



FEDeRATED - EU DATA LOGISTICS FESTIVAL

#Living lab 23

30 November 2023



Ahola Digital **INTRODUCTION**

40+
EMPLOYEES



20 OF
LOGISTICS
YEARS EXPERIENCE



ISO
9001 AND 27001
CERTIFIED

50
APPLICATIONS
AND TOOLS
DEVELOPED




SUSTAINABLE
LOGISTICS
SOLUTIONS



TRUSTED
R&D
PARTNER



PARTNER OF CHOICE

OWN

NATIVE
CLOUD
PLATFORM

KOKKOLA,
FINLAND
LOCATED



Logistics **FEDeRATED** → **LOGISTICS 5.0**



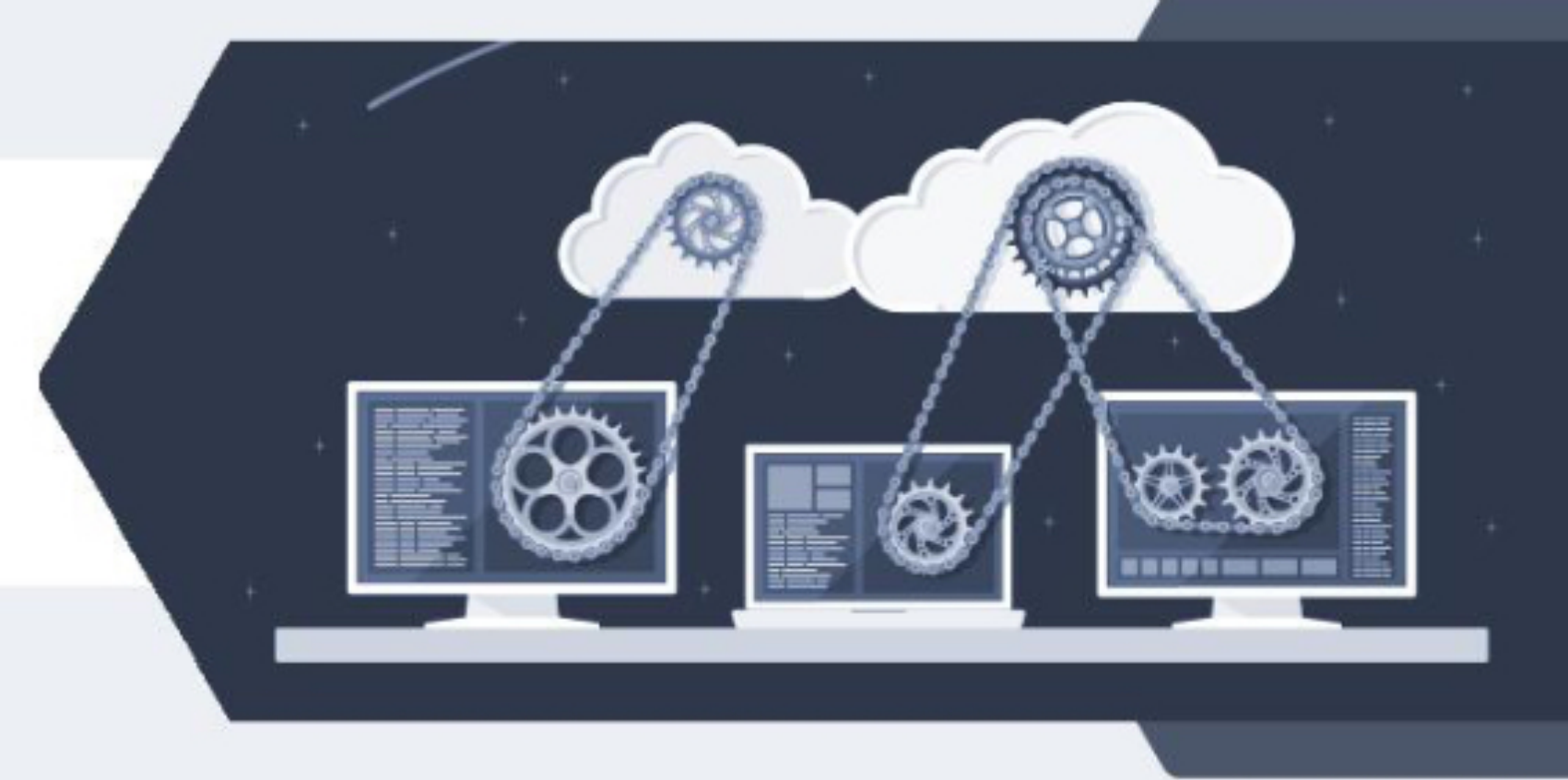
Logistics 4.0 did introduce IoT, Big Data, BI & Cloud Computing. Logistics 5.0 will continue to emphasize reconciling the human and machine, which will ultimately enable industries to improve the means and efficiency of logistics production.

