOW CUSTOMER BEHAVIOR CHANGED?

<table>
<thead>
<tr>
<th>PAST</th>
<th>PRESENT &amp; FUTURE</th>
</tr>
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<tbody>
<tr>
<td>Technology makes the experience worse</td>
<td>Technology makes the experience better</td>
</tr>
<tr>
<td>Open 9 to 5* 5 days</td>
<td>Open 24* 7</td>
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<tr>
<td>Customers find content</td>
<td>Content find customers</td>
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<tr>
<td>Online reviews were not important</td>
<td>&gt;67% depend on online reviews before any purchase</td>
</tr>
<tr>
<td>Influenced by advertisements</td>
<td>Word-of-mouth and social media are far more influential</td>
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<tr>
<td>Preferred desktop over mobile</td>
<td>Prefer mobile over desktop</td>
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Source: Enhancier Cx Solutions

*Note: Prof. Yoon*
Industrial Revolution History

Increasingly fast cycle of industrial revolution

- **The First** (1784): 1870
- **Second** (1969)
- **Third** (2015): 5G, AI, Robot, AR, VR

An increase in range and influence

Source: KT Economic Management Institute
4IR IS ABOUT CONNECTIVITY

It’s about linking physical networks with cyber networks as one system, to allow real time information flow. Boosting the value add to customers.

Source: @EEF_Economists eef.org.uk/fourthindustrial
Tourism services have traditionally been provided by businesses such as hotels, taxis or tour operators. Recently, a growing number of individuals are proposing to share temporarily with tourists what they own (for example their house or car) or what they do (for example meals or excursions).

“Technology enhance connecting travelers with others.”
Digital Darwinism is the phenomenon when technology and society evolve faster than an organization can adapt.
Tourism Policy: Preparing Technology Evolutions

- Taking steps to future-proof tourism policy
- Modernizing regulatory and legislative frameworks
- Cultivating partnerships with industry, other governments and stockholders

Source: [www.oecd.org/cfe/tourism](http://www.oecd.org/cfe/tourism)  
Prof. Yoon
1. Taking steps to future-proof tourism policy

- Promoting a culture of improvement and future-oriented thinking.
- Monitoring megatrends and long-term scenario planning exercises.
2. Modernizing regulatory and legislative frameworks

- Undertake **regular reviews** of regulatory frameworks.
- Engage stakeholders in the **development of new regulatory frameworks**.
Need laws to regulate the tourism industry

- **Tourism Promotion Act**
  - Travel agency
  - Tourist accommodation business
  - Tourist facilities business
  - International convention business
  - Casino business
  - Amusement facility business
  - Tourist convenience facilities business

- **Tourism Promotion Basic Act**
  - **Tourism Business Act**
    - Travel agency, Casino business
    - International convention business, Amusement facility business
  - **Tourist Accommodation Promotion Act**
    - Tourist accommodation business
  - **Tourism Development Act**
    - Tourist facilities business, Tourist convenience facilities business

Travel platform service, tourist souvenir, travel map, AR VR sightseeing experience, etc. Some tourism venture is not tied up anywhere.
3. Cultivating partnerships with industry, other governments and stockholders

- The impacts of megatrends and the process of policymaking are more crosscutting than ever before.
Cultivating Tourism Ventures

1. Cultivating Tourism Ventures

- Customized Consulting (Tourism Venture Lab Account)
- Funding (Crowd funding)
- Legal advice and regulatory improvements

2. Introducing in-house tourism venture system

- Innovation model of public institution venture
- Launching KTO Tourism Technology lab
  ▶ Online Tour Secretary : Train social disadvantaged people such as the handicapped as an online tour guide
Tourism Venture Business Performance

Key performance figures for 2016 (2011 - 2016 self-aggregate)

- Excavation: 344
- Founded: 246
- Employ: 1,079

Quantitative expansion in 2013
- Senior Management Consultant Operations Division Tourism venture business
- BI development and database construction

Qualitative expansion in 2014
- National Geographic Travel Fair

Since 2015 Support for growth phase
- (Preliminary tourism venture business, tourism venture business) Fund creation and fund special loan operation
- Culture Creation Belt Cel Venture Complex

2016
- The 6th Industrial Venture Venture Business Contest Expansion of tourism venture fostering fund
- Tourism Promotion Development Fund Special Loan

2015
- Operation of Tourism Venture Company

2014
- National Geographic Travel Fair 2015 - Operation of Tourism Venture Company

2013
- Qualitative expansion in 2014
- Demonstration in 2011 Investment Support Team
- Pilot Project 1st Tourism Venture Business Contest held

2012
- Introduced in 2012 Established a dedicated organization [Tourism Venture Team] Held the first start-up competition

2011
- Investment Support Team
- Pilot Project 1st Tourism Venture
- Business Contest held

Prof. Yoon
# A plan for smart tourism in Busan

## 1. Improvement of travel information system

### 1. Integrated management of tourism information system
- Integrated management of tourism information distributed to City / Town / County and Busan Tourism Corporation
- Build a cloud-based tourism information platform

## 2. Reorganization of Busan Tourism App
- Location-based (map) service, SNS integration, user-friendly UI / UX implementation

## 3. Open Travel Information, and Content
- Activation of Busan tourism app development through free publicity of tourist information (text, photo, image data, etc.)

