



Passport Please!

Let's Build a Sustainability Data
Ecosystem – an Industrial Point of View

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BASF Intertrade AG (BIT)
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Assumptions



We all have different perceptions of

- Innovation
- Digitalization or Digital Transformation
- Data
- Interaction



Technology != Innovation

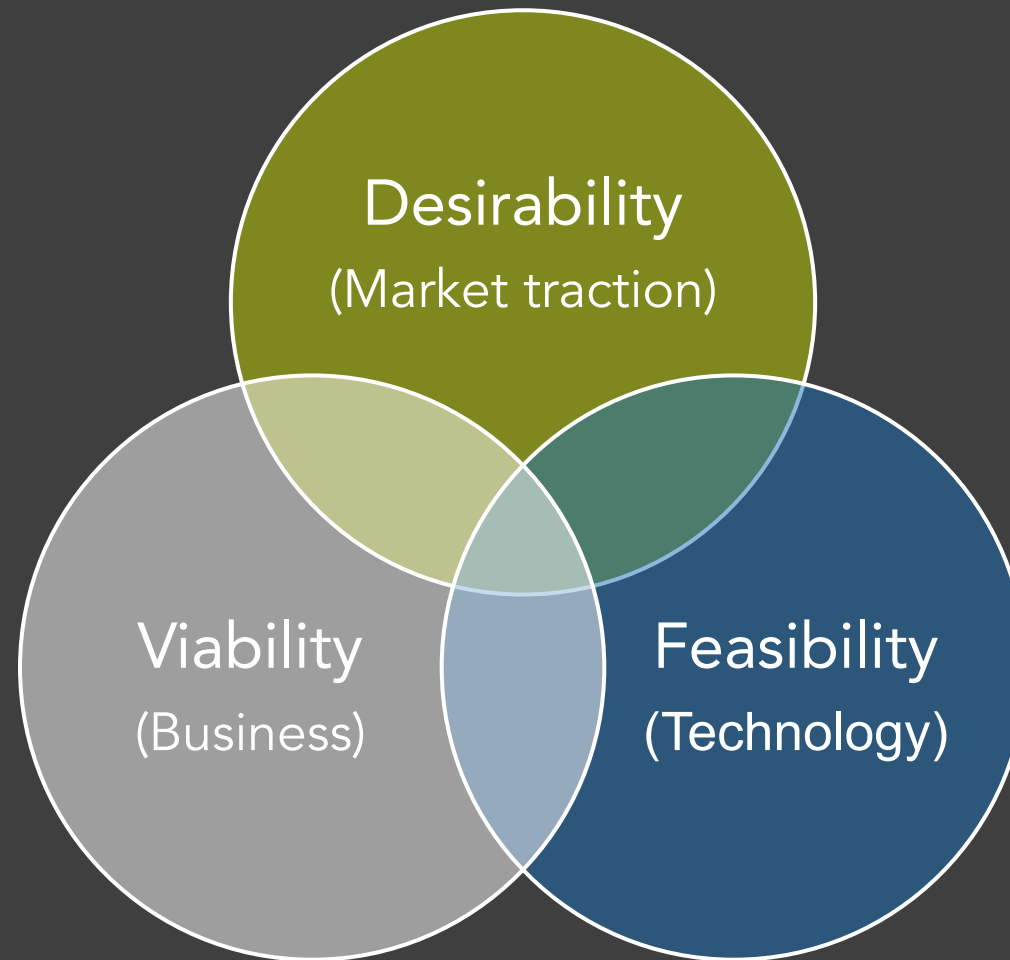


“Europe is the global technology incubator,
and has a hard time generating sustainable
business out of the (basic) technology
developments”

