

Japan-EU Digital Week 2025

“Data Spaces – or the Story How to Make Business from Data in a Legal Fashion” Workshop

Automotive and Battery Dataspace on Ouranos Ecosystem

3 Apr. 2025

Automotive and Battery Traceability Center (ABtC)

Chairperson, Teruyoshi Fujiwara



Teruyoshi Fujiwara

Roles: **Automotive and Battery Traceability Center Association**

Chairperson

Japan Automobile Manufacturers Association

Leader of "Traceability Team"

Toyota Motor Corporation

Project General Mgr.

Experience: Digitalization of car development & manufacturing

Factory IoT

Enterprise digital transformation

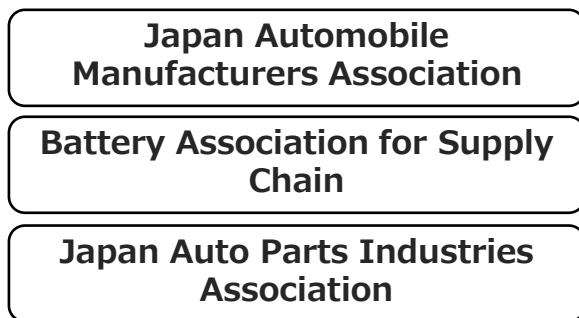
Safety design of vehicle control systems

IS General Director in Belgium; Automotive R&D, PE and Purchasing

About ABtC

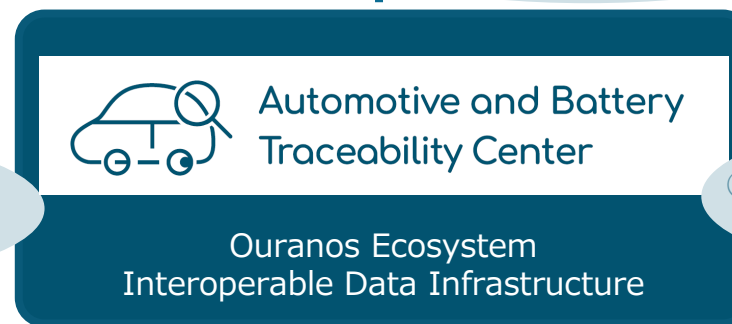
- ABtC was established in Feb 2024, as an independent dataspace operator responsible for safe and secure data sharing between companies in the automotive and battery supply chains.
- ABtC acquired accreditation as a “public interest digital platform operator” in Sep 2024.

<ABtC members>



User companies
(Automakers and suppliers)