## 4. Activation of tourism contents through civil cooperation
- Alliance with private companies such as Naver Place and Kakao Tour Tips, to strengthen mutual cooperation
- Strengthen the provision of tourist information using Google Map, Youtube, and TripAdviser

Continuous update and management of systems and content needed
2. Establish scientific tourism policy using Big Data

1. Re-establishment of travel statistics index and establishing data-based scientific tourism policy
   - Re-establishing the current tourist statistics index using big data
   - Development of tourism products and services based on scientific data

2. Tourist inflow route Analysis
   - Analyze the size, increase / decrease rate, demographic characteristics, and influx of domestic and foreign tourists visiting Busan
   => reflect them in tourism policy

3. Travel Pattern analysis
   - Analyze preferred tourist destinations, time of stay, and travel routes of domestic and foreign tourists
   => reflect them in tourism policy

4. Travel Consumption Behavior Analysis
   - Analyze the patterns of consumption, area, time, items, and expenditure of domestic and foreign tourists
   => reflect them in tourism policy

Improve efficiency of tourism policy through big data analysis
A plan for smart tourism in Busan

3. Development of user-friendly smart tourism service

1. Travel guide service combined with Beacon / AR technology
   - Nampo-dong / international market
   - Tourist attractions / restaurants location information and guidance service using Beacon-based technology
   - Providing text, audio, and AR information for exhibits using Beacon

2. Exhibition guide service combined with beacon / AR technology
   - National Maritime Museum
   - Providing text, audio, and AR information for exhibits using Beacon

3. Revival of traditional market using Beacon / AR technology
   - Bujeon Market
   - Tourist attractions / restaurants location information and guidance service using Beacon-based technology
   - Providing Events, discount coupons using Beacon-based technology

4. Walking tour service combined with AR game
   - Gamcheon Culture Village
   - Walk tour service combined with AR game elements (benchmark ‘Pokemongo’)

User-centered content planning, continuous management of post-content, participation of business owner needed
4. Vitalize tourism through Smart City Service

1. Smart parking
   - Busan City
   - Eliminate parking difficulties around major tourist attractions and support faster and more convenient parking for tourists
   - Offer information of available Parking space, Parking reservation and payment, Parking lot sharing etc.

2. Prevention of missing children using smart band
   - Haeundae Beach, Busan Citizen Park
   - Identify the location of lost child and Support rescue activities using smart band

3. Maritime safety service using drone
   - Haeundae Beach etc.
   - Real-time monitoring of marine safety accidents such as drowning using drone
   - Surveillance of marine environment such as rip currents and jellyfish etc.

4. Smart tour guide service based on IoT
   - City Tour Bus, Haeundae Beach
   - Busan city tour smart unmanned tourist information service development
   - Provide PR contents using Beacon and Geo-Fence technology
   - Provide virtual experience service (ex. experience recommended course guide in advance etc.) using VR

Smart City Service is convenient for Busan citizens as well as tourists
## 5. Development of Future-oriented Tourism Contents and Service Technology

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<th>2</th>
<th>3</th>
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<tr>
<td><strong>Tour guide service using interactive AI technology</strong>&lt;br&gt;Interactive translation and interpretation services using interactive AI technology (Pilot test applied on tourist taxi) Directions, tour guide services using interactive AI technology (Pilot test applied on Tourist information center, major subway station)</td>
<td><strong>Development of tourism products using autonomous navigation tram</strong>&lt;br&gt;Development of new tourism products using unmanned trams</td>
<td><strong>VR/AR experience tourism contents production</strong>&lt;br&gt;Development of tangible experience tourism contents such as VR / hologram VR-based scuba diving, marine sports experience contents, hologram-based whale / dolphin show (National Maritime Museum etc.)</td>
<td><strong>Development of augmented culture contents product</strong>&lt;br&gt;Develop cultural products using hologram technology Hologram K-Pop Concert (Busan Won Asia Festival) Hologram Red Carpet (Pusan International Film Festival)</td>
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Mutual cooperation with private companies with technology is essential
### A plan for smart tourism in Busan

#### 6. Support for promoting private sector tourism development

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<th>Support for private sector tourism development</th>
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<tbody>
<tr>
<td>1</td>
<td>Create Segway and Electric Vehicle Tour Environment</td>
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<tr>
<td></td>
<td>Create safe driving environment to activate the promotion of private investment of Segway Tour, Electric Bike Tour</td>
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<td>2</td>
<td>Support for spreading media facade as a tourism resource</td>
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<td>Spread out through providing landscape lighting for private facilities and incentives for introducing media facades</td>
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<tr>
<td>3</td>
<td>Travel pass card for internationals</td>
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<tr>
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<td>Review the introduction of private sector-led foreigners Travel Pass Card (Mobile card combination, Combined transportation card, discount coupon etc.)</td>
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<td>4</td>
<td>Expansion of global easy payment franchisee</td>
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<tr>
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<td>Establishment of support plan for expansion of global easy payment for convenience service franchisee such as UnionPay, AliPay, PayPal and Apple Pay and cooperation with the private sector</td>
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Creating an Effective Mobile Map Service

Dabeeo MAPS - Mobile Solution

- Vector-based ultralight map service
- Multi-language service for Busan (8 languages)
- City map & tourist information
- Route guidance & nearby information
- Price information for accommodation

Android / iOS
Client: Busan City
Travel is about "interfacing" with other people.

Interfacing with other people through travel is what makes humanity flourish.

Technology make this possible for more people, in more locations, more of time, and more quickly.
Thank You!

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