

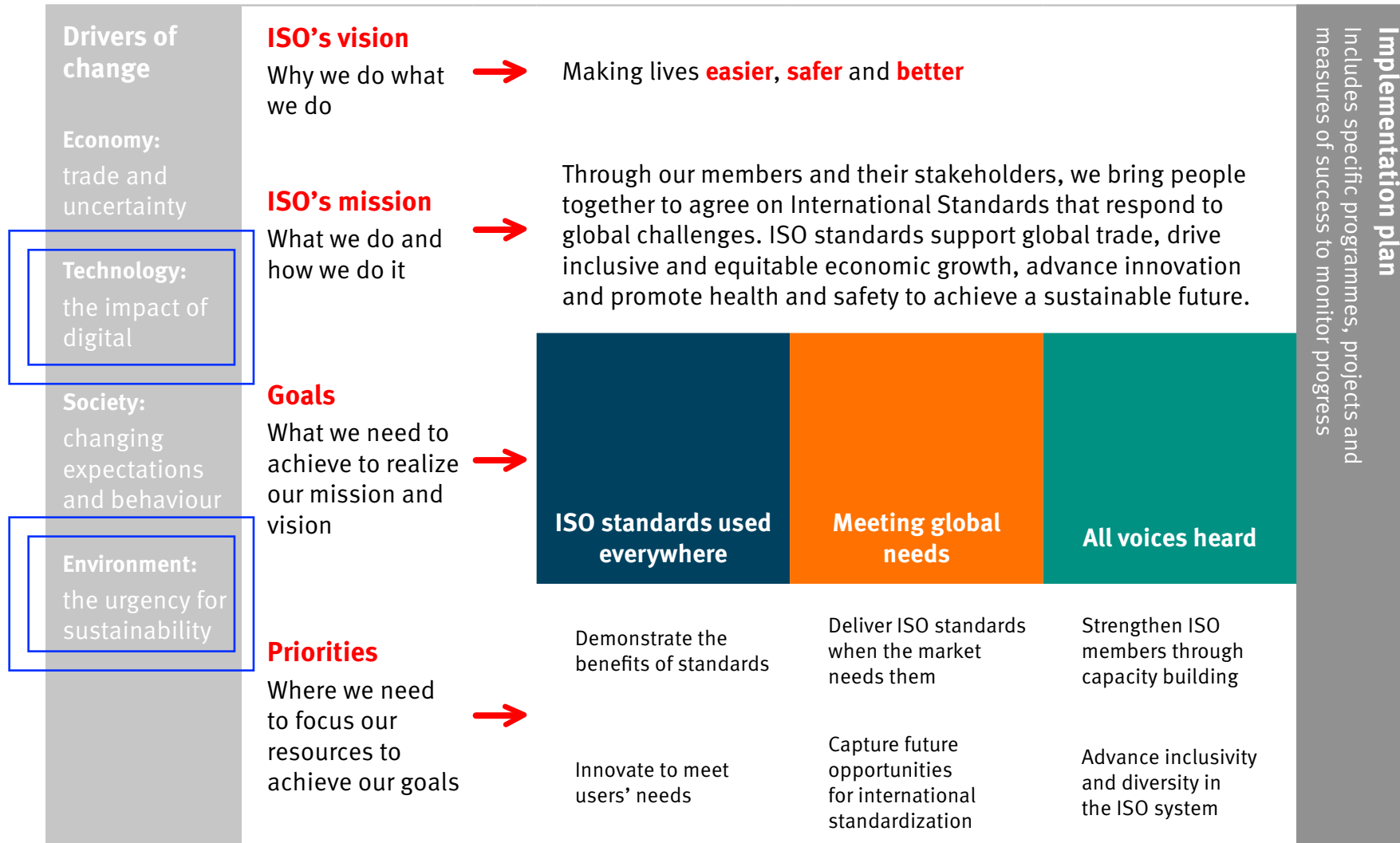
# **Global Standardization for Green ITS and Sustainable Mobility**

Expert Group Meeting on Harnessing Innovative Technologies  
to Advance Green Transformation for Sustainable Development in North and Central Asia  
Mar., 2024

Young-Jun MOON, Ph.D.  
ISO TMB Member & Professor in KAIST



# ISO Strategy 2030



Source: ISO Strategy 2030, ISO

# *Questions in Mobility*

☞ Is our transportation good enough for sustainable society?