Ann Mettler



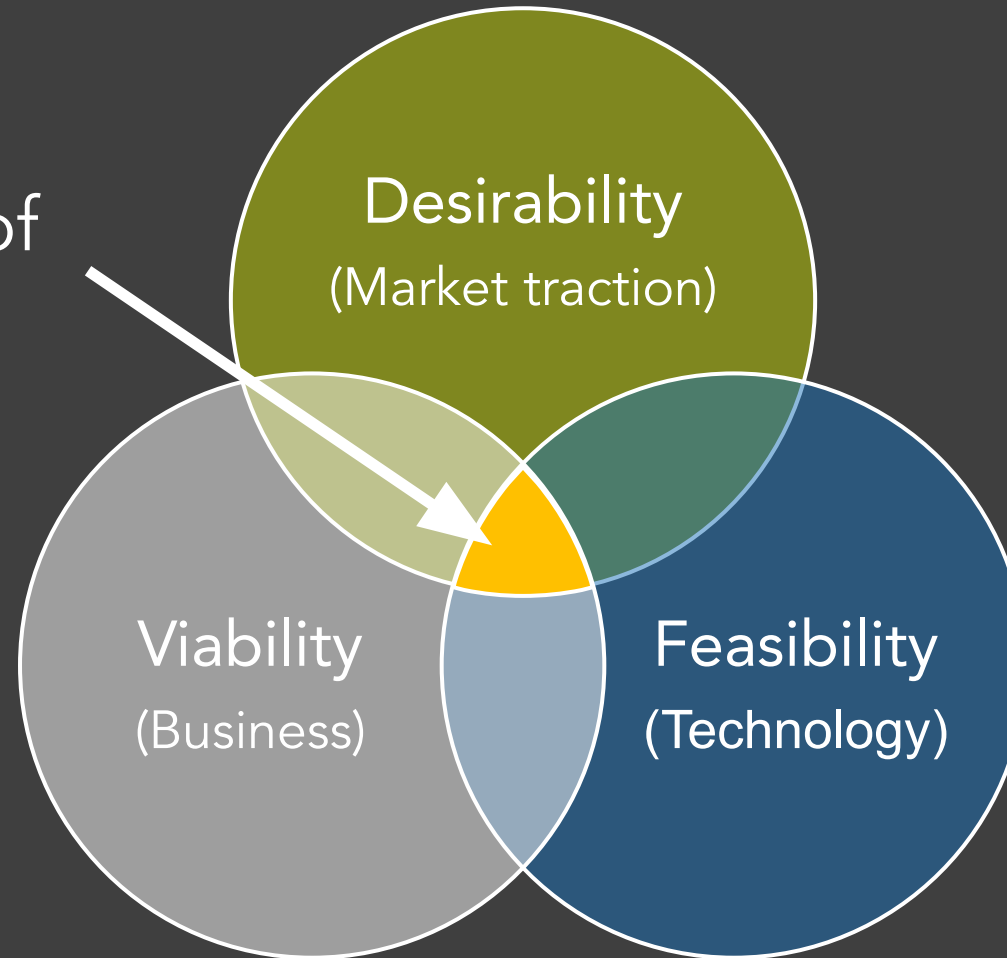
What is Innovation?



What is Innovation?



Sweet spot of
Innovation



What is Digital Transformation?



What is Digital Transformation?



What is Digital Transformation?



Digitalization

Digitize
Documents available in digital
format

Transformation



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What is Digital Transformation?



Digitalization

- Data – machine-readable, machine-actionable
- Related set of (basic) functions
- Semantics – Ontology, Quality information

Digitize

Documents available in digital format

Transformation



What is Digital Transformation?