①Neutral and safe
traceability services



②Joint projects
with industries

③Interoperability with
other data spaces

“Public interest digital platform
operator” Accreditation



Catena-X
Automotive Network

Other data
spaces

International interoperability

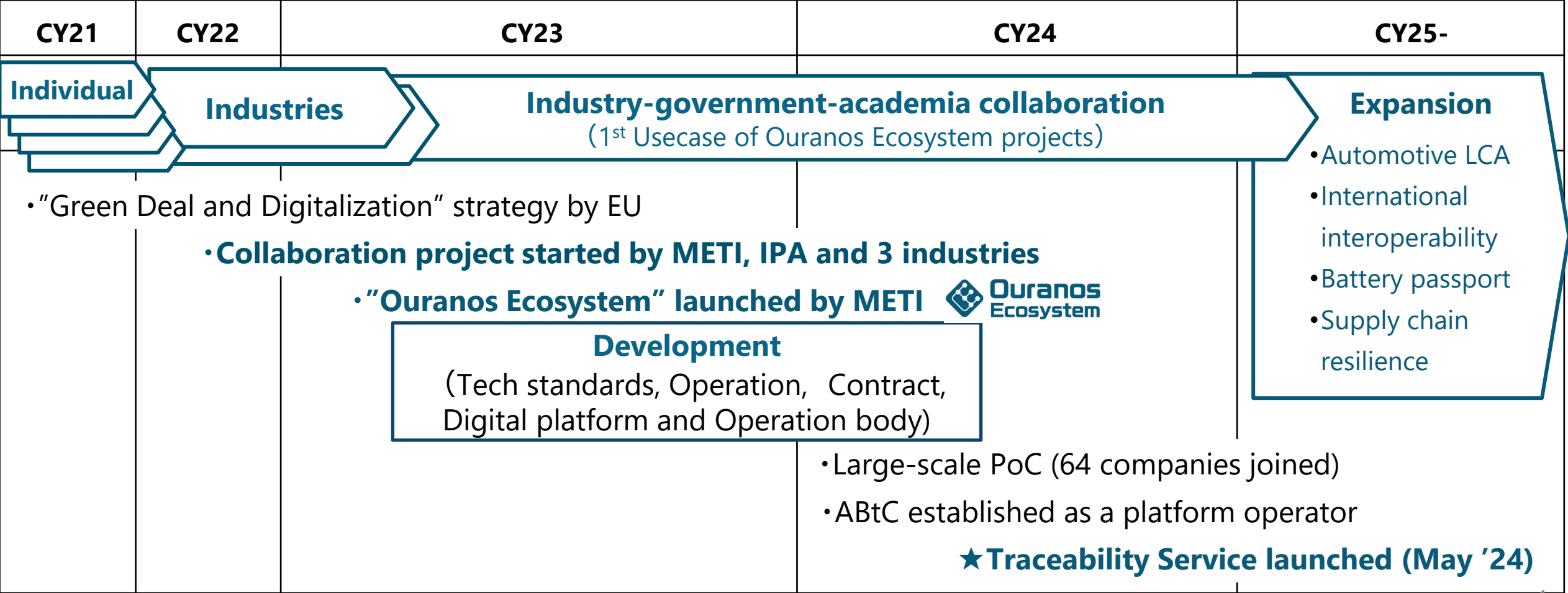
MOU for technical PoC was signed between
IPA and Catena-X in Apr 2024.

