

THTH Spring webinar 2025

20.5.2025 via Teams

Some instructions

- The webinar will be recorded
- The presentation materials and the recording will be shared after the webinar
- Please, preferably use the Teams chat button to ask questions
- Please, keep your microphone muted and unmute it only when you want ask or answer a question
- [Spring Webinar 20.5.2025 | THTH](#)

Agenda

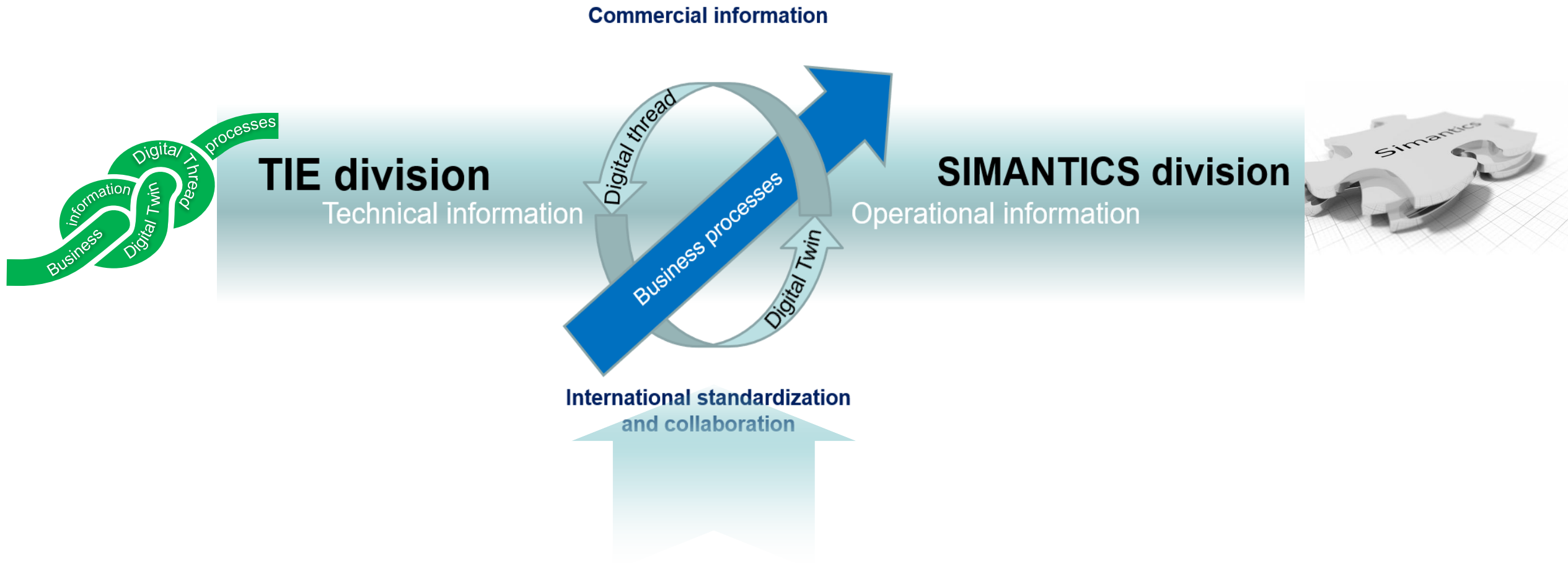
- 13:00 Opening words, Teppo Kainulainen – THTH Chairman of the Board
- 13:05 Webinar agenda and THTH's Arrowhead fPVN project perspective – Arto Marttinen, THTH
- 13:30 How Peppol automates data exchange? – Tomi Dahlberg, DBE Core/Turku University
- 14:00 Lessons learned (history telling) before we “discovered” Peppol – Arne Johan Larsen, Equinor
- 14:30 Break
- 14:40 Handling Bid Clarification Meetings (BCM) and Handover with Digital Twins - Practical use of Asset Administration Shell for data exchange of structured data – Michael Mayer, Endress+Hauser
- 14:10 PCA Library Service – Hosting & instant extensions of digital standards and reference data, Fredrik Valde Anthonisen, PCA
- 15:40 IMF concept, Jann Slettebakk, Aker Solutions
- 16:10 Closing discussions – theme Arrowhead fPVN – DISC collaboration
Panelists: presenters, Lars Berthinussen (PCA), Johnny Sundström (SEIIA/Stora Enso), Nils Sandsmark (PCA), Erik Molin (SEIIA)
- 16:30 Closing