Digitize

Documents available in digital format

Digitalization

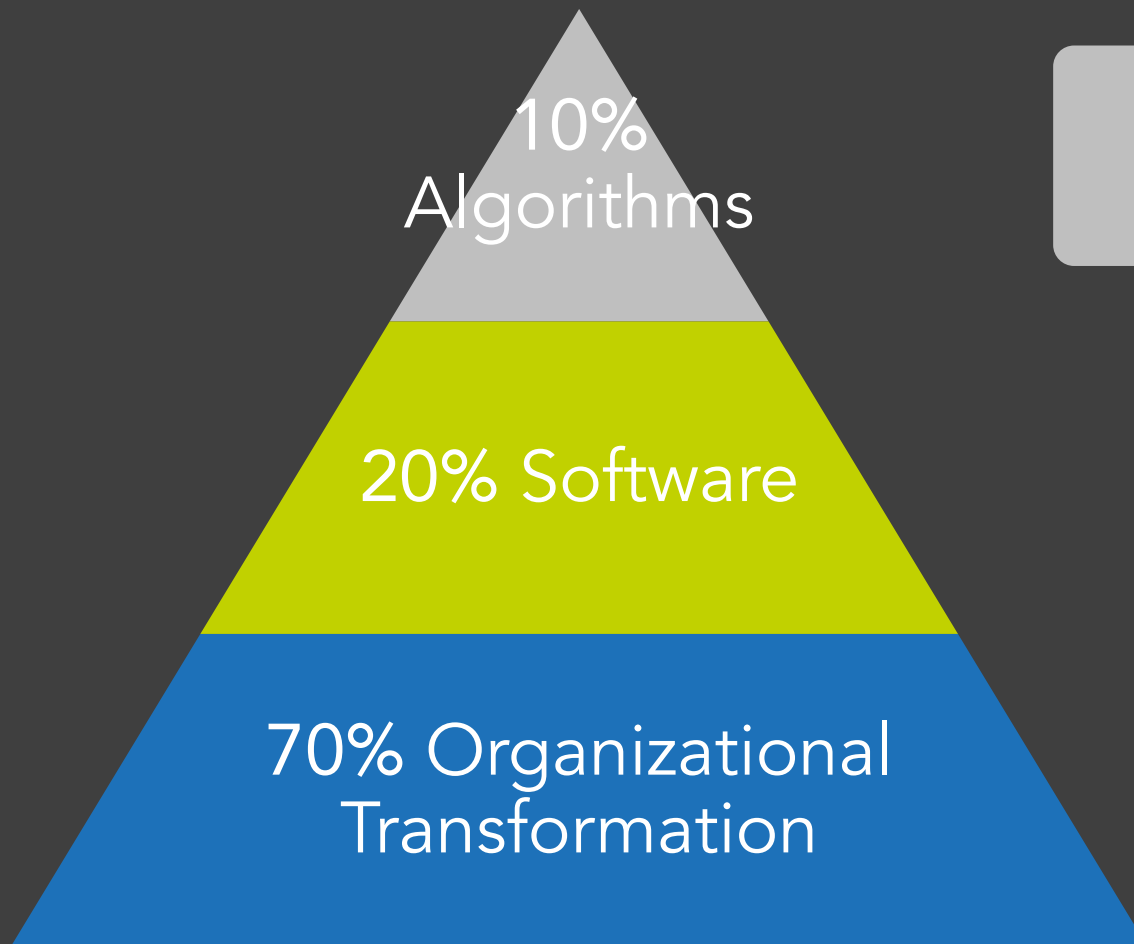
- Data – machine-readable, machine-actionable
- Related set of (basic) functions
- Semantics – Ontology, Quality information

Transformation

- New business opportunities & cost structure
- Data Spaces – operating system of a sustainable economy and a new interaction model



Successful Digital Transformation



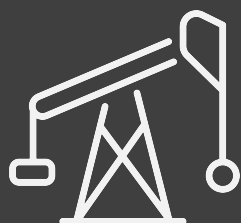
- Make more informed decisions earlier
- Knowledge Hub / cognitive systems