History of Automotive and battery dataspace in Japan

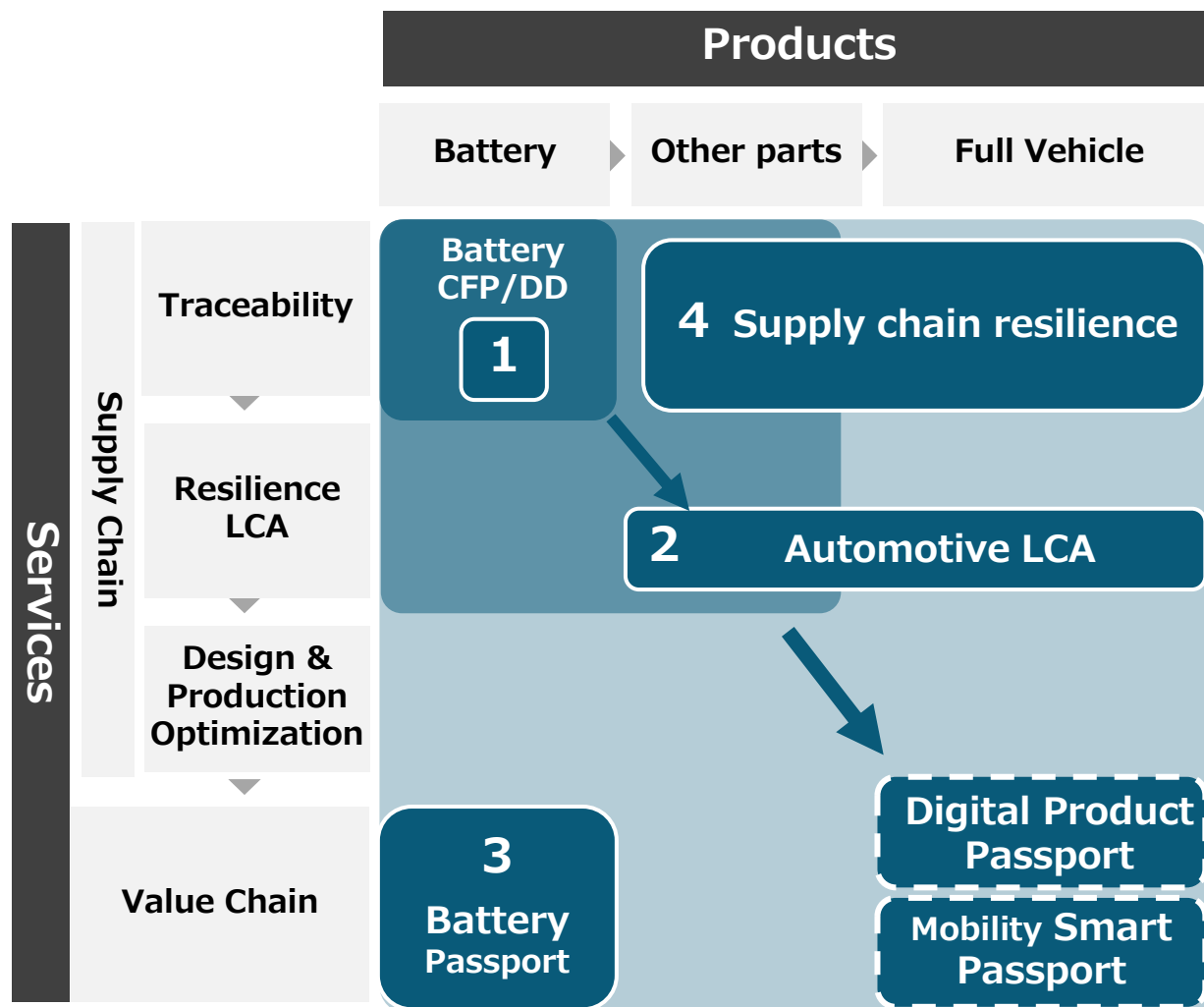


Automotive and Battery
Traceability Center

- The actions started by individual companies became a cross-industry collaboration (automotive and battery), and it was finally expanded to an industry-government-academia initiative.



Our Roadmap



1 Battery CFP and DD (EU Battery regulation)

- Calculate CO2 emissions of battery pack production throughout a supply chain
- Share evidence of risk management on human rights and environmental impact throughout a supply chain

2 Automotive Life-cycle Assessment

- Industry-wide data sharing to quantitatively evaluate the environmental impact of a vehicle's life cycle, from materials to disposal.

3 Battery Passport

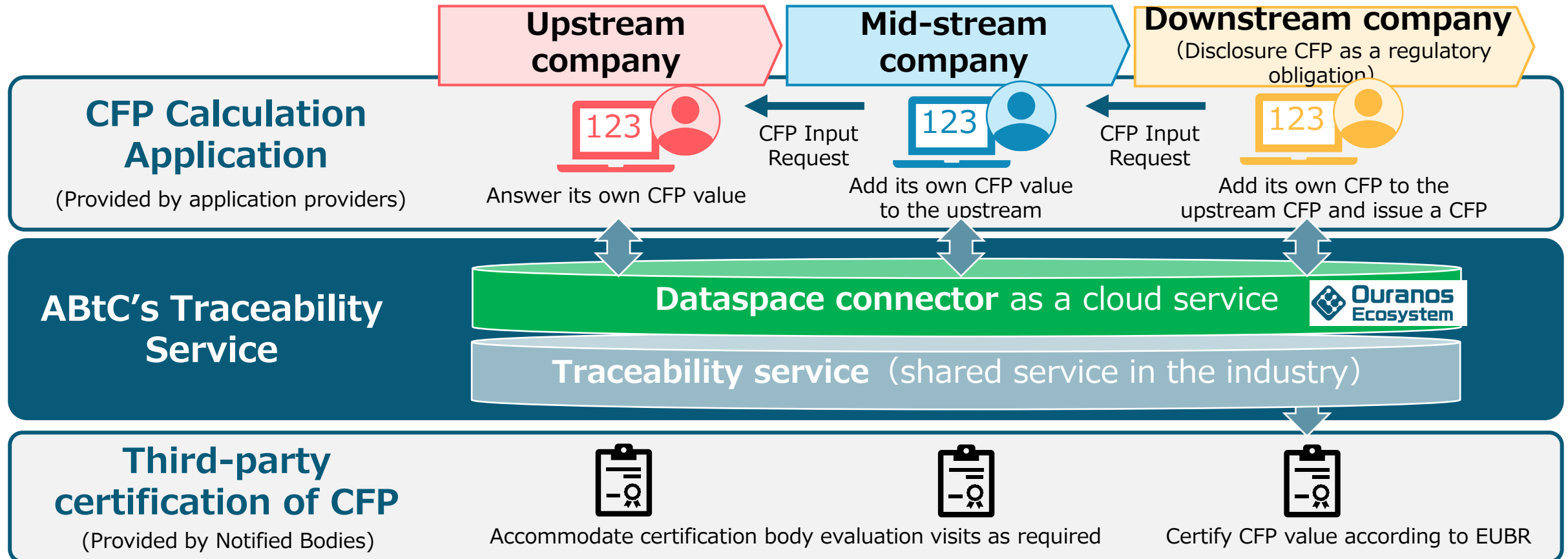
- Create new values and contribute to circular society, by connecting battery-related data and services throughout supply chains and value chains.

