

NIC FI and future projects

David Hästbacka and Teemu Mätäsniemi
david.hastbacka@tuni.fi, teemu.matasniemi@vtt.fi

NIC FI

- Ongoing BF Co-creation project (pre-project) with TAU and VTT
- Objectives
 - **Identify gaps and challenges** in business models, technologies and standards **that prevent digitalization and the full exploitation** of the information economy in the industrial use of digital information exchange in international ecosystems
 - **Define a path to overcome these challenges in collaboration** with companies and involved standardization organizations as a joint Nordic Interoperability Cooperation
 - **Involve relevant stakeholders** and build an international network of companies and research organisations for joint European project efforts – Europe to lead industry digitalization

Focus: Information specification in early phases

CFIHOS (JIP 36, attributes)

...

ISO 15926 (structures, classes)

PSK standards

...

Stakeholder requirements

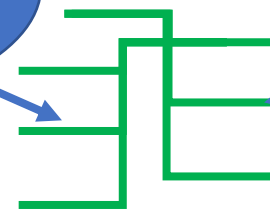
Process definitions
Process flow diagrams
Safety requirements

Plant structuring principles and rules (item/reference designations)

Product descriptions /catalogs

Requirement
extraction,
refinement and
alignment

Product
selection and
configurations



SFS-EN 81346-1
(earlier EN 61346-1)

Performance and
Availability

Functional specifications

Operating procedures
Operating conditions
Degree of automation
Measurement/Control points

Challenges re-using, integrating technical data for various purposes and especially in business networks

