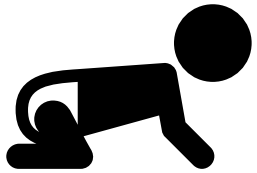
SAFE AI – TECHNICAL FOUNDATIONS

SAFE AI starts with SAFE DATA

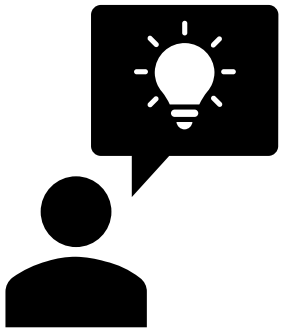
Svenja Hainz, German Aerospace Center (DLR), 27.10.2026

Polanyi-Paradoxon – What is knowledge?

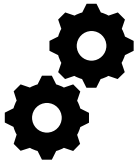
„*We can know more than we can tell*“
Michael Polanyi



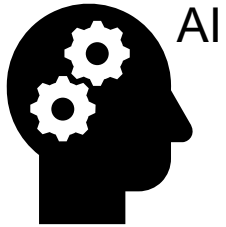




Data, Learned Rules, Experience,
Conclusion, Ideas







Data, Learned Rules, Experience, ?

What means SAFE (and secure) Data

- Data is the foundation of AI systems - Without reliable data, any AI remains “dumb”
- The smarter the systems, the more valuable the data – and the more important it is to protect it
- The need for *protection of* and *trust in* IT systems and hence data is increasing



Confidentiality



Integrity



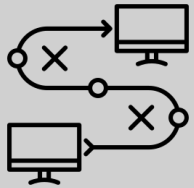
Availability



Interoperability



Transparency



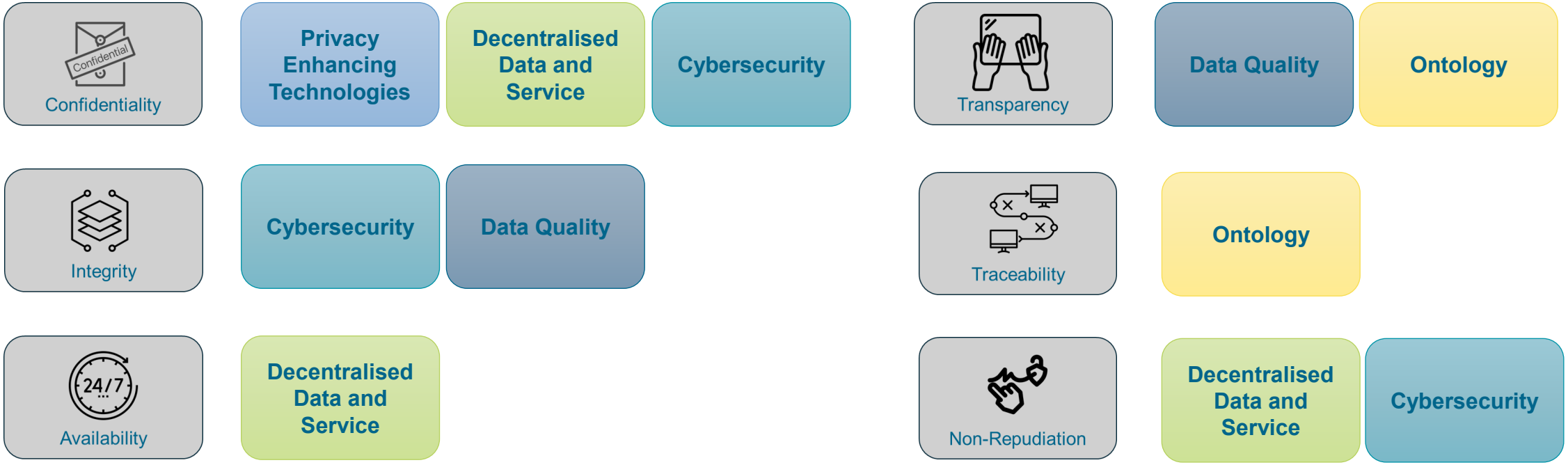
Traceability



Non-Repudiation

Protection and Usability – Creating a data protection portfolio with AI in mind

- Protection and Usability are traditionally conflicting while being both proportional to the value of data



From intern to colleague – when does my AI gets knowledgeable



Data, Learned Rules, Experience, ?

- Do you have all necessary Information?
- Which information works together?
- Where did you get the information from?
- Is the information still valid and available?
- Who is allowed to also know this?
- What data is the information based on?
- Can you trust the source?

Does my AI know, what it is supposed to know?

Safe Data – Backbone for a “grown-up” AI

- Advanced AI should not only be an analysis tool, but be able to find conclusions and propose ideas
- To find conclusions and propose ideas the right information is needed
- Information is gained through data, but information also includes understanding and verifying data

Advanced AI needs a solid data ground to stand on.

No Safe AI without Safe Data.

THANK YOU FOR YOUR ATTENTION

Svenja Hainz | Scientific Lead

Deutsches Zentrum für Luft- und Raumfahrt e.V. (DLR) | German Aerospace Center

Institute for AI Safety and Security in Sankt Augustin & Ulm | Organisational Unit Safety-Critical Data Infrastructures

Wilhelm-Runge-Straße 10 | 89081 Ulm

Telephone +49 731 400198 335 | svenja.hainz@dlr.de

DLR.de | Institute for AI Safety and Security

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