4 Supply chain Resilience

- Quickly grasp the impact of a disaster and make actions for efficient inventory management and production control.

Our first service (CFP calculation on a battery supply chain)

- Each company in a supply chain registers its own CFP value using its own CFP calculation tool upon request from downstream.
- ABtC's "traceability service" compiles CFP values along business relationships while keeping data confidential from anyone other than direct business partners.



- Life Cycle Assessment for each vehicle throughout the entire supply chain to identify areas where CO2 emissions can be reduced.

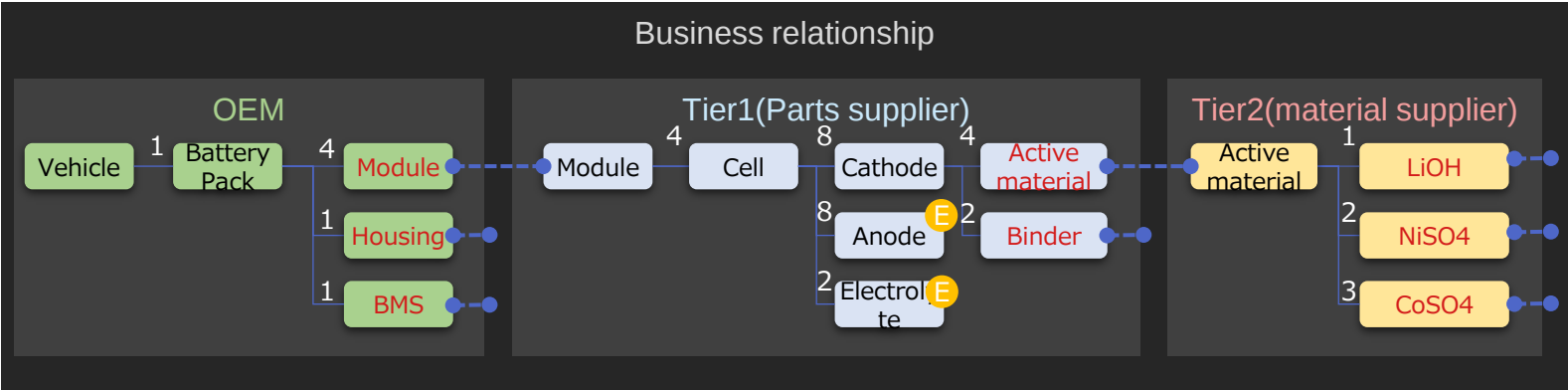
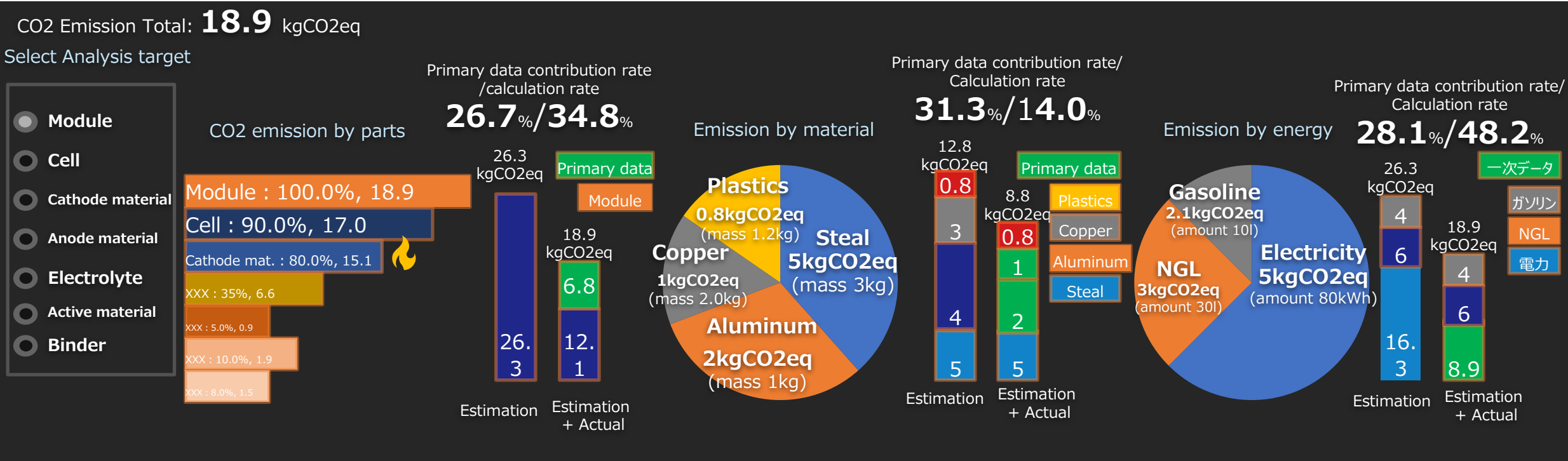
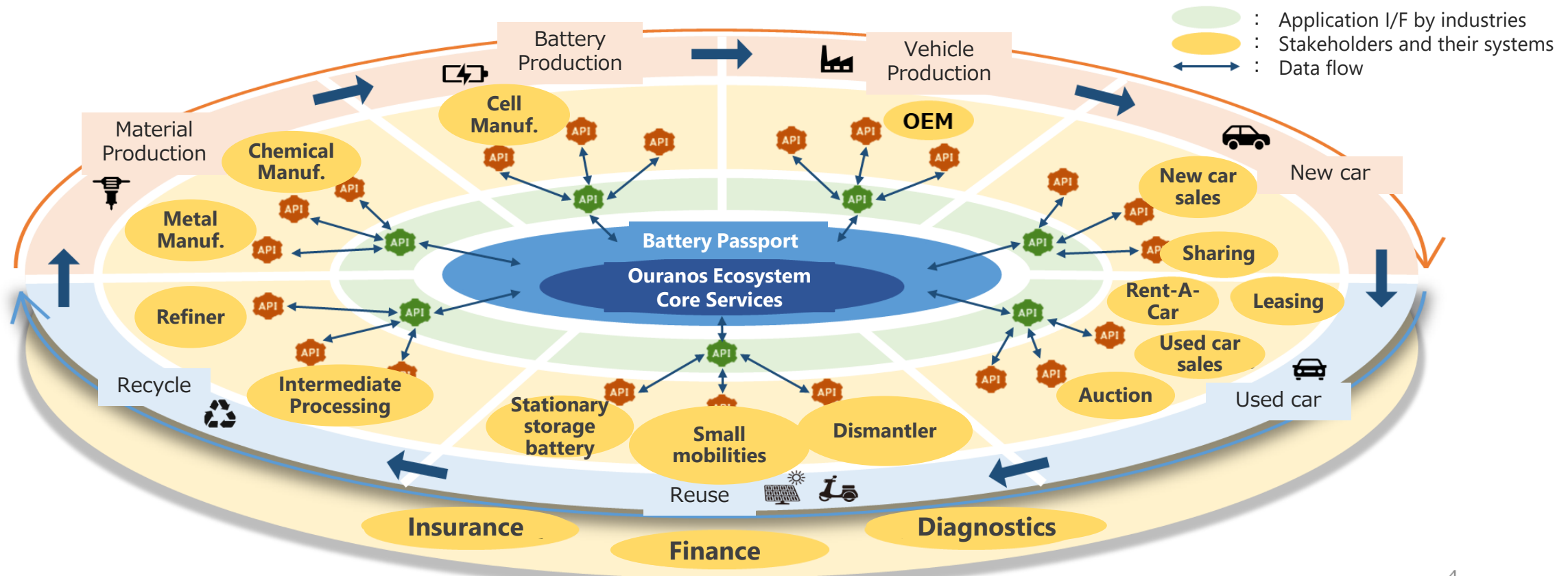


Image of Assessment



Battery Passport (Next Action)

- Circular Economy demands "an ecosystem that creates value at every stage of the storage battery life cycle and utilizes 100% of the value of the batteries."
- From a regulatory perspective, international cooperation among policy makers is required because differences in regulations between countries have a negative impact on the global manufacturing industries.