- Safe?
- Mobility Accessible and/or Affordable?
- Efficient and/or Effective? (time & cost)
- **Sustainable?** (Environmental friendly)

# Global Challenges in Mobility Future

## Smart City in Korea

- ISO/TC204 (ITS) & ISO/TC268 (Smart City)

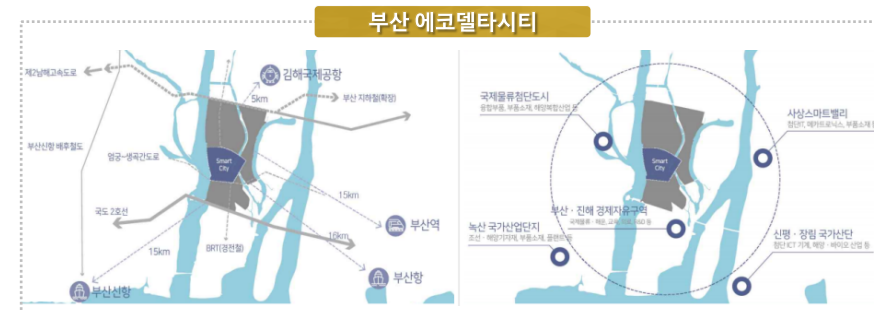
CITY PLANNING CONCEPT

“ City as a sustainable platform to enhance civic happiness and provide creative opportunities ”



- ① Mobility
- ② Healthcare
- ③ Education
- ④ Energy and Environment
- ⑤ Governance
- ⑥ Culture and Shopping
- ⑦ Jobs

Source: Smart City MP, KAIST



# ISO London Declaration for Climate Changes

## The London Declaration

<https://www.iso.org/ClimateAction/LondonDeclaration.html>

ISO will:

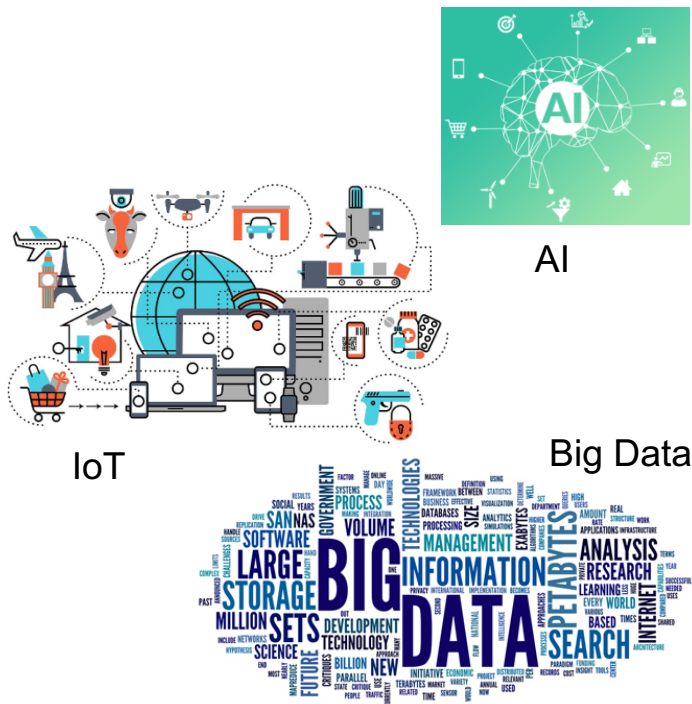
Foster the **active consideration of climate science and associated transitions** in the development of all new and revised International Standards and publications

Facilitate the **involvement of civil society and those most vulnerable to climate change** in the development of International Standards and publications



# Digitalization & Electrification

- Green ITS and Sustainable Mobility



AI

Big Data

IoT

Automated shuttle



Personal Mobility

SEGWAY I2 SE				NINEBOT MINIPRO			
제품 중량	최대 하중	최고 속도	주행 거리	제품 중량	최대 하중	최고 속도	주행 거리
47.3kg	117kg	20km/h	25km	11.6kg	100kg	20km/h	-