Logistics 5.0 will be complemented by three pillars of Industry 5.0

- ★ Human Centricity
- ★ Resilience
- ★ Sustainability

The highly **automated, connected, and intelligent digital ecosystem** will thrive along with a human touch in Logistics 5.0. **Living Lab #23** will show how Ahola Digital is driving to the future of Logistics utilizing FEDeRATED.

FEDeRATED DATA SHARING PRINCIPLES



To successfully share data, the following elements must be met.

Semantic model:

To cover up all contextual data model requirements via core and extensions including private and public sector requirements, in FEDeRATED semantic models are relying on;

- **Digital twin** (Digital and real world object matching each others)
- **Business services and transactions**
- **Events** (real-time predictive events of transportation activities)

Data quality:

- **Correctness:** Data structure is made according to the specified data schemas
- **Completeness:** All mandatory data values are given as specified by the schema
- **Consistency:** Data shared different times from same vendor shall be consistent

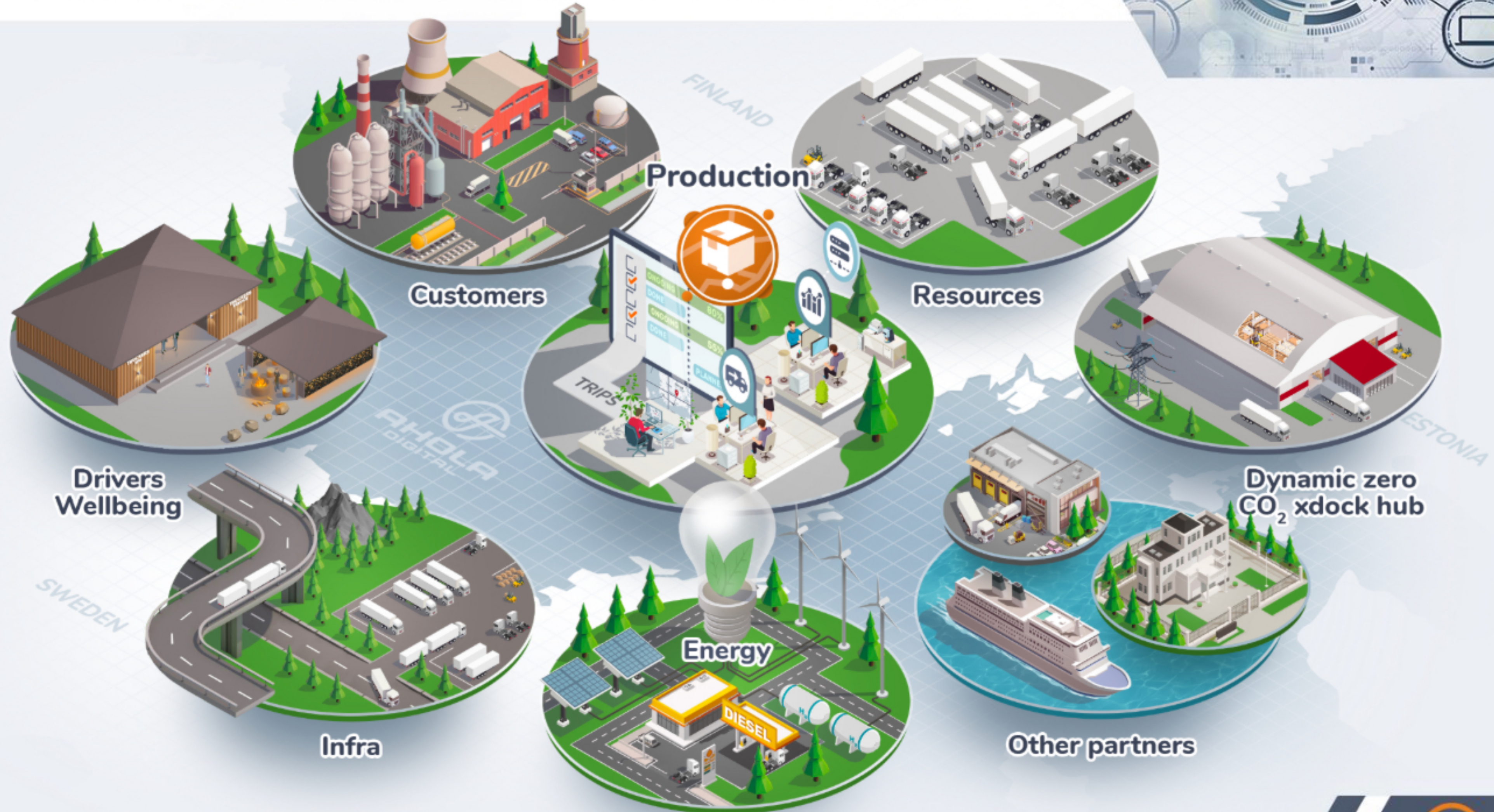
Data Sovereignty: Define and agree on data usage scope for shared data.

Data Provenance: Data provenance refers to the history of where data comes from, who has had it, and who owns it.

