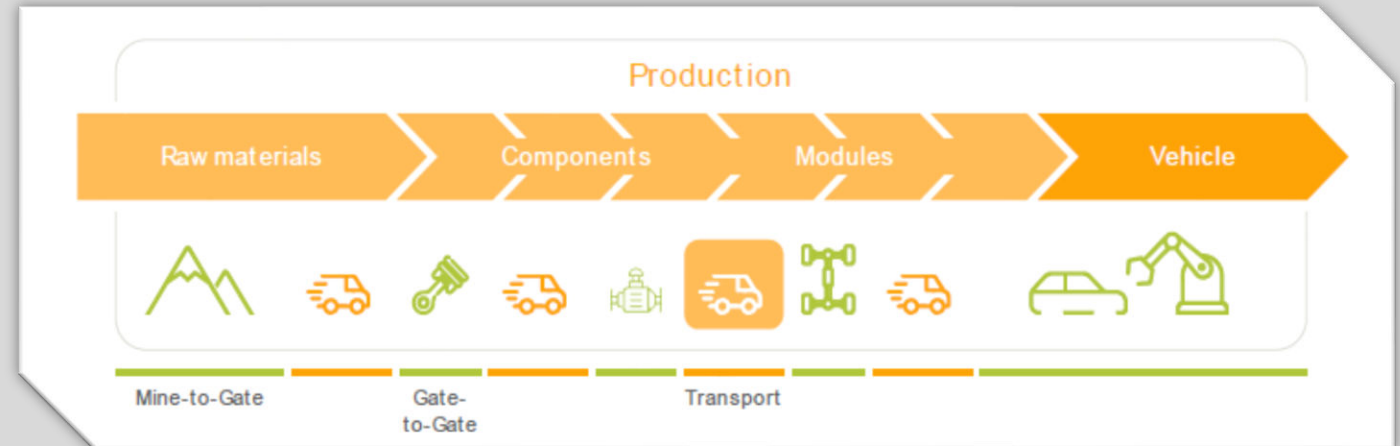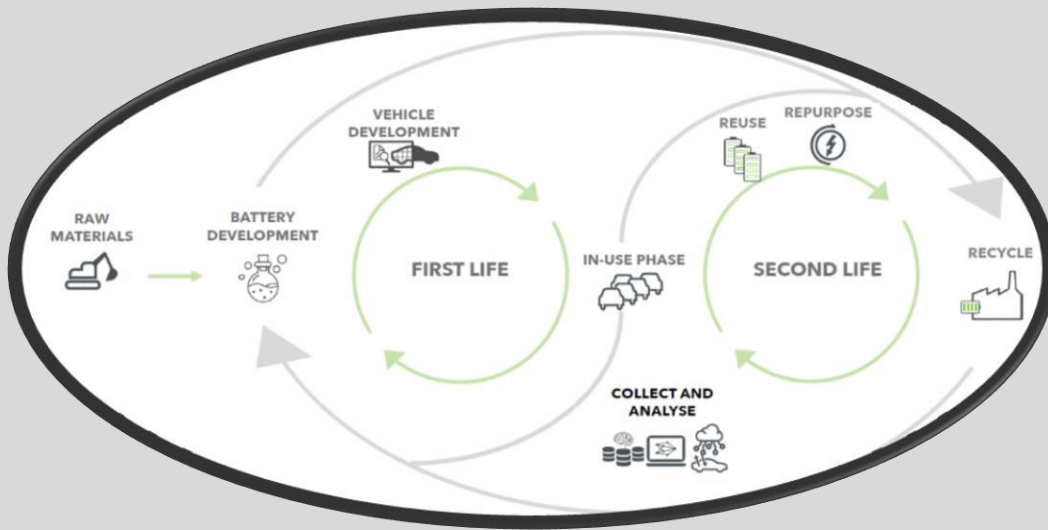# Lessons Learned on Data Sovereignty

Industrial Use Cases drive Dataspace Adoption

Dr. Bernhard Peischl

Product Environmental Footprint
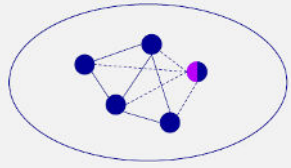

Sources: Catena-X Automotive Network, PCF Rulebook.

	PEFCR	Catena-X	Global Battery Alliance (GBA)	Battery Pass
System boundary	Gradle to Grave	Gradle to (factory) gate	Cradle to gate	Gate to grave
Data source & data quality	▪ Primary data ▪ Secondary data ▪ Data quality ratings ▪ Data needs matrix	▪ Primary data shall be used, if available ▪ Penalty for secondary data ▪ Data quality ratings	▪ Collect primary data on annual basis ▪ Secondary data	-
Objective	Guidance on PEF	Production phase of vehicles from tier to tier	Globally harmonized rules; footprint transparency	Complement of GBA for recycler

