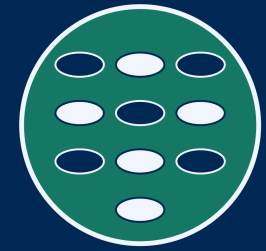




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KGA working group

XAIR data and metadata principles

Fadi Al Machot,¹ Silvia Chiacchiera,² Martin T. Horsch,^{1,2}
Björn Schembera,³ and Ilian T. Todorov²

¹Norwegian University of Life Sciences, ²UK Research and Innovation, ³University of Stuttgart
Knowledge Graph Alliance webinar, 19th March 2024

FAIR and XAIR data

Data are **XAIR** to the degree that they are semantically enriched so that **best use** can be made of **interpretable learning** techniques. These include XAI in the narrow sense (learning by induction) and logical reasoning (deduction).

XAI: Explainable artificial intelligence

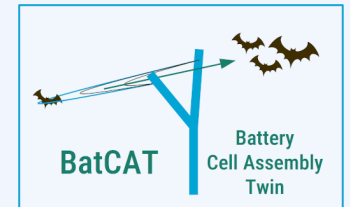
AIR: Artificial-intelligence ready



XAIR: Explainable AI-ready

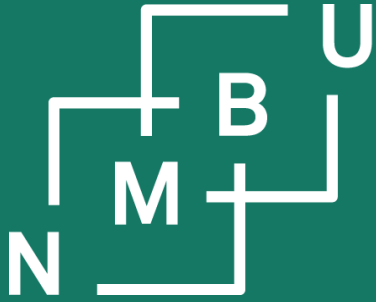


Beginning with the EC's **Battery Regulation**, **digital product passports (DPPs)** will become mandatory; first for batteries, later textiles, electronics, and for more and more products.



Tendency: Data must become explainable-AI-ready (XAIR). **Making data trustworthy through explanations** will increasingly become a legal requirement.

Slogan: "FAIR and XAIR data." (Sounds similar to the idiom "fair and square.")

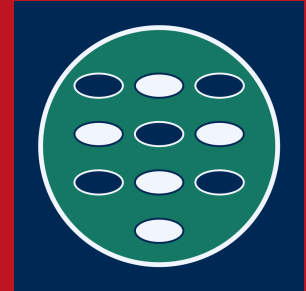


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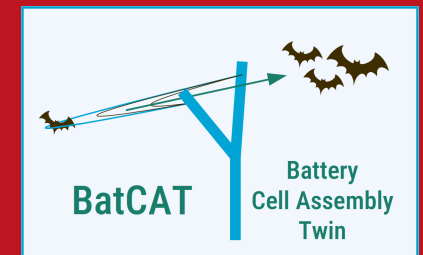
Proposed work plan

THEME-4: SKG applications and innovations

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Horizon Europe ID 101137725



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Work plan for 40 months

Months 1 to 10: **Synopsis of literature work on core concepts**

- Identify the core concepts, analyse and summarize the literature characterizing these concepts.
- M10, report, public, "Synopsis of XAIR core concepts."

Months 11 to 16: **Work on actionable core concepts**

- Discussion of use cases; annotation of examples; draft of mid-level and domain ontologies.
- M16, report, public, "Request for comments on actionable XAIR core concepts."

Months 17 to 22: **Work and consultation on XAIR principles**

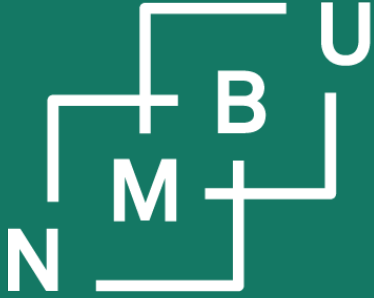
- Community discussion toward "XAIR principles."
- M22, report, public, "Request for comments on XAIR data and metadata [...] principles [...]".

Months 23 to 34: **Stable release of mid and domain ontologies**

- Ontologies for XAIR are finalized to the extent that no major changes will occur in the future.
- M34, ontologies, public, "[...] Ontologies covering the XAIR key concepts [...]".

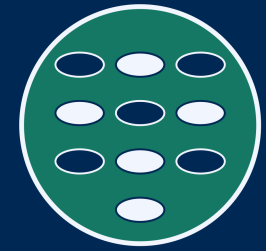
Months 35 to 40: **XAIR forward plan and ontology governance**

- Critical analysis of accomplishments and forward-looking discussion.
- M40, report, public, "XAIR forward plan and ontology governance."



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