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MADRID 2024

REINDUSTRIALIZING EUROPE

WHERE IS THE CONSTRUCTION EQUIPMENT SECTOR GOING?

23-25 Oct
2024
MADRID

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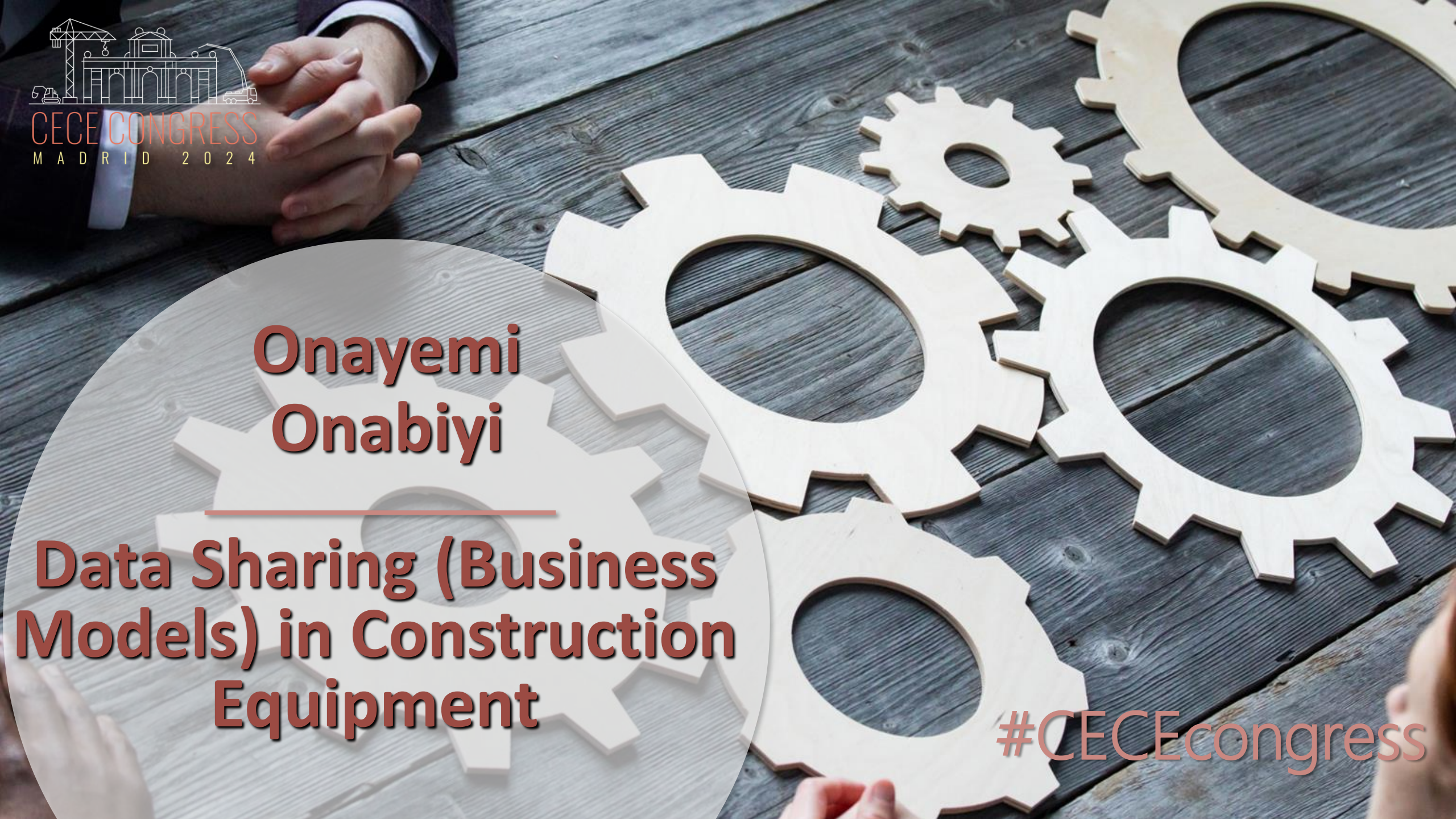

