Proposal for Korea-Europe cooperation to develop a public transportation and charging infrastructure monitoring system for hydrogen energy utilization.

This proposal aims to facilitate multilateral cooperation between two or more European countries and Korea.

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1. The Development of the Conurbation Low-Floor Hydrogen Fuel Cell Electric(HFCE) Bus

1.1. Overview

Low-floor HFCE bus structure and system

- Hydrogen Fuel Cell Electric Power train
- Chassis Platform
- Application and development of reinforced materials for Chassis
- Interior/ Exterior system etc.

Building vehicle safety systems and prototype

- FCA(Forward Collision Avoidance Assist) / VDC(Vehicle Dynamic Control / LDW(Lane Departure Warning), etc.
- Adjusting technology the number of wheelchair spaces to the needs
- Other driver and passenger safety systems
- Real-world performance evaluation for optimization etc.

▪ Powertrain specifications

Length × Width × Height (mm)		12,550 × 2,490 × 3,400
Fuel Cell	**kW (Gross)**	220 kW
Battery	**Capacity(Lithium-ion)**	48 kWh
Driving motor (Max/Cont.)		500/350kW (Central type)
Driving distance on a single charge		560 km(73KPH, Empty Car) - 16.327 km/H2 kg

▪ Others

Seater (Persons)	38
Wheelchair ride-on	1 (+ 1 available)
Low-floor	340mm or less from the ground (for the mobility handicapped)
Maximum Power	500 kW
Minimum clearance circle	12 M

1. The Development of the Conurbation Low-Floor Hydrogen Fuel Cell Electric(HFCE) Bus

1.2. Joint R&D (Draft/Example)

Representative & Managing Agency

Industry-Academia-Public Collaboration

- Developing Bare Chassis
- Supporting EU/local demand and the needs of technology
- Supporting vehicle safety systems and a prototype

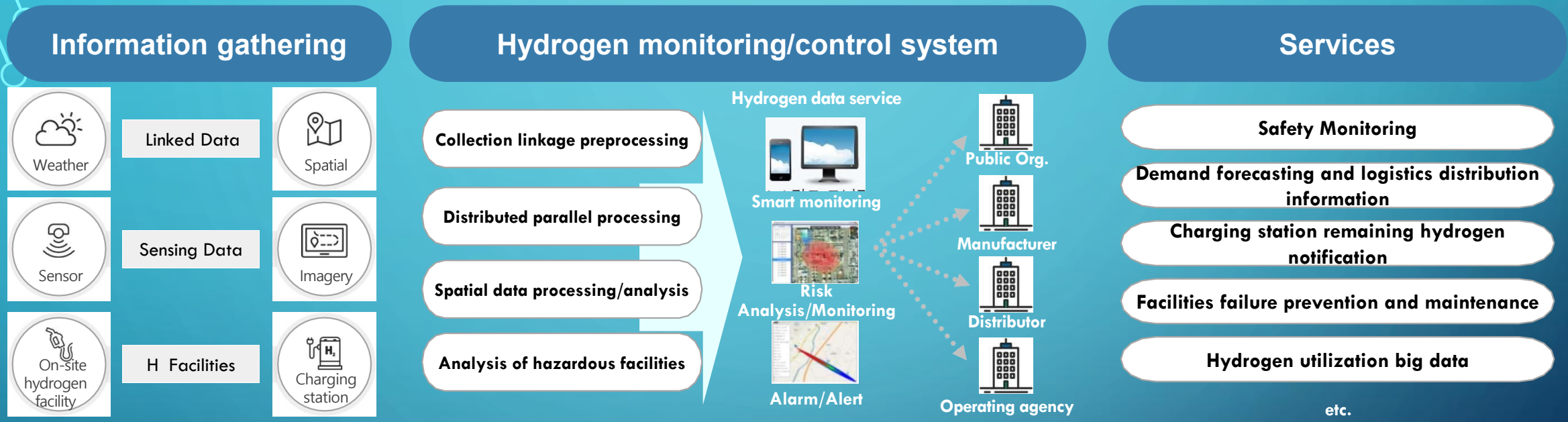
※ This is a draft and example, and may be subject to flexibility through discussion with the partner side.

Representative & Managing Agency

Industry-Academia-Public Collaboration

Commonness	▪ Developing Bus Body in White(BIW), Interior/ Exterior system, etc., for the standard of EU/local
Univ./Public	▪ Research for EU/local demand and the needs of technology ▪ Research for institutional systems, such as standards/regulations in EU/local ▪ Research team building through Industry-academia networking ▪ Co-work for field operation in the local ▪ Data gathering and monitoring (Joint) – performance, safety, and improvement, etc. ▪ Co-developing relevant policies (Joint) ▪ HFCE bus test operation in the proving ground
Company/ Association	▪ Partnering with Korean companies ▪ Technology/Business alliance ▪ Field test operation in the local ▪ Business development in EU/local
Municipality	▪ Field test operation in the local ▪ Beneficiary ▪ European reference city for eco-friendly/handicapped-friendly public transport

2. Efficient spatial information-based hydrogen integrated control platform



1. This technology aims to implement an integrated control system at the local and public levels.
2. In the long term, it is proposed as the beginning of cooperation in the Korea-EU Hydrogen Economy Belt.
3. Seeking partners to develop this technology, SW, HW, System, etc.
4. The detailed role assignment will be determined through discussion.
5. Another proposal : Development of hydrogen production and charging technologies to utilize urban railway regeneration and residual electricity.

Thank you for your attention.

On behalf of the Korean research group
(The Development of the Standard Model of Low-Floor Bus for Operating on Motorways)

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