- Federated Master Data Management
- 24/7 availability

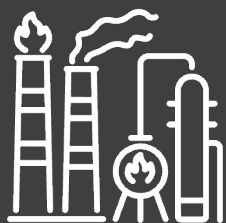
- Data Literacy
- Data Governance



Reality Within Chemical Industry



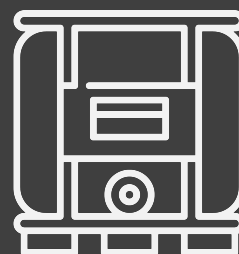
Crude Oil



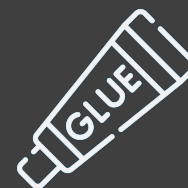
Petrochemical



Chemical



Chemical Product



Food Packaging Product



Disposal

Communication via



E-Mail



Safety Datasheet



Label



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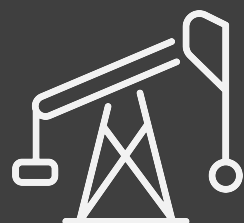
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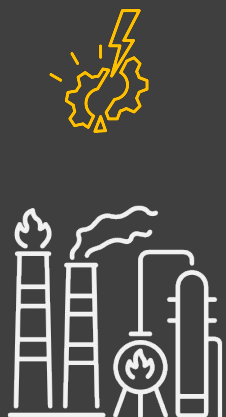
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Reality Within Chemical Industry



Crude Oil



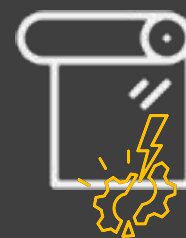
Petrochemical



Chemical



Chemical Product



Food Packaging Product



Disposal

Communication via



E-Mail

+



Safety Datasheet

+



Label

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Information Disruption



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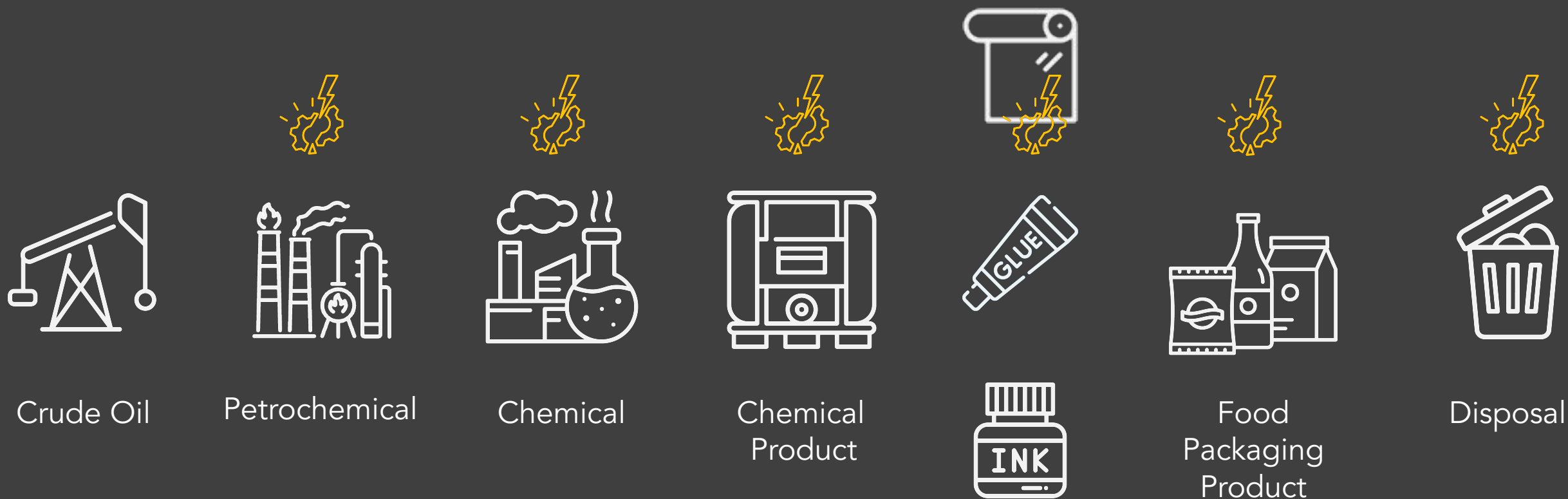
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Reality Within Chemical Industry