Onayemi Onabiyi

Data Sharing (Business Models) in Construction Equipment

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Hitachi Construction Machinery

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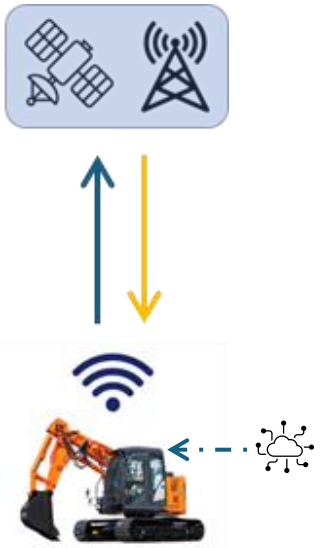
01 The existing data sharing systems/models

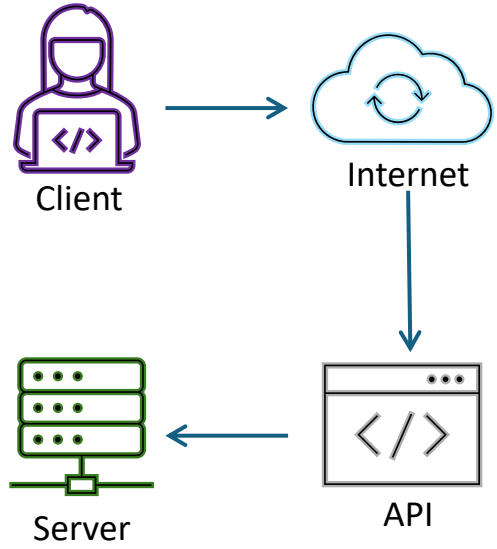
02 Use case example

03 Implication of the data act

Leveling the playing field – Terms/Terminology

Telematics	Telematics Data	IoT/CC	Restful - API
Télécommunications + Infor**Matique** = **Telematics**	< = Operating Hours Fuel Consumption = > < = Location Alerts = >	IoT = Internet of Things CC = Communication Controller	Application Programming Interface





- The existing data sharing systems/models

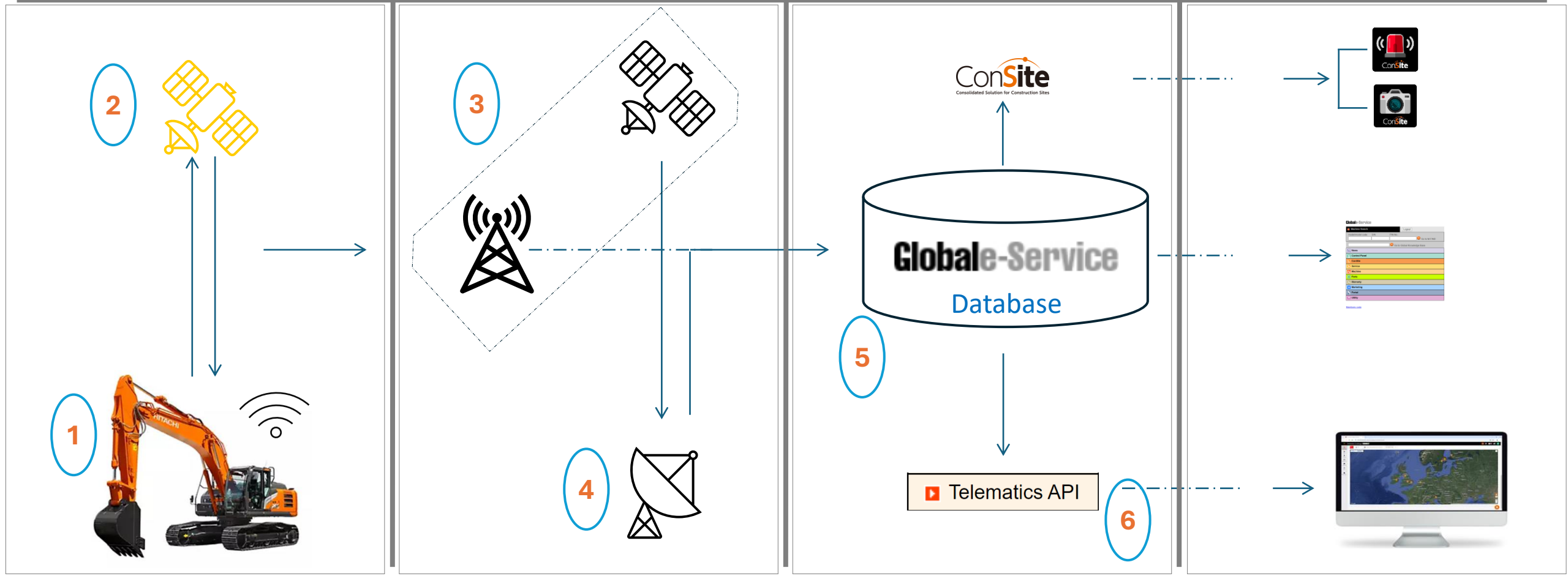
- Types of Data Shared
- The Data Flow
- Key Business Models
- Is the solution effective or not?