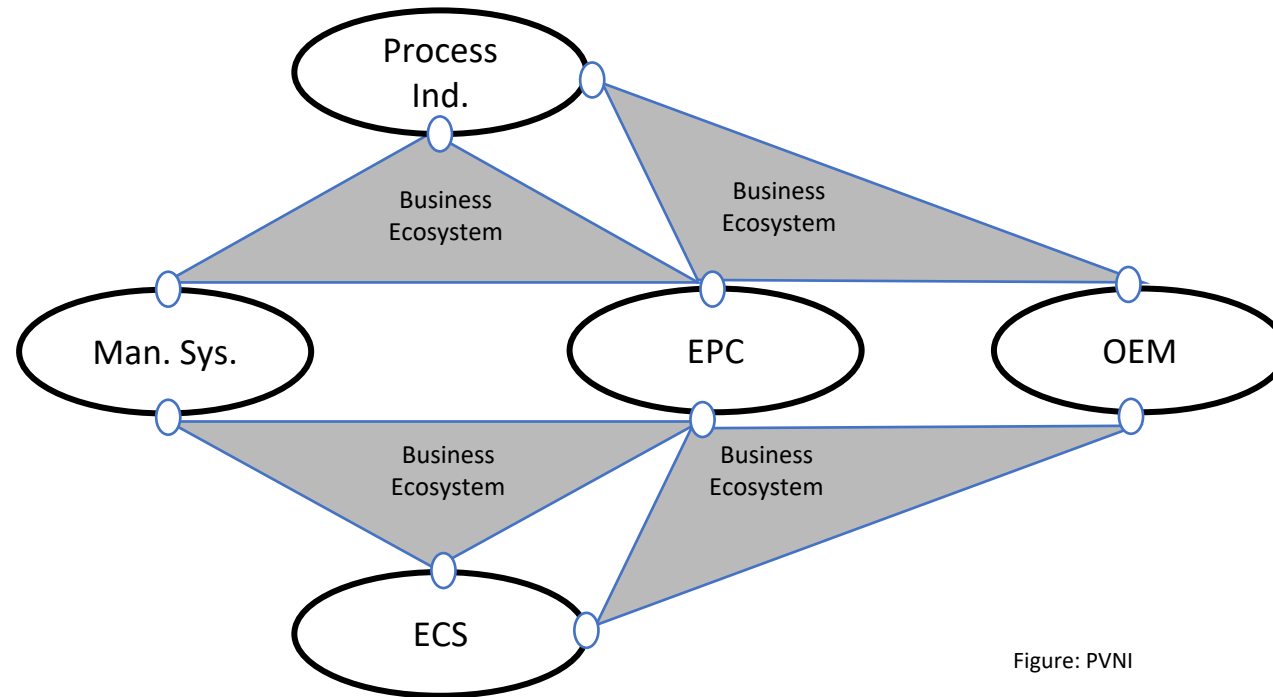
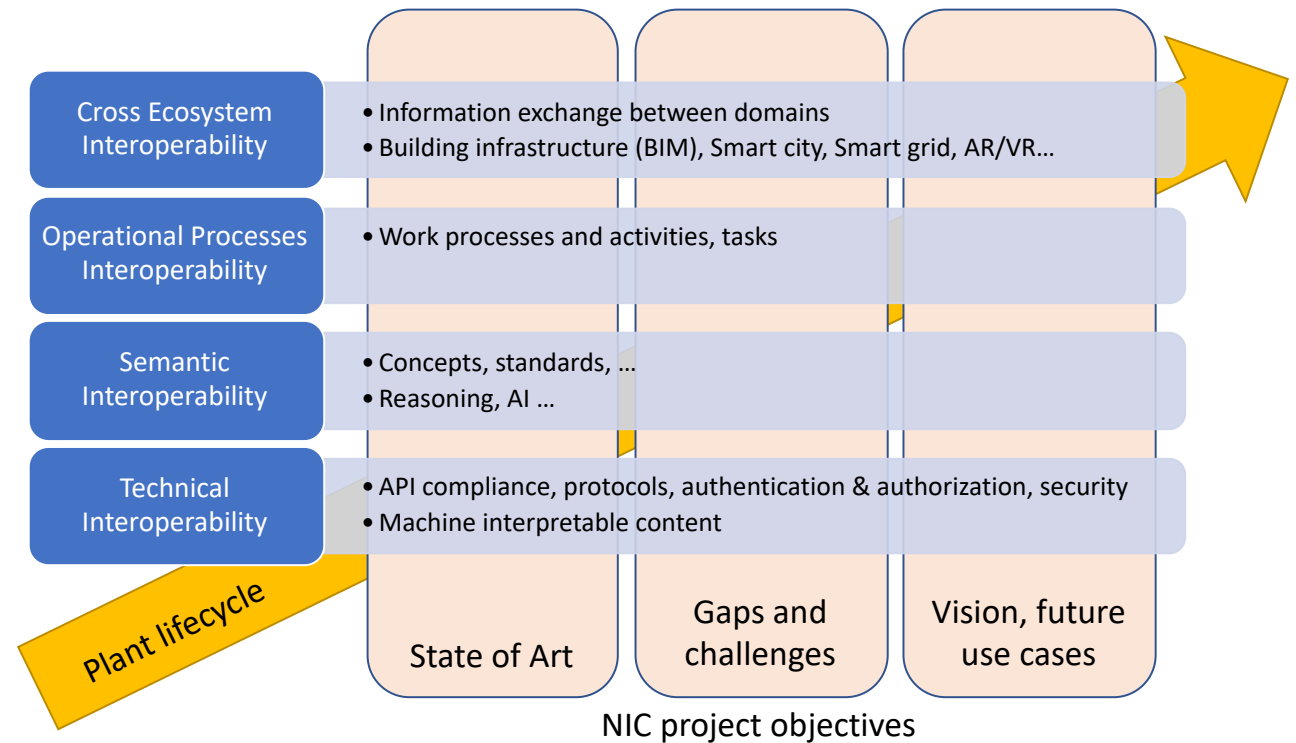


Figure: PVNI

Approach

- Linked data approach (principles), machine interpretable data
- Ontologies, reference vocabularies, reasoners, rules
- Translations
- Digital business ecosystems require broader networks and international interoperability



From NIC FI to international collaboration

- NIC (co-innovation) project (TBD later)
 - NIC FI co-creation continuation, spin-off from needs in TIE and SEED projects
 - Nordic collaboration to continue
- Production Value Network Interoperability (PVNI)
 - An Innovation Action project preparation for Key Digital Technologies (KDT) of Horizon Europe
 - Company and use case driven, developing enabling technologies
 - Business Finland committed to KDT
 - Still looking for partners to join joint development