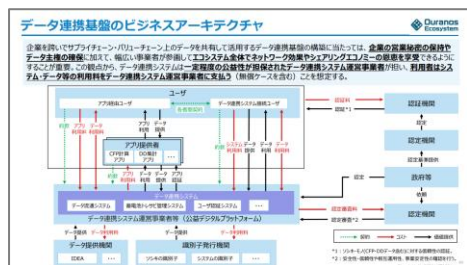


Implementation on the open basis

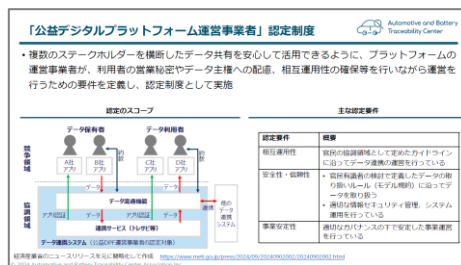
- The development was done on the open and collaborative basis with METI, IPA DADC and automotive and battery industries.
- All “collaborative” components belong to public domain and all “competitive” components are built on the APIs and data models defined on the open basis so that any player can join the ecosystem in a fair and equitable manner.

(Implementation outcomes)

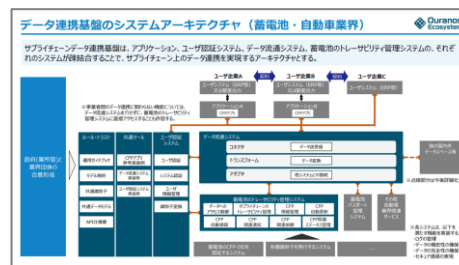
Business Ecosystem Model



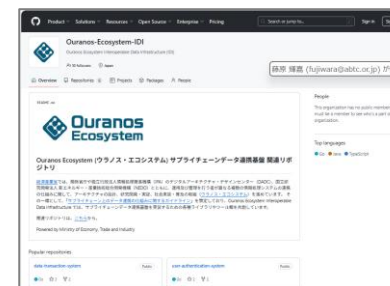
Governance Model (Public-interest DPF)



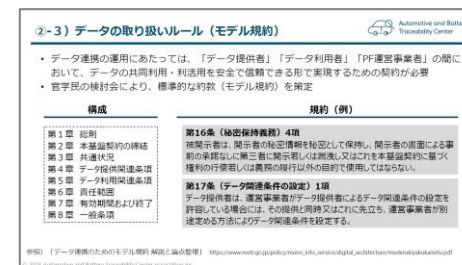
Digital Architecture



Reference Implementation



Standard Rules (Terms and Conditions)



Reference:

Ouranos Ecosystem Interoperable Data Infrastructure: Reference implementation <https://github.com/ouranos-ecosystem-idi>

METI “Interoperable Data Infrastructure Terms and Conditions”(in Japanese) https://www.meti.go.jp/policy/mono_info_service/digital_architecture/model_kiyaku.pdf

IPA “Public-Interest DPF Operator Certification (in Japanese) <https://www.ipa.go.jp/digital/dx/dpf-nintei.html>

IPA “Guidelines on Data Integration Mechanisms in Supply Chains (for Battery CFP/DD)” <https://www.ipa.go.jp/en/digital/architecture-guidelines/scdata-guidline-en.html>

Demonstration (5 min movie)

- A short movie demonstrates how the “Carbon Footprint of Product (CFP) ” usecase works.
- In the movie, an automotive OEM and a battery cell manufacturer can safely share CFP information respecting data sovereignty.

Automotive OEM
(Company A)

Cell manufacturer
(Company B)

【Own product】



【Stocking part】



•Amount : 1

partName	Battery Pack A
PartItem	OM1100

partName	Cathode Material A
PartItem	OM1110

【Own product】



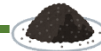
•Amount : 1

partName	Module A
PartItem	OM1120

【Own product】



partName	Cathode Material A
PartItem	TR1100



•Amount : 3

partName	Cathode Material B
PartItem	TR1110



•Amount : 2

partName	Cathode Material C
PartItem	TR1120



Automotive and Battery Traceability Center

