Parcel Goods Traceability in Last Mile Delivery

– T&L Domain

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1. Background

Issues

▪ Increasing parcel logistics around the world

- Increasing the volume of contactless transactions due to COVID-19
- Pursuing e-commerce activation
- Diversification of delivery services (next-day (or one-day) delivery, early morning delivery, delivery to the unmanned locker, etc.)
- Digital transformation accelerates the transition to on-tact business
- Requires standardized delivery information that allows sharing of delivery information: need to support the requirements of delivery tracking due to the increased delivery of items such as fresh food that is sensitive goods to temperature and humidity
- The emergence of last-mile delivery based on eco-friendly and unmanned transport means for delivery to end consumers

1. Background

Issues

▪ Requirements

- Diversification of logistics data generating entities: autonomous transport means, IoT devices, delivery robots, drones, etc.
- Introducing the combined delivery method with manned and unmanned transport means in last-mile delivery
- Expansion of unmanned logistics facilities: Need to monitor facilities and operational status in facilities operated without human intervention, such as unmanned stores and unmanned warehouses
- Expansion of delivery tracking scope according to last-mile delivery due to Expansion of service scope to delivery to final customers

2. Scope

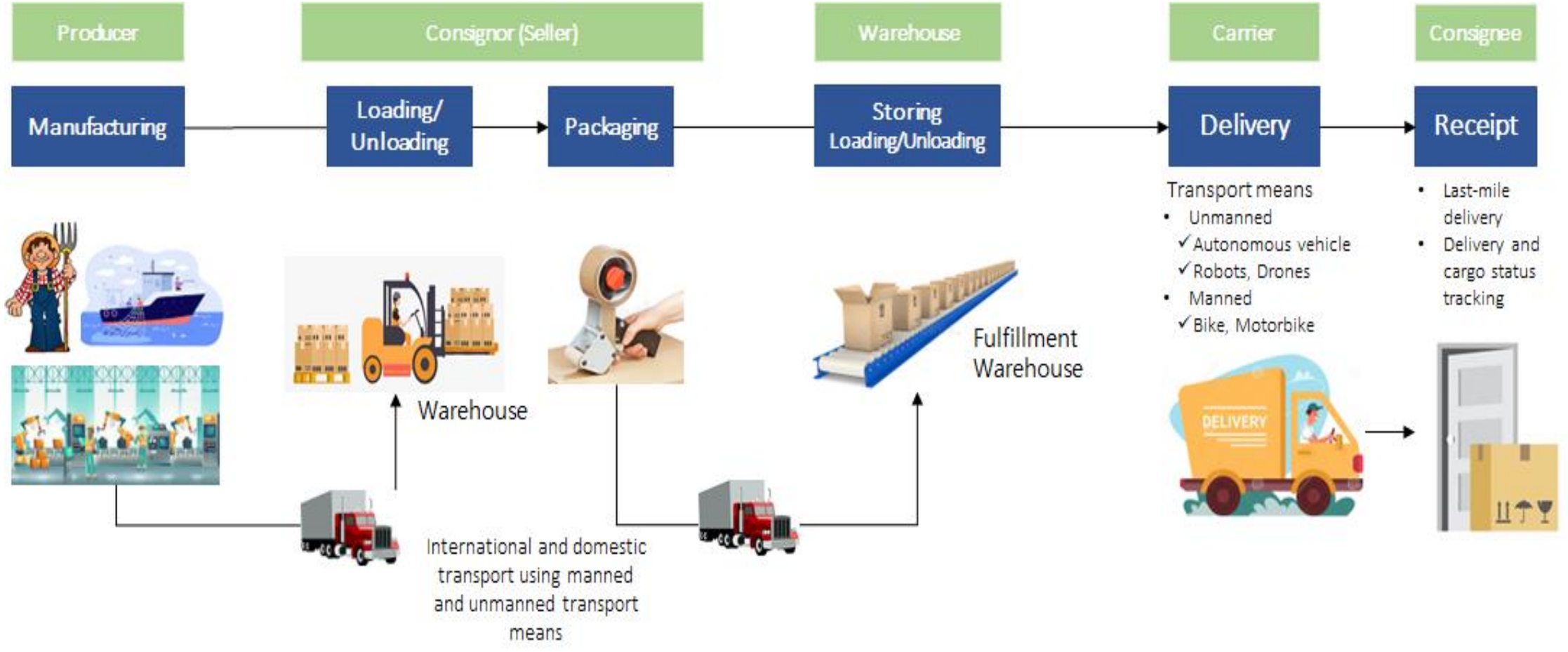
Objectives

- **Seamless parcel goods traceability**
  - Accuracy: Maintaining information accuracy and transparency throughout the entire supply chain, from producers, distribution centers, warehouses, stores, and transport means to end customers until parcel goods reach the final consumer
  - Reliability: For seamless parcel goods flow and to check the status of last-mile delivery, it is recommended to ensure data sharing and management of discontinuous delivery stages or between participating entities (distribution center, warehouse, store, end consumer, unmanned transport means, etc.)
  - Diversity: Service framework for seamless traceability that has flexibility for various supply chain environments, including manned/unmanned stores, manned/unmanned warehouses, transport means for last-mile delivery, autonomous vehicles, mobile depots, etc.

