PFNC – CEA-GRENOBLE : NANO-CHARACTERIZATION

Characterization Data need more and more processing

- Electron microscopy: 1TBytes per experiment
- **Data from characterization and from modelling**
- Need heavy processing of large pictures
- Storage and workflows are required (+ HPC!)
- **Added value for characterisation (and modelling)**

PFNC: PlatForm of Nano-Characterization

CSP: Center of Predictive Simulation

Strong partnerships with industries in electronics, batteries,…

TOWARD « MATERIALS INFORMATICS »

- **“Smart” Data Management**:

  Workflows + processing (HPC)

- Specific analysis of a given materials

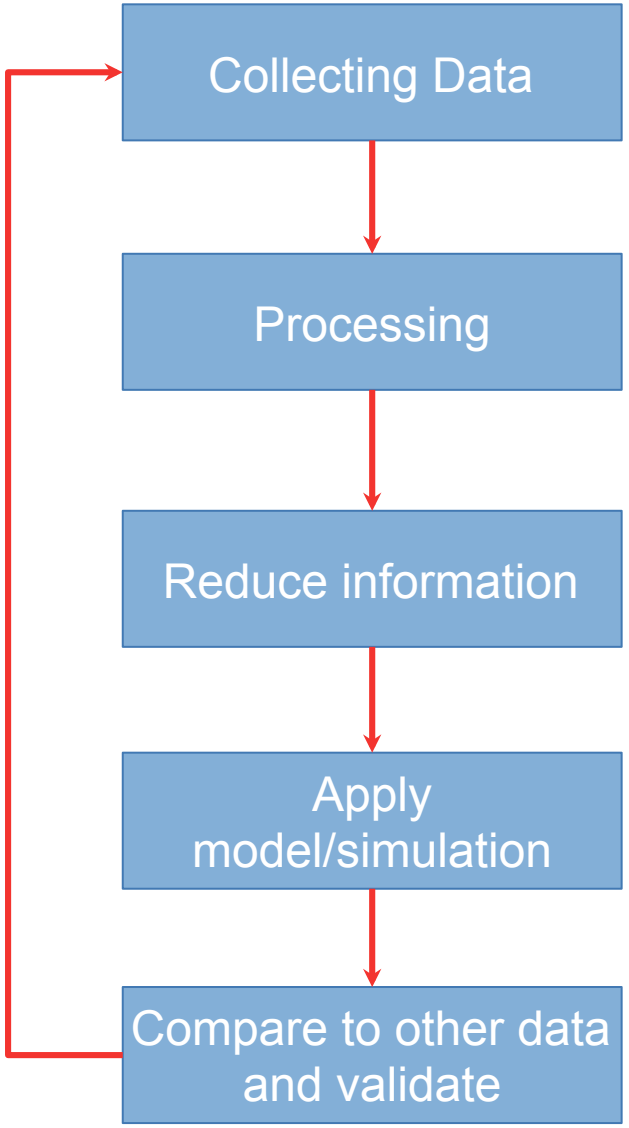
- Analysed Data are more important:

  - Data + meta-data (apparatus tuning)

  - Analysis (based on models,

    machine learning ?)

  - **Very Valuable (Materials Knowledge)**



NEED EFFICIENT TRANSLATION: MATERIALS ONTOLOGY

- Developing scientific modules and components oriented Materials
- Catalogue of workflows: data processing + modelling
- Importance of Interoperability
- Definition of ontologies for
  - documentations,
  - exchange of smart data (data + replaying workflows)