Group 4: Interoperability

Group members:

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What are key challenges of interoperability and data reusability

for materials researchers and service providers?

- Lack of APIs
- Different API's
- Different data formats
- Different terminology
- Different data models, ontologies
- Different licenses
- (sustainability)

Key points of Group 4 discussion

- Joining data from different sources= difficult
- Add & describe data + "Fair Principle"
- Interoperability – evolving over time
  - First steps – make API available even tho' APIs are different
  - "Reusable tools pages" describing reusable solutions offered by a project/web site
    - Template descriptions: what the data needs to look like to work with my tools
    - Translators/converters
- Common Data Models
  - Facilitate conversion
  - Extensible "MS concept templates", data models, file formats (json, xml,hdf5)

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Proposed low barrier activity

- Deploy schema repository

- Experiment: build simple "Kayak" tool for 3-4 materials data resources
  - E.g. Materials Project, AFLOWLIB, OQMD, …

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Requirements/needs/collaborations to accomplish Group 4 activity

- Community "buy-in" to share data
- Agreement of data usage licenses
- Attribution of authors, institutions, etc
- Search prototype: Prototypers for interoperability experiments

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