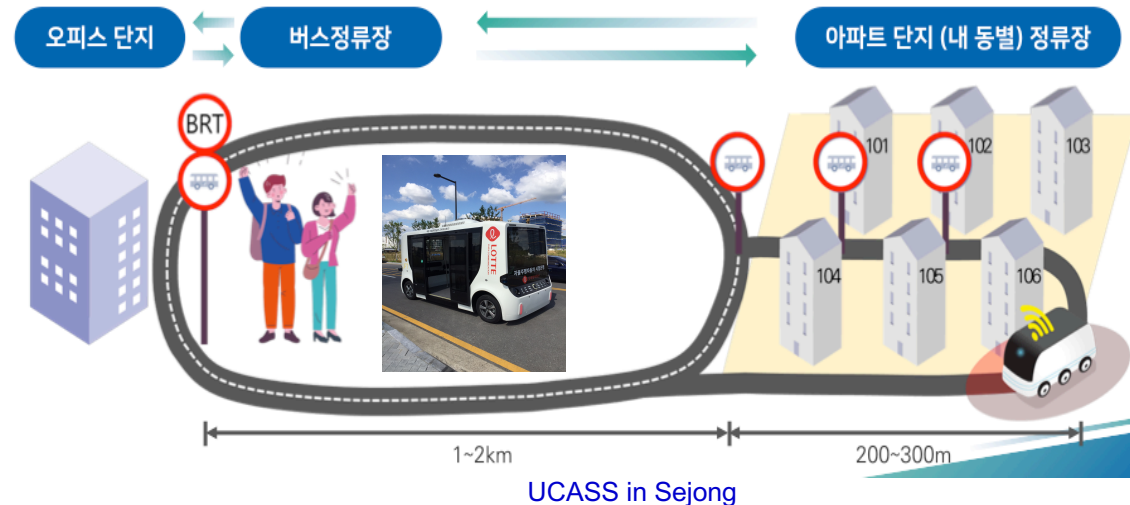
자료: <http://www.segway.com/prod/style/segway-i2-seG>

자료: [http://www.airwheel.net/home/specs/23\(2016.10.28\)](http://www.airwheel.net/home/specs/23(2016.10.28))

# Digitalization & Electrification

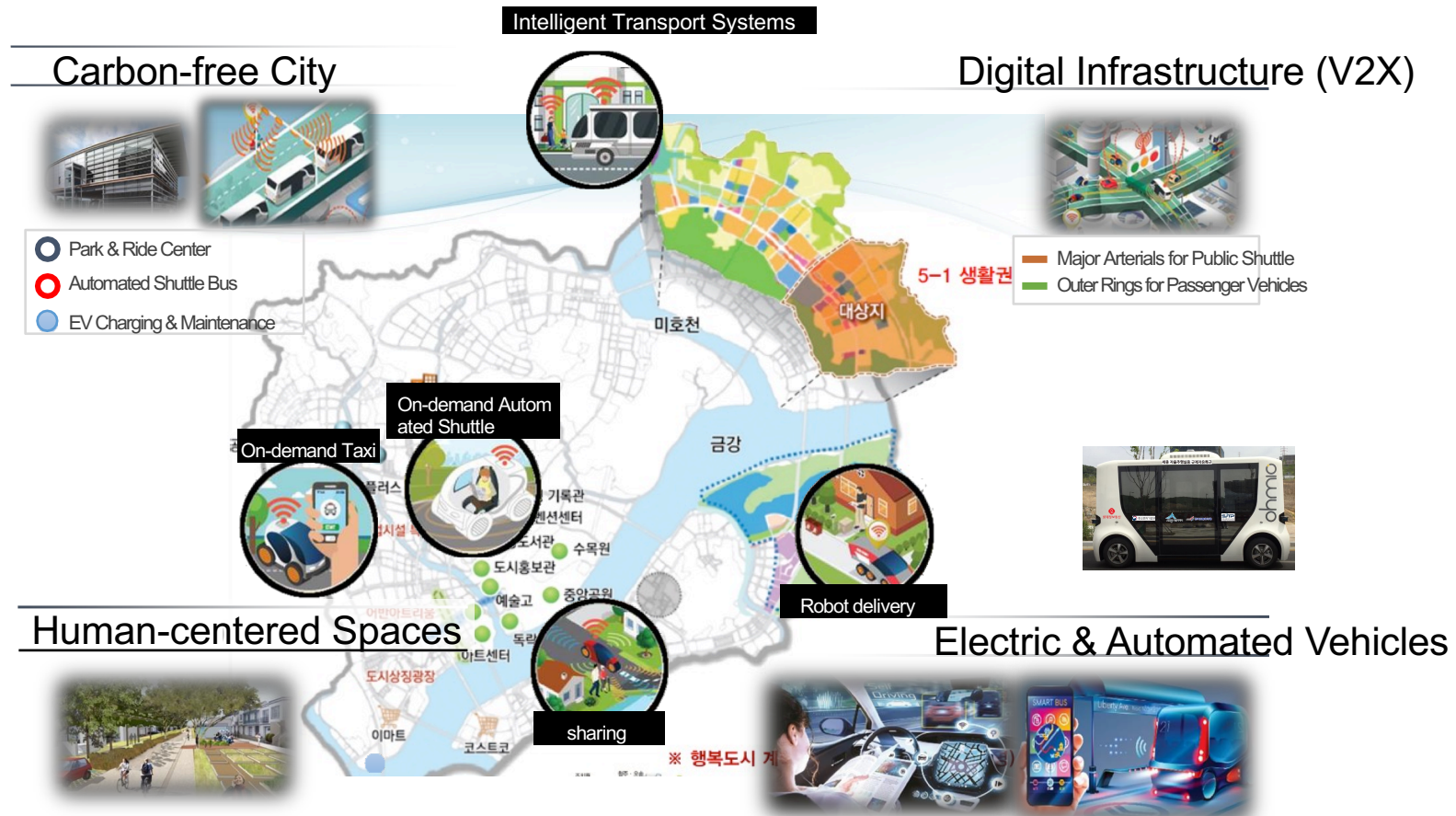
- Connected & Automated Driving Systems (CADS)
  - Passenger Car : High Speed & Designated Motorways
    - Level 3 being in the Market around mid-2020 by OEM
  - Public & Shared : Low Speed & Urban Mobility
    - Level 4 (Driverless) being in the Market in 2020 by SME
    - Urban Connected Automated Shuttle System (UCASS) in Sejong City
      - “LIMO” Shuttle by KOTI + Ohmio + Lotte from 2019