2. Scope

Parcel goods traceability

- Last-mile delivery

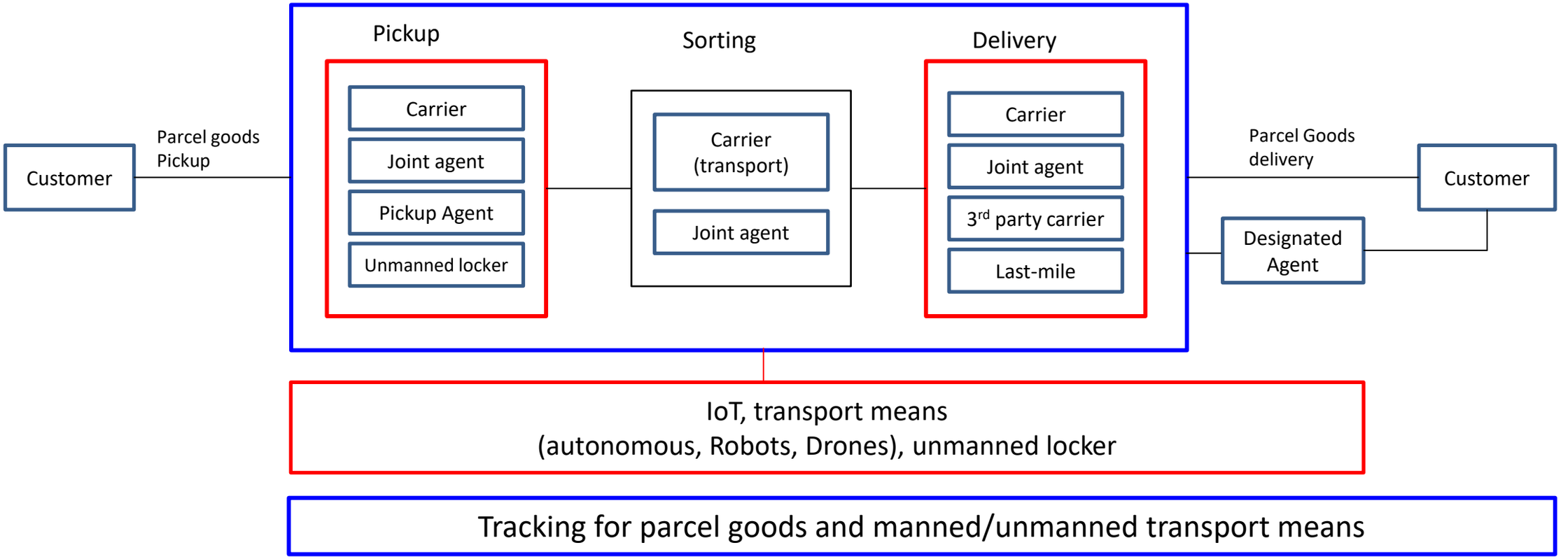


Seamless traceability in Last-mile Delivery