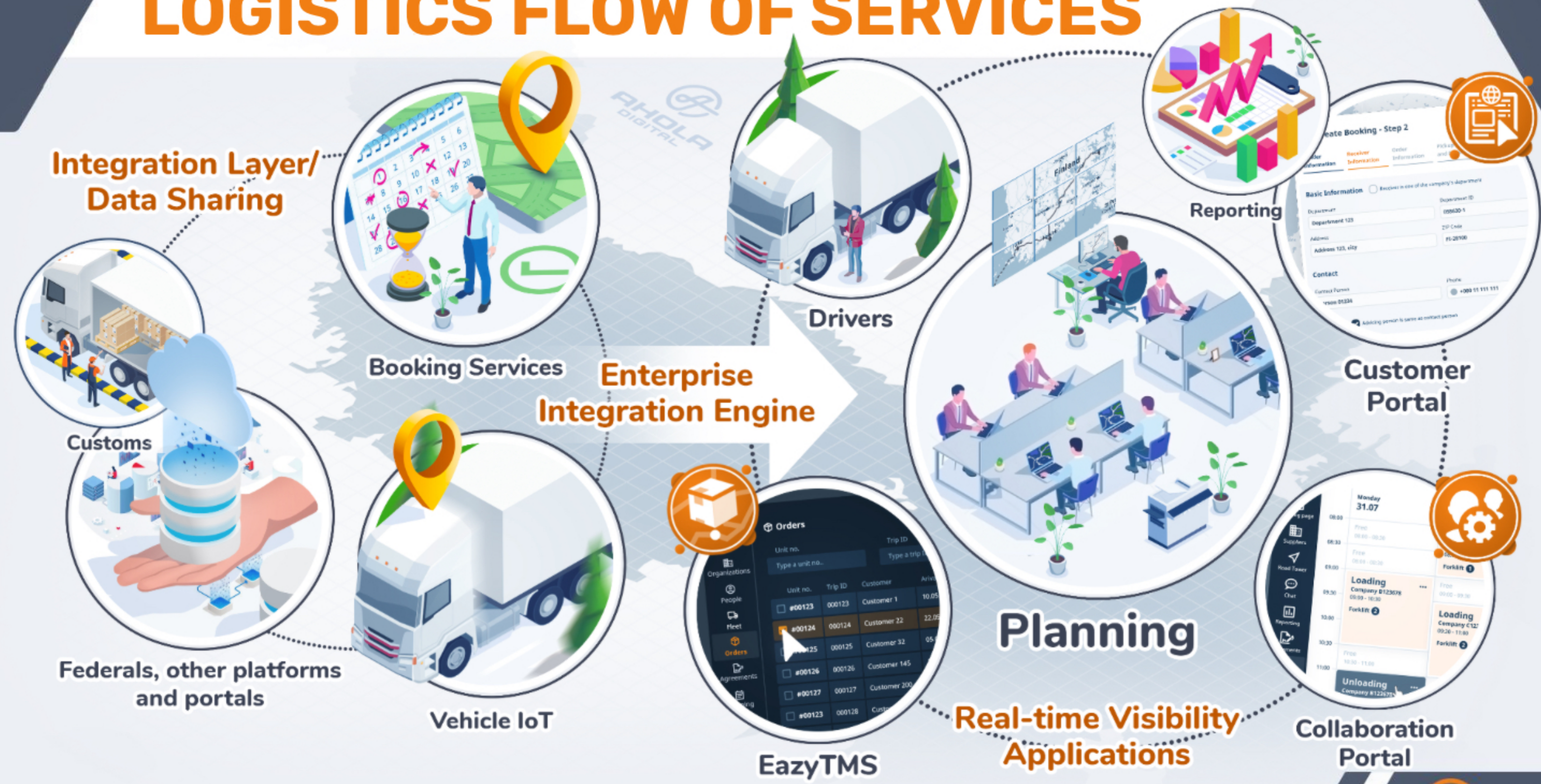
Cybersecurity:

- **Authentication:** An approved Identity Provider can confirm the identity of a person, organization or system.
- **Data confidentiality:** Data is not disclosed to unauthorized users.
- **Data integrity:** The data that is received is identical to the data that has been sent and has not been altered.
- **Non-repudiation:** The immutable proof of shared data in the event of a dispute.

Ahola Digital **LOGISTICS EVOLUTION 5.0**



Ahola Digital LOGISTICS FLOW OF SERVICES



Moving from a **REACTIVE TO PREDICTIVE**



STANDARD VISIBILITY

Information a location of goods is manually entered transmitted regular intervals by EDI. Because this information is only available several hours a day after-the-fact, it is unreliable and does not allow for proactivity



Transport Flow



REAL-TIME VISIBILITY

Information is captured on real-time systems (e.g. telematics, smartphones, IOT and API:s) and provides live location information of goods at that present moment. The information is reliable and allows for post-delivery performance analysis



PREDICTIVE VISIBILITY

The Information Collected is real-time is cross-checked with previously collected information, such as road traffic, estimated delivery times and routes to calculate an estimated time of arrival (ETA), making it possible to alert stakeholders several hours/days in advance



Next

SHORT VIDEO & LIVE DEMO

In the upcoming session, we will present a narrated video that illustrates the flow of information within a node of a supply chain network, with a specific focus on the transportation network.

This network forms a connected ecosystem within an independent transportation network that involves various stakeholders such as good owners, transport companies, and federal administrators such as customs and police.

The data sharing among these stakeholders is based on the principles established by the FEDeRATED project.

Following the video, we will demonstrate a live demo.

It is time for
▶ LIVE DEMO