자율주행 셔틀을 이용해 주거단지와 생활권역을 연결해주는 “단지형 자율주행 셔틀”



# Digitalization & Electrification

## ➤ Green ITS and Sustainable Mobility Services



Source: The Korea Transport Institute (KOTI, 2016)

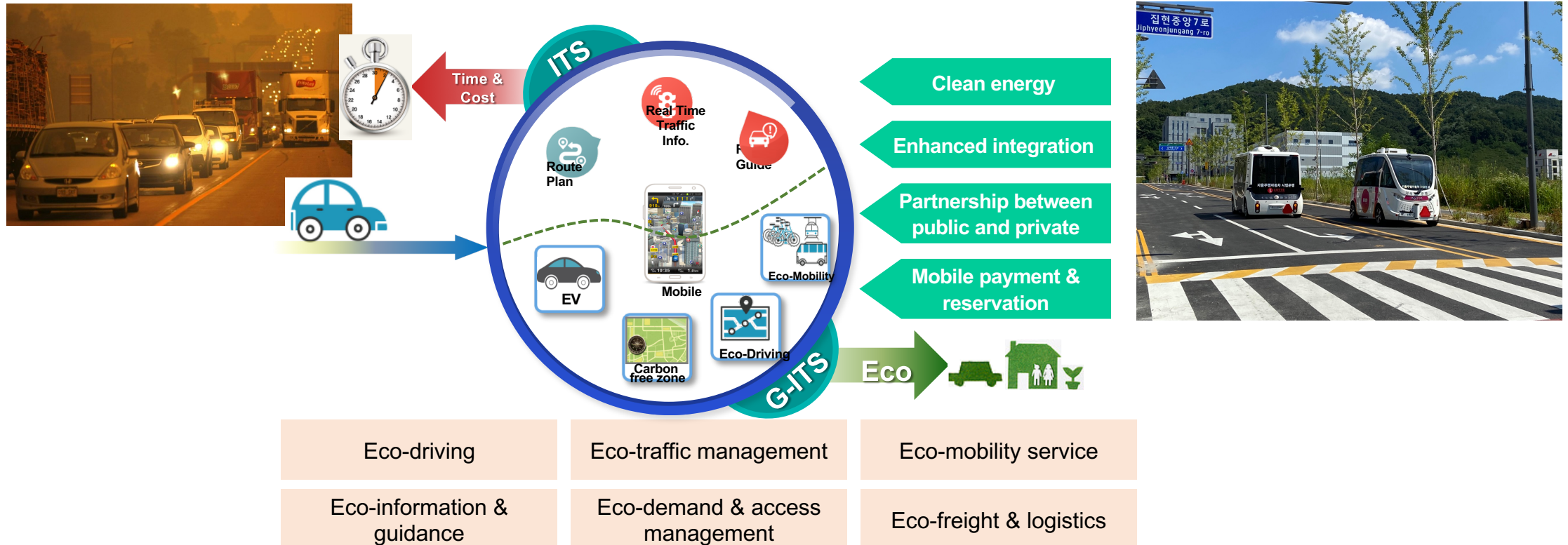
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# Global Standardization for Green ITS