2. Scope

Parcel goods traceability

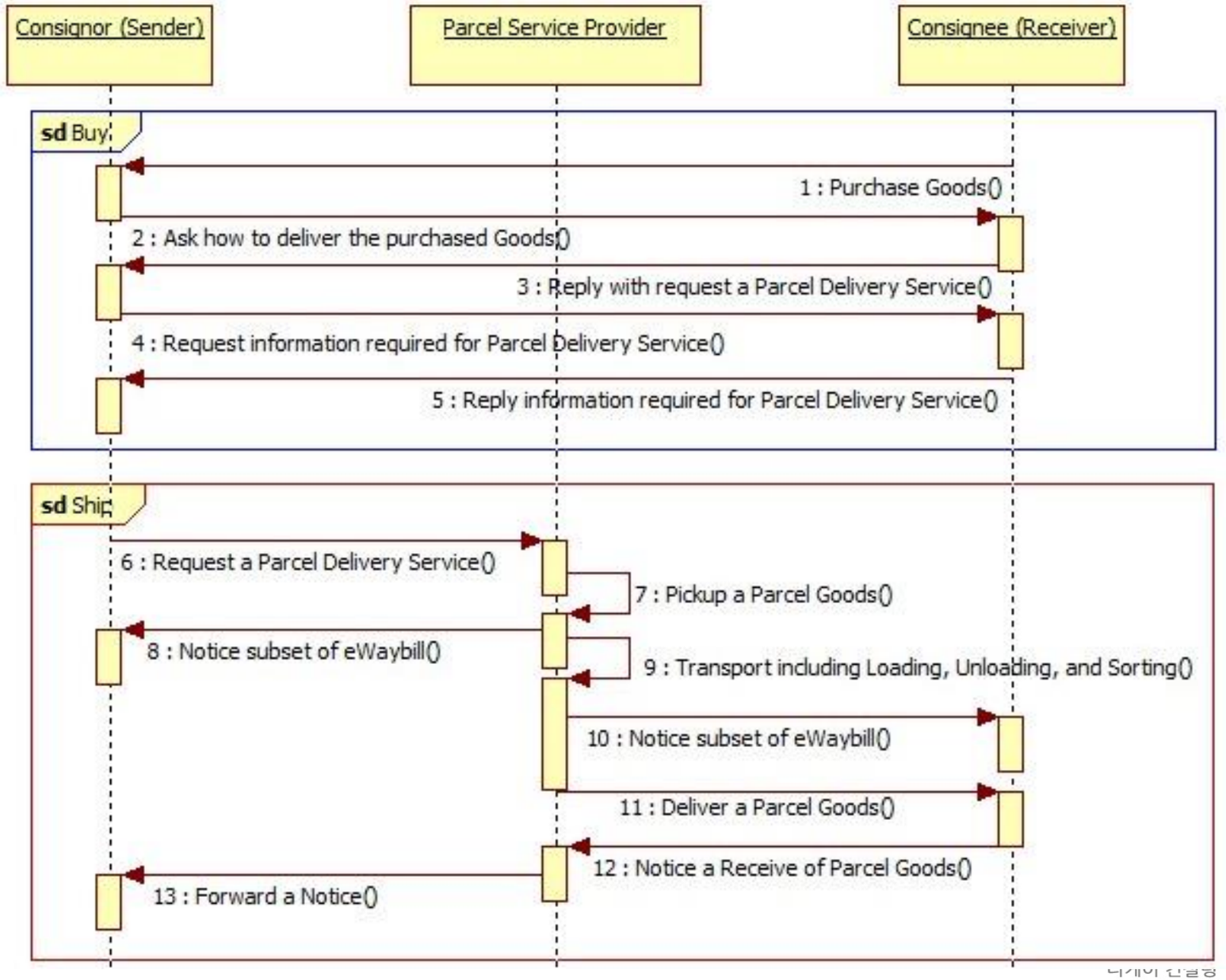
- Last-mile delivery



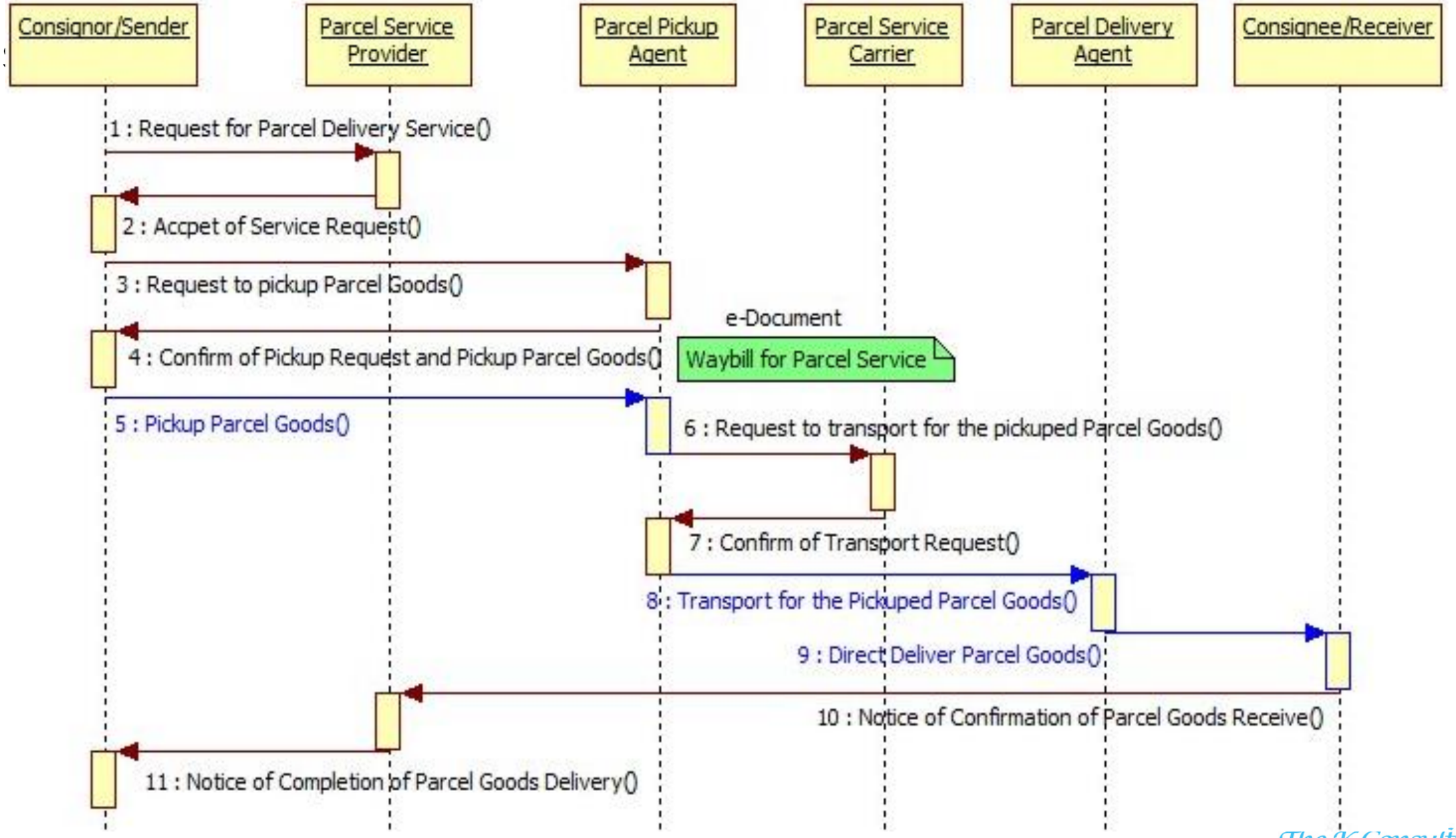
Underline Technology	Business Process	Information model	User Authentication	Interface (API)	Network (5G, Wi-Fi, Mobile, BLE, etc.)