Source

Refine

Manufacture

Manufacture

Assemble

Use

Dismantle

Dispose

Communication via



E-Mail

+



Safety Datasheet

+



Label

=



Information Disruption



Reality Within Chemical Industry



Source



Refine



Manufacture



Manufacture



Assemble



Use



Dismantle



Dispose

Communication via



E-Mail +



Safety Datasheet +



Label =




Information Disruption



Reality Within Chemical Industry

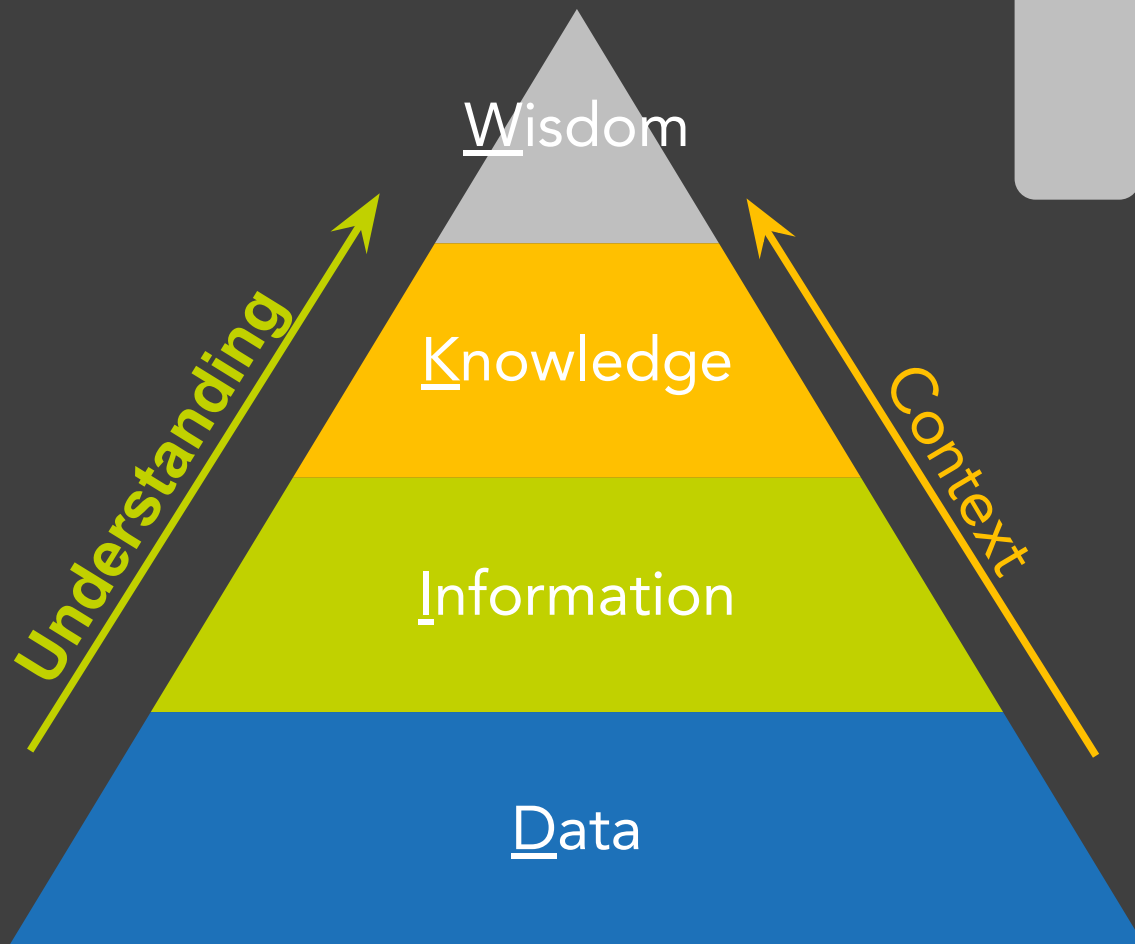


R&D

maximal  disruption



Information = Data + Context



- Understanding principles
- Reflecting, decision making (why do?)

- Understanding patterns
- Contextualized information (how?)

- Understanding relations (meaning)
- Categorized, calculated, ... (how many?)