THTH briefly

- Non-profit industry association in Finland
- Currently over 30 member companies ([see members and partners](#))
- Process industry supply-chain collaboration forum to promote digitalisation and digital-twin
- [Simantics division](#)
 - develop and maintain open-source code applications for modeling and simulation and for environmental lifecycle assessment and footprint calculations via its
 - SIMANTICS, Eclipse Public License EPL
 - SULCA Sustainability tool for Ecodesign, Footprints & LCA
 - Simantics System Dynamics tools ([Sysdyn](#))
- [TIE division](#)
 - Promote and develop digitalization in projects and O&M based on existing standards
 - National and international standardization networks and collaboration (key partners SEIIA/Sweden, PCA/Norway, DEXPI/Germany, USPI/Netherlands, MIMOSA/USA, CFIHOS/IOGP, ISO/TC184 and on national level PSK, METSTA, SESKO)
 - EU ChipsJU funded Arrowhead fPVN project started in June 2023 and will end August 2026



THTH vision



THTH and Arrowhead fPVN

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Arrowhead fPVN development tasks

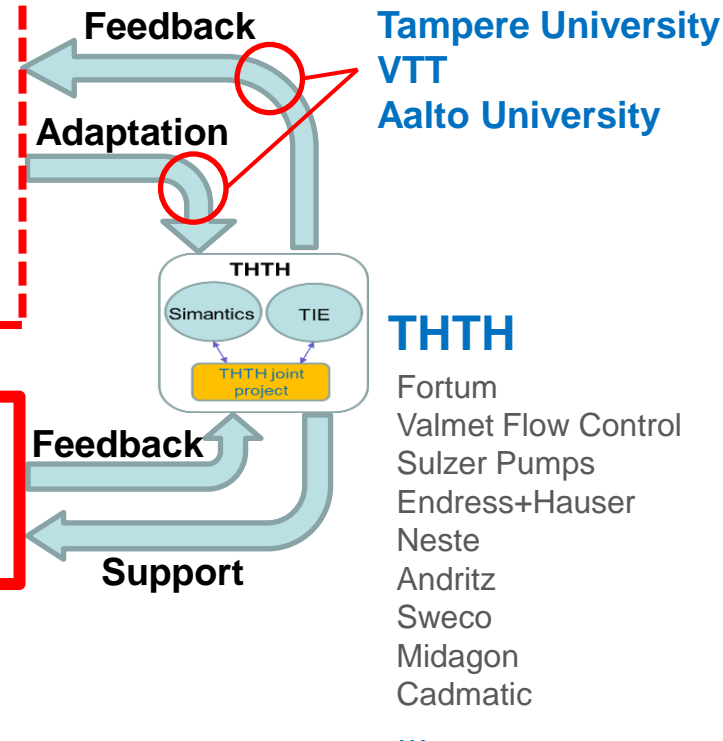
Common tasks

Micro-services (integration, API) (WP2)
Major digital languages (standards) (WP3)
 Translations (mapping between standards) (WP4)
 Exploitation and digital transformation management (WP10)
 Dissemination and standardization (WP11)

Process industry pilots (WP9)
Stora Enso, Afry, Semantum from Finland

Automotive pilots (batteries)