2. Scope

- Parcel goods traceability
  - Sequence diagram



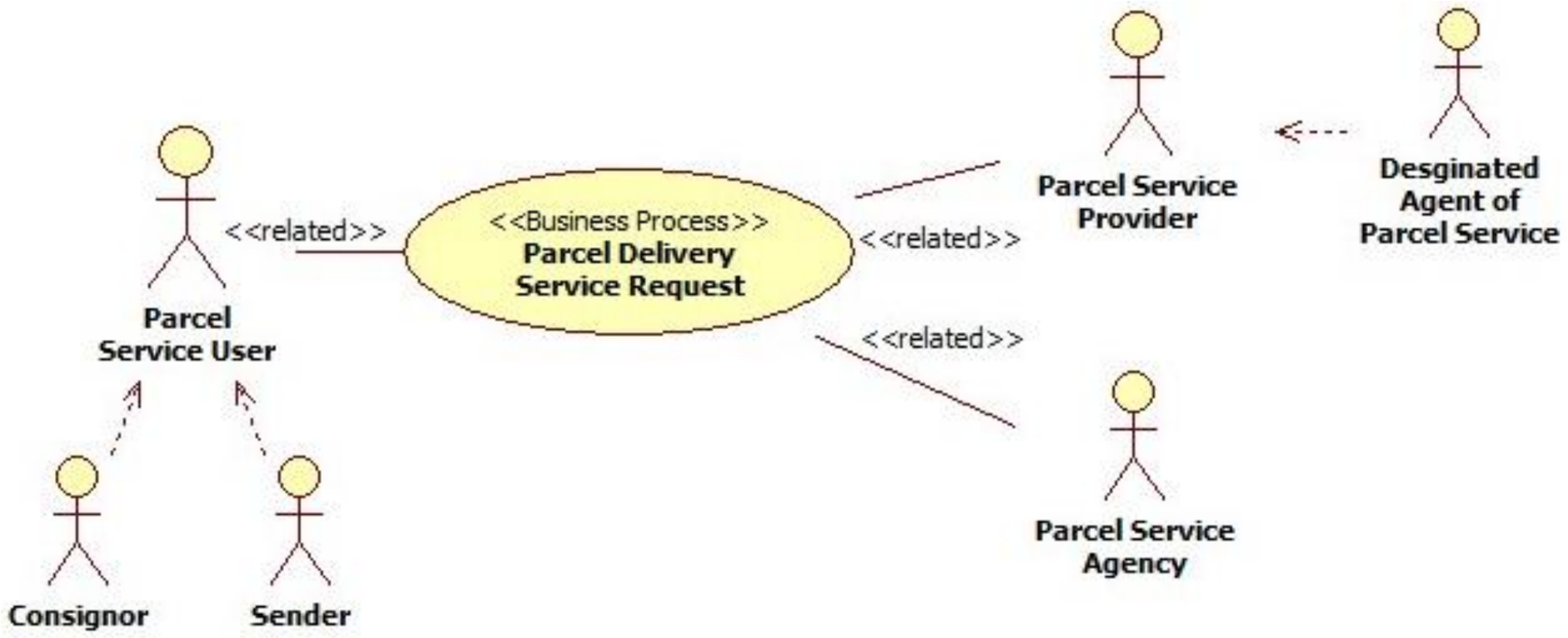
2. Scope

- Parcel goods traceability
  - 

2. Scope

Parcel goods traceability

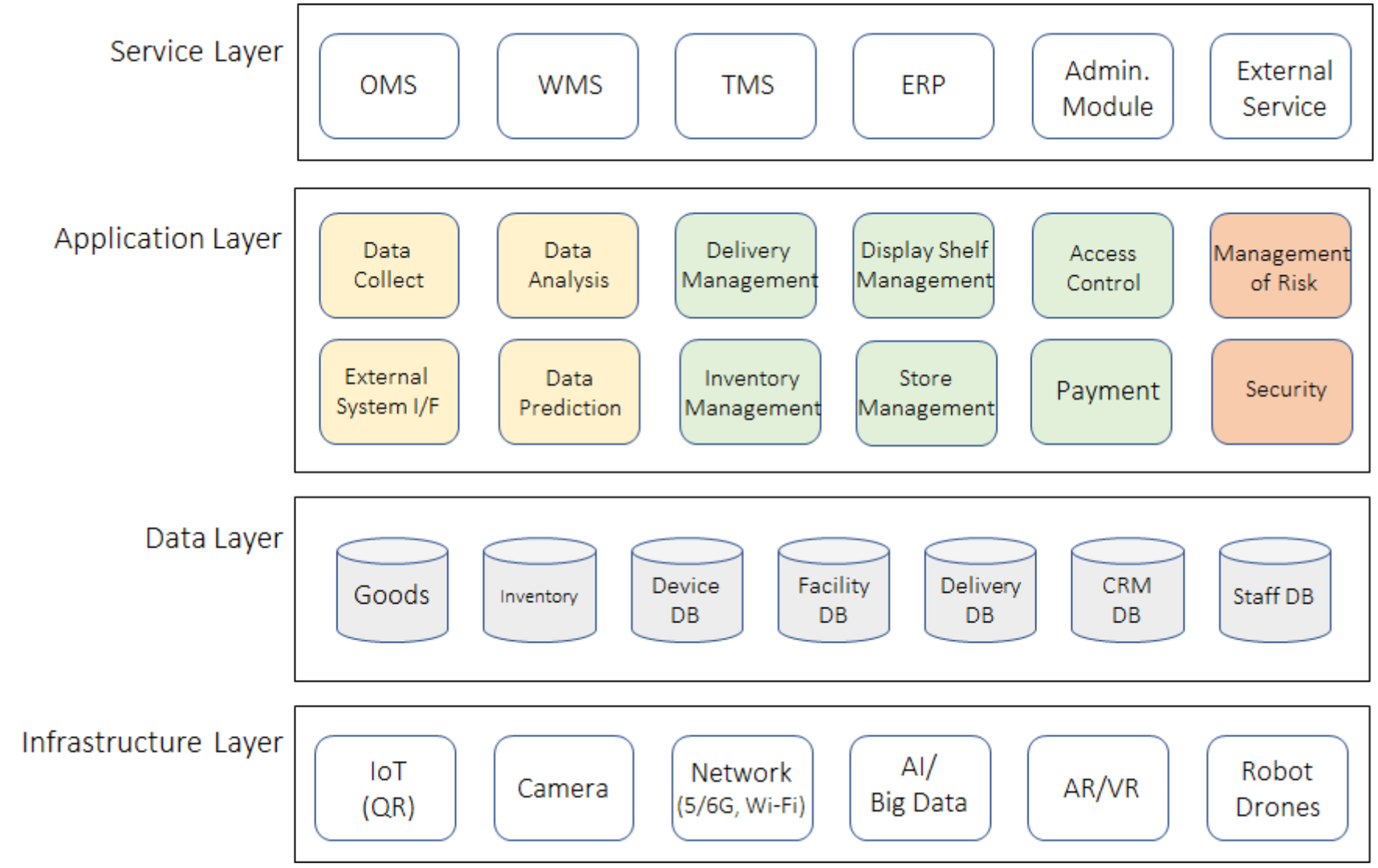
- Use case diagram – parcel goods delivery service request



2. Scope

Parcel goods traceability

- Service framework (TBD)



3. Deliverables

Project deliverables

Output

- BRS and eBusiness Standard for Parcel Goods waybill
- BRS and eBusiness Standard for Parcel Goods delivery receipt
- Whitepaper on Parcel Goods Traceability in last-mile delivery

Q&A

감사합니다

Thank You

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