- Raw "input"
- Discrete, facts

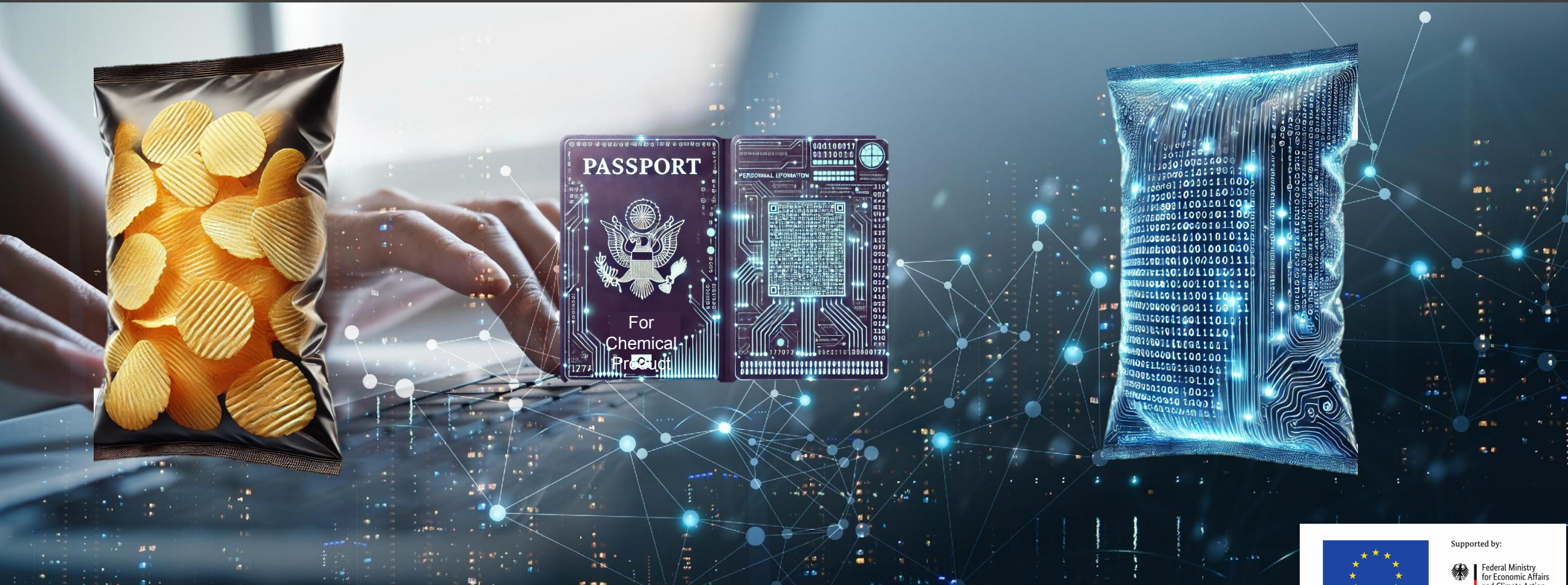
Innovation + Digital + Information



foster Interaction



Digital Product Passports = Link



Standards = Harmonization



Get the gearings to work in sync to found and forge an European Sustainability Data Ecosystem