Aerospace pilots

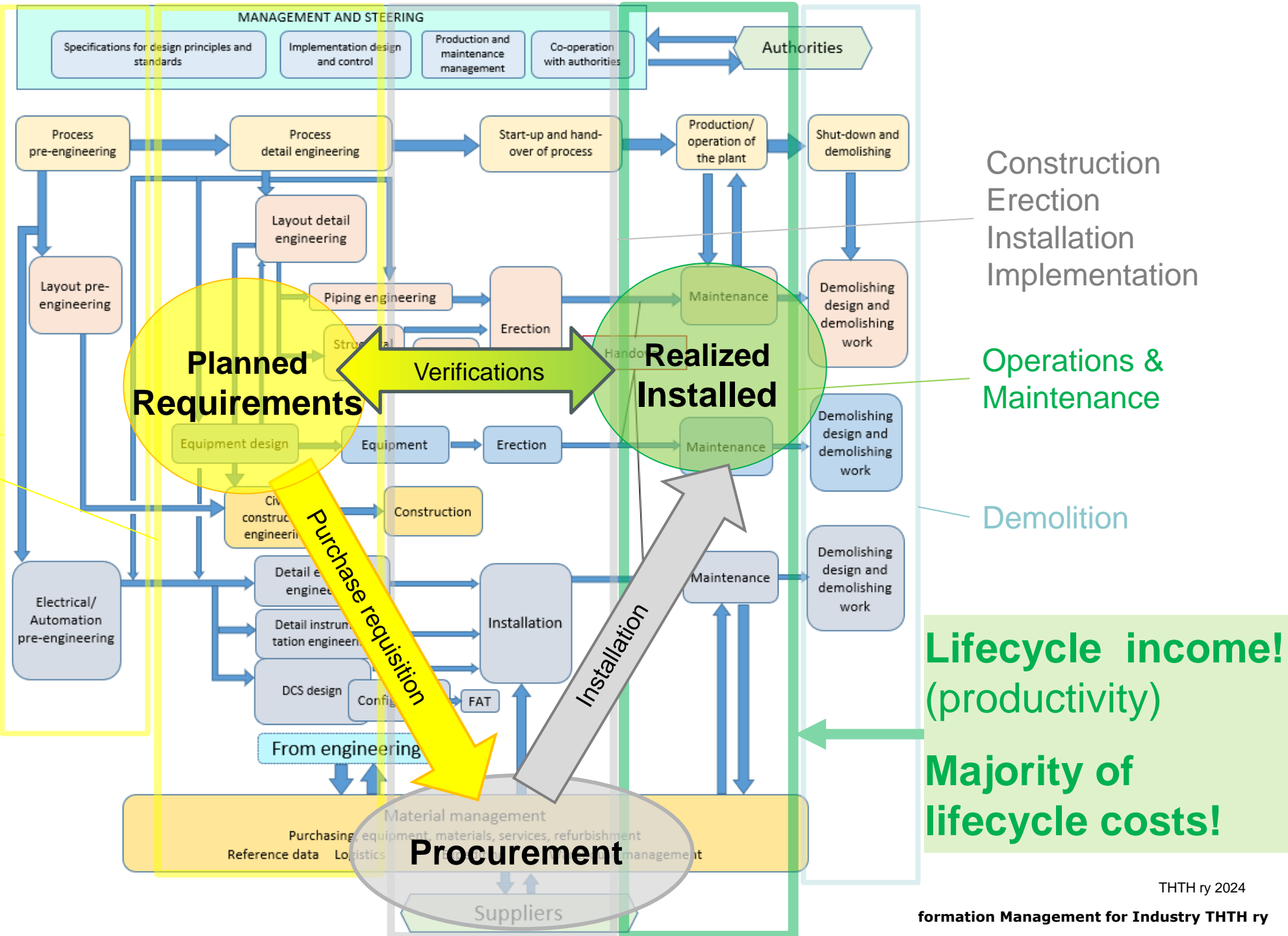


Arrowhead fPVN pilot use-cases in WP9

- Three main pilot use-cases – Finnish focus on WP9.2 and WP9.3
- WP9.2 (Sweden) focuses in industrial Digital Twin
- WP9.3 (Finland) focuses on several different use-cases
 - Technical information exchange in process industry investment projects and service operations in digital value chains
 - For managing engineering & design information, information for procurement and information for O&M
 - The exchange of technical information takes place through the collaboration platform (IEP) and is integrated with commercial information exchange processes (Peppol) – two currently separate manual processes are combined into one automated process.
 - Common standardization infrastructure (PCA Library Service) to serve different industries – complementing standards with pulp and paper industry requirements
 - Dependability data management in engineering and O&M
 - Sustainability data

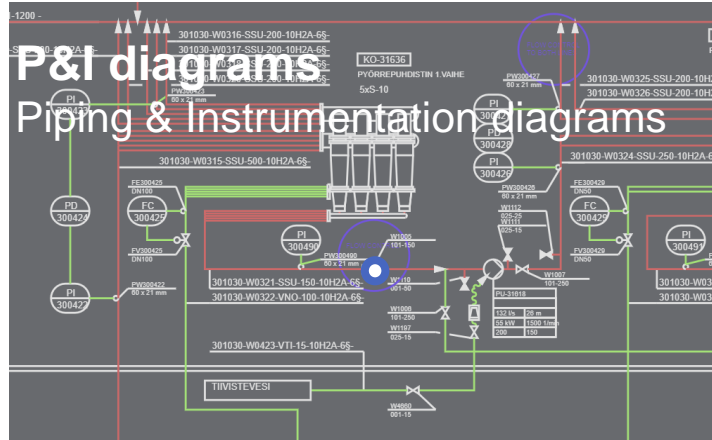
Plant lifecycle phases and information flow

Engineering & design



Arrowhead fPVN use-cases in WP9.3

3D engineering Process Flow Diagrams



Process hierarchies Functional requirements Equipment information Documentation O&M information

Dependability, sustainability,
condition monitoring,
performance, ...

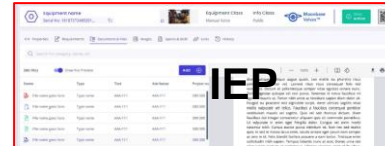
Commercial information

Pre-engineering (FEED)

Detailed engineering

Request for quotations and tendering

Catalogues



Procurement/sales

Delivery and commissioning

Invoicing and payment

Steady-state simulation, VTT
Dynamical simulation, Semantum
Intelligent P&I diagrams, Semantum
Engineering & design, AFRY
Functional requirements, Stora
Enso, AFRY

Catalogues, Stora Enso, AFRY,
suppliers

Digital data sharing platforms

Purchase requisition, Stora Enso,
AFRY

Ordering and delivery, Stora
Enso, suppliers

*ModelBroker
AutoCAD*

...

Pre-award

Sharecat™

Post-award

