ONTO COMMONS
ONTOLOGY-DRIVEN DATA DOCUMENTATION FOR INDUSTRY COMMONS

Materials' Tribological Characterisation

Use Case 4

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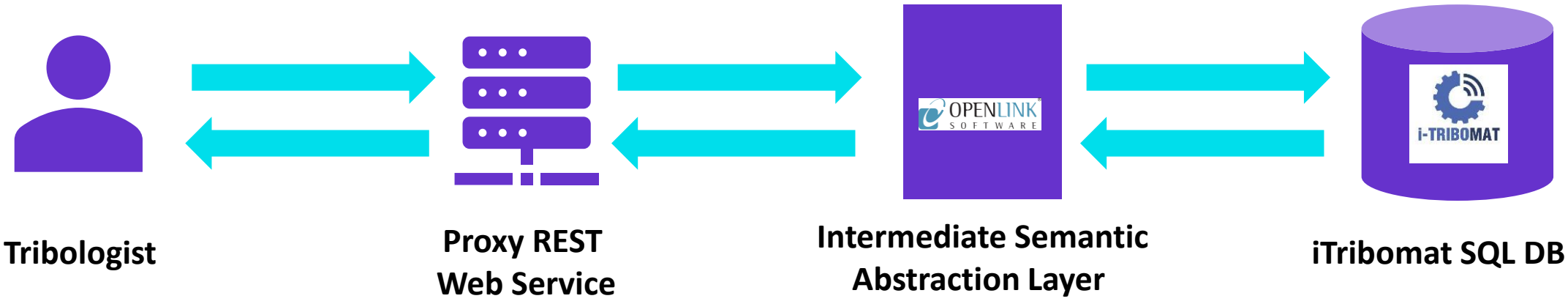
Tekniker

- **R&D Centre** located in Spain
- **40+ years of experience** on Applied Research
- Mission: Enhance the **positioning and competitiveness** of our **clients** through **technology transfer**
- Specialised in **Manufacturing**

UC4: Materials' Tribological Characterisation

- **Goal:** Shorten the time, number and size of experiments required to identify the behaviour of a material or combination of them (e.g., metal, coating, lubricant) with respect to specific operation conditions.



Ontology use in the UC4

- Ontology for **semantic representation** of tribological experiments data
- Model the stored knowledge in **a more meaningful way**
- Existing ontological resources need to be analysed and see if they satisfy UC requirements

UC4 requirements

- **RESTful APIs** for handling data
  - To **provide security** and underneath configuration abstraction
- Ontology-Based Data Access (**OBDA**)
  - To **abstract** from underlying data structures
- **Reuse** standardized semantic assets
  - Following the **best practices** of the Semantic Web community
- **Extend** reused ontologies
  - Align new terms with existing ones to favour an **interoperable ecosystem**

Main expected benefits

- **Better representation** of materials' experiments
- **Enrich existing data** with additional background knowledge
- **Ease data retrieval** and navigation through related resources
- Set the ground for developing **more application-independent solutions**

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Thank you very much for your attention!

Questions?

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