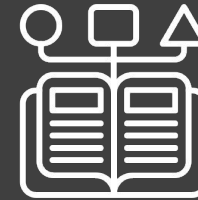
Requirements for a Data Ecosystem



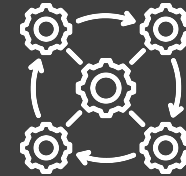
Digital
Governance



Standards



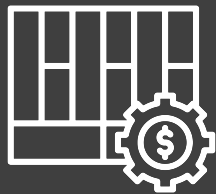
Semantic
Harmonization



Interoperability



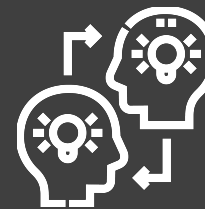
Digital
Infrastructure



Business
Case



Digital
Twins



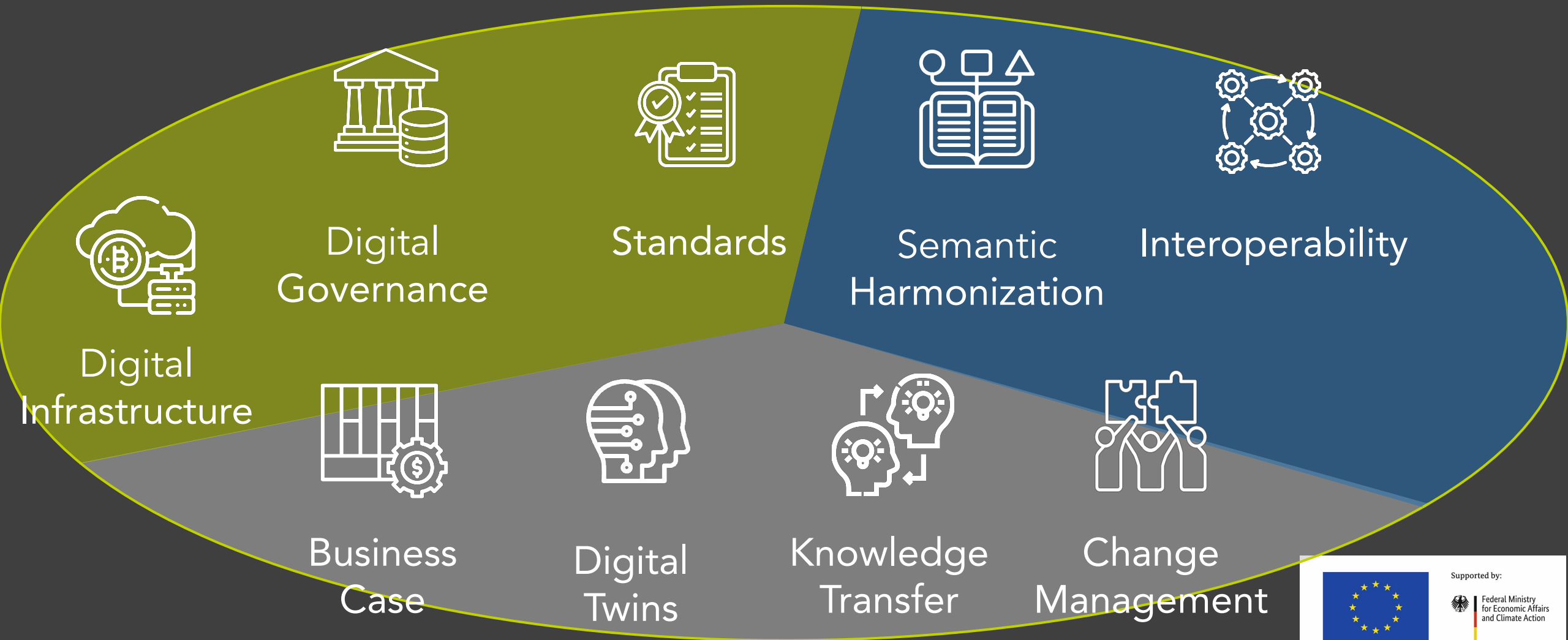
Knowledge
Transfer



Change
Management



Requirements for a Data Ecosystem

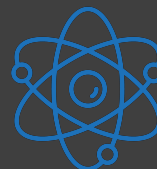


Requirements for a Data Ecosystem



EU Government

- Digital Infrastructure
- Digital Governance
- Standards
- Business Case



Scientific Community

- Semantic Harmonization
- Interoperability
- Change Management



Business

- Business Case
- Knowledge Transfer
- Digital Twins
- Change Management



Sustainability Business Needs



- Digital Transformation
- Information according to DIKY
- Interactions
- Innovation



Many thanks for your attention!



Chem-X material representation



- Horizontal material representation – serves multiple segments
- Harmonized, interoperable* and machine-readable
- Public and private compartments – for different data types
- Visibility “one level up” / “one level down” in the value chain
- Decentralized DPP-Data storage – protect IPR and data sovereignty
- Technology agnostic – Implementation with various technology stacks
- Enabling data provision to regulated DPPs in ESPR, CPR, and other Green Deal regulations



Comments, Questions, Feedback?



Please connect with me



[/in/adrian-von-muehlenen](#)



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