Types of Data Shared

- Location - Lat/Long/Altitude
- Cumulative Idle Non-Operating Hours
- Cumulative Operating Hours
- Fuel Consumed
- Fuel Used Last 24-Hours
- Alerts – Diagnostic Trouble Codes

The Data Flow

Generation	Transmission	Processing	Use cases



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Key Business Models

Subscription-Based	Platform-Based	Pay-Per-Use
• Equipment manufacturer or 3rd party. • Data as a service (DaaS) for a fee. • Customers can access the data on: 1. Equipment usage 2. Equipment performance 3. Maintenance needs	• Equipment manufacturer or 3rd party. • Gather data from multiple sources. • Data is used to provide insights on. 1. Fleet management 2. Predictive maintenance 3. Productivity analysis	• Users pay per use for data. • Often used when accessing data for: 1. Specific projects 2. Specific equipment

Is the solution effective or not?

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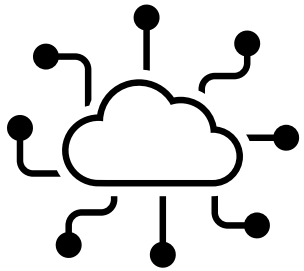
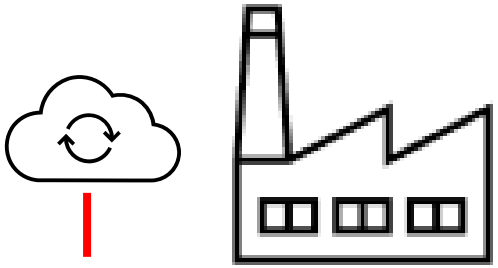
Improved Equipment Management | **Real-time Tracking.** **Preventive Maintenance.**	**Enhanced Productivity and Efficiency** | **Optimized Resource Allocation.** **Operational Insights.**	**Cost Savings** | **Fuel Efficiency.** **Reduced Equipment Wear and Tear.**	**Enhanced Safety and Risk Management** | **Operator Safety Monitoring.** **Geofencing.** **Incident Reporting.**
Regulatory Compliance | **Emissions Monitoring.** **Data for Audits and Reports.**	**Improved Project Management** | **Accurate Job Costing.** **Better Decision-Making.**	**Environmental Impact Reduction** | **Lower Fuel Consumption.** **Efficient Equipment Use.**	Yes.