Minimal Viable Product CO_2 traceability

#5 | Visualize/monitor CO_2 impact of production facility

Tier 1 supplier

VEHICLE **OEM**

#4 | AVL: apply simulation to derive CO_2 equivalent from energy consumption

ANALYTICS **PLATFORM***

INTERNAL **SYSTEMS***

Energy Consumption & CO_2 Tracking

✔ verify

✔ verify

#6 | AVL: share CO_2 equivalent with automotive OEM

#3 | AVL: consume and verify data with respects to origin and integrity

BLOCKCHAIN

DATA LAYER

Tier 1 supplier

DATASPACE **NODE**

ANALYTICS **PLATFORM***

#2 | Tier 1 supplier: shares only energy consumption with AVL

#7 | OEM: consume and verify data with respects to origin and integrity

#1 | Collect production parameter at source (n parameters) – via IoT device

IoT device

Sources: Ch. Sams, M. Rothbart, A. Sztatecsny; AVL List & Tributech GmbH.

Governance of Digital Eco-Systems

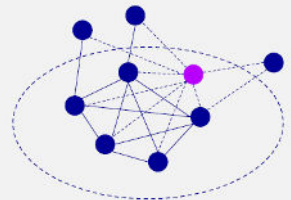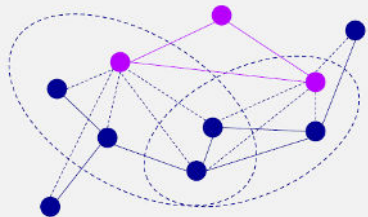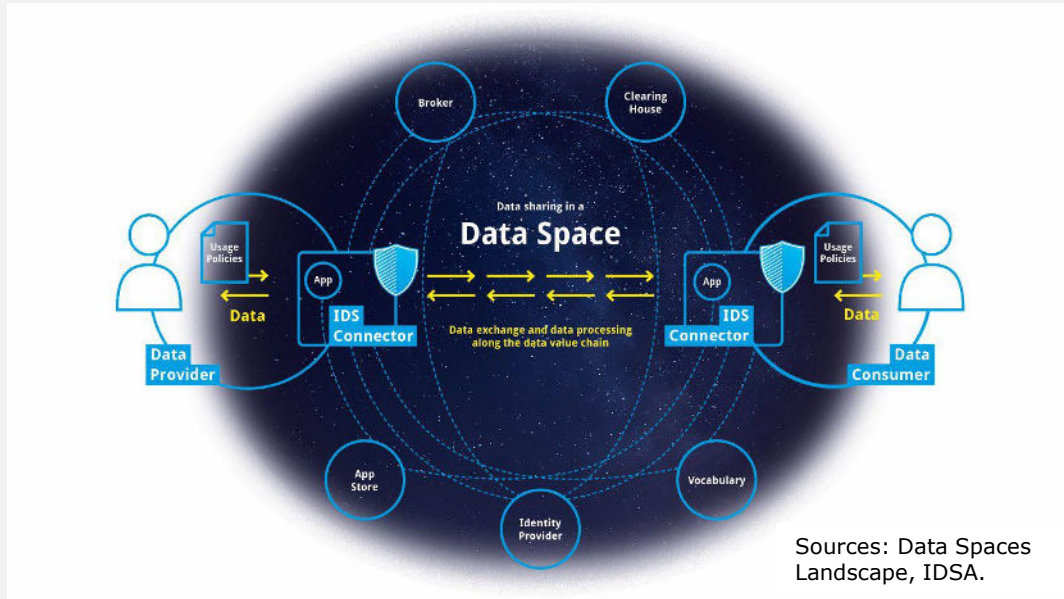|	Interoperability	Sovereignty	Trust & Security	Use case / business case
Closed Ecosystem	▪ Proprietary schema ▪ Domain-specific standards	▪ Traceability and transparency of data exchange not required	▪ Trust through consortium ▪ Digital tokens not required	
Open Ecosystem	▪ Domain-specific, open standards ▪ Common vocabulary	▪ Incr. demands for policy enforcement ▪ Policies to be unanimously understood	▪ Digital tokens required ▪ Dynamic technologies for sensitive data	Sources: Catena-X Automotive Network.
Federated Ecosystem Sources: Gaia-X Webinar on Data Spaces.	▪ Cross-domain, open standards ▪ Voc. Mapping ▪ Unique IDs across domains	▪ Demand for policy enforcm. ▪ Policies to be unanimously understood ▪ Policies for automated negotiation	▪ Digital tokens for cross-ecosystem apps ▪ Uniqueness of identities required	Sources: Mobility Data Space.

Lessons Learned (Catena-X, Mobility Data Space)

Sources: Data Spaces Landscape, IDSA.

Sources: Mobility Data Space.

Sources: Catena-X Automotive Network.

Tangible use cases to understand the immediate benefits of data spaces and kickstart the ecosystem

- Catena-X: CO_2 / ESG Monitoring, Live Quality Loops, Behavioral Digital Twins – automotive supply chain
- Mobility Data Space: Sustainable use of commercial PHEV fleets – mobility and road transport
- PCF Rulebooks & Data Act: Interoperability, Data Sovereignty and Trust into digital ecosystems