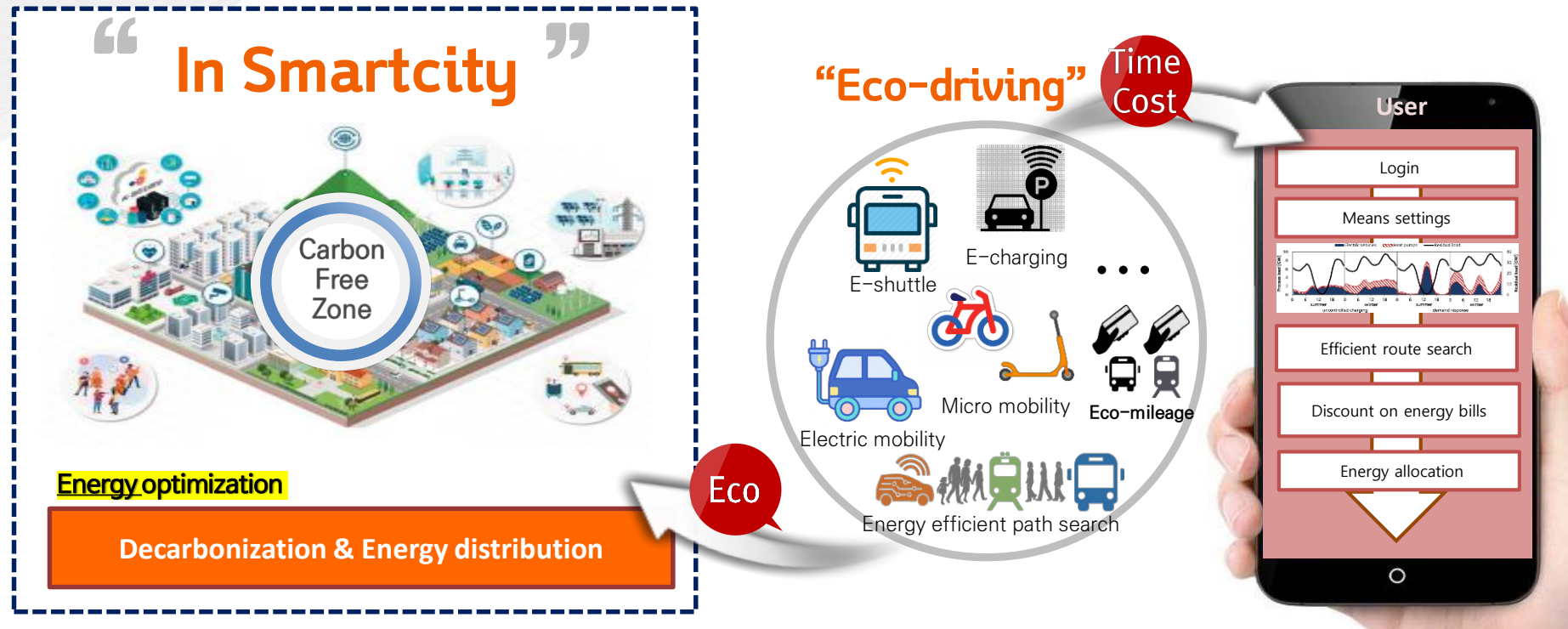
## “Green ITS Services” based on Digitalization & Electrification

- ISO 20529-1 & ISO 20529-2 : ISO/TC204
- ISO 18561-1 & ISO 18561-2 : ISO/TC204



# Global Standardization for Green ITS

## The need to switch to future mobility



# ***Global Standardization for Green ITS***

## ***☞ Nomadic & Mobile Devices for Green ITS in Global Society***

- Providing safety guidance on roadsides with all moving subjects including vulnerable road users (VRU) on nomadic & mobile devices
  - ☞ To save the peoples on roadside through nomadic & mobile devices
- Promoting eco and/or green mobility services on nomadic & mobile devices, for both city operators and peoples living in the city for managing carbon-free and energy related mobility
  - ☞ To save the planet in global warming through nomadic & mobile devices

*☞ Future Domains of International Standardization as a New Technical Committee*

***Thank you very much!***

***Young-Jun MOON, Ph.D., Professor***

ISO TMB Member & ISO/TC204 WG17 Convenor

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