- Use case example (OEM)

- The most common data sharing relationships
- The Economic Operators

Data Sharing Models/Use Case

Customer	IoT Supplier	Manufacturer (OEM)
		
User 		
3rd Party 		 Data Holder
Machine is sold with a Factory Fitted IoT Device	The IoT Device sends the generated data to OEM server	OEM handles the administration of access to the data

The Economic Operators - Roles

User	Data Recipient	Data Holder
(12) 'user' means a natural or legal person that owns a connected product or to whom temporary rights to use that connected product have been contractually transferred, or that receives related services;	(14) 'data recipient' means a natural or legal person, acting for purposes which are related to that person's trade, business, craft or profession, other than the user of a connected product or related service, to whom the data holder makes data available, including a third party following a request by the user to the data holder in accordance with a legal obligation under Union law or national legislation adopted in accordance with Union law;	(13) 'data holder' means a natural or legal person that has the right or obligation, in accordance with this Regulation, applicable Union law or national legislation adopted in accordance with Union law, to use and make available data, including, where contractually agreed, product data or related service data which it has retrieved or generated during the provision of a related service;

Customer

3rd Party

Equipment Manufacturer

- Implication of the data act

- stemming from the distinction between raw, pre-processed, and processed data introduced under the Data Act

Raw, Pre-processed & Processed

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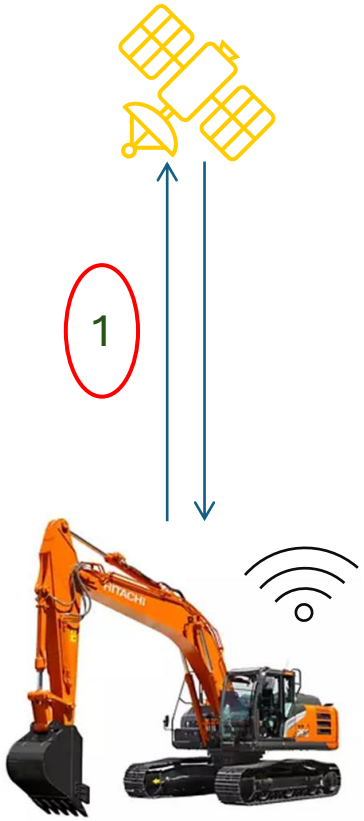
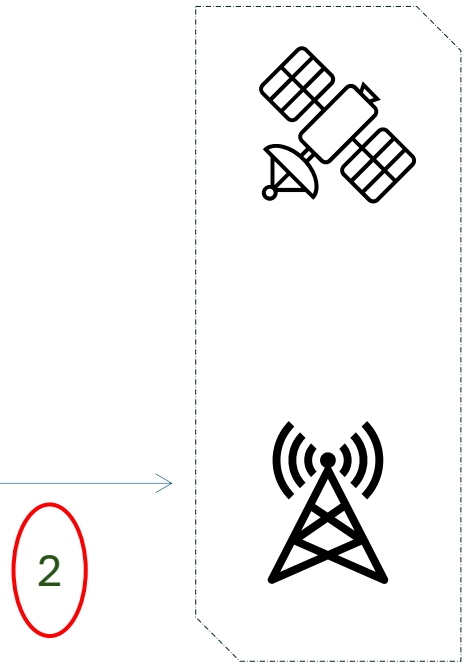
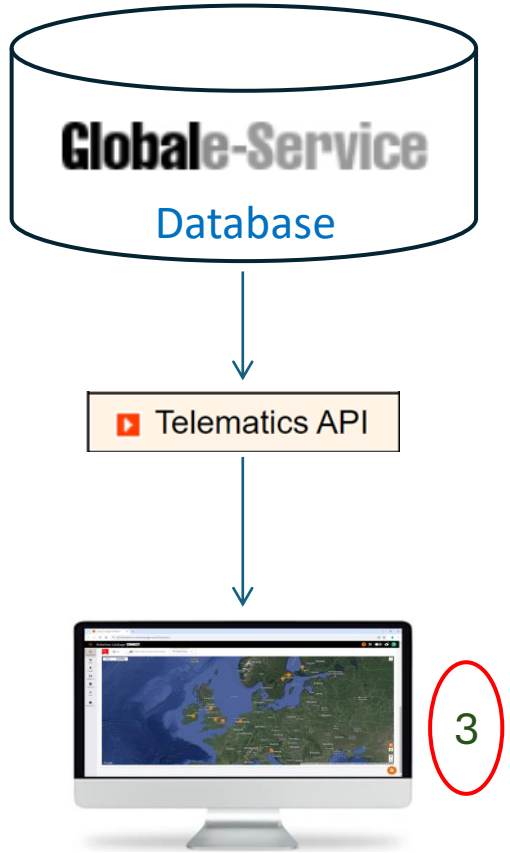
Raw	Pre-processed	Processed
(Also called source or primary data) 1. Data that is **automatically generated** by a connected product or sensor. 2. It is **unmodified** and has not undergone any processing. Examples: temperature readings, pressure levels, or any other direct outputs from sensors.	(Lightly processed to make it clear and usable for further analysis.) 1. Formatting data to make it consistent and usable. 2. Adding basic metadata, like timestamps or context. 3. Performing simple calculations to determine measurable quantities. 4. Examples: - Sorting data. - Converting it into a standard format. - Calculating changes like speed or temperature differences.	(Analyzed using complex algorithms or software.) 1. Infers insights or makes predictions. 2. Involves combining multiple data points, like sensor fusion. 3. Often uses proprietary techniques or intellectual property. 4. Examples: - Predictive Maintenance - Fleet Management

Raw, Pre-processed & Processed

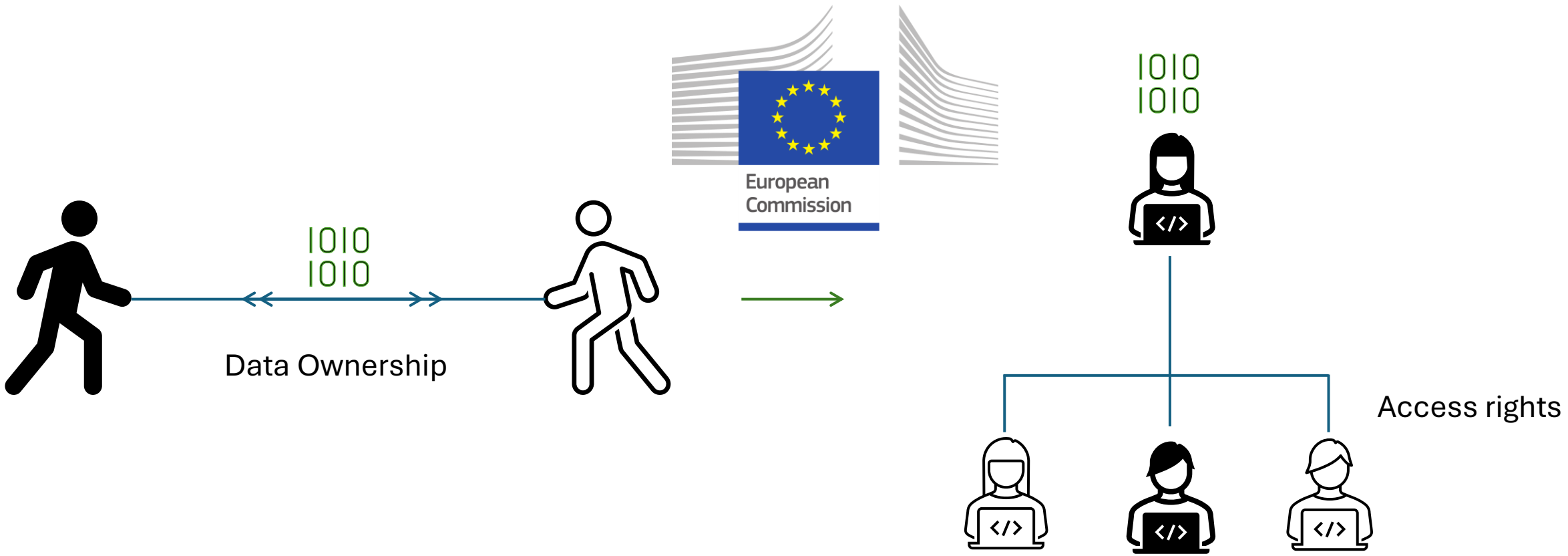
1. Raw	2. Pre-processed	3. Processed







From data ownership to data access rights



From data ownership to data access rights


THANK YOU FOR YOUR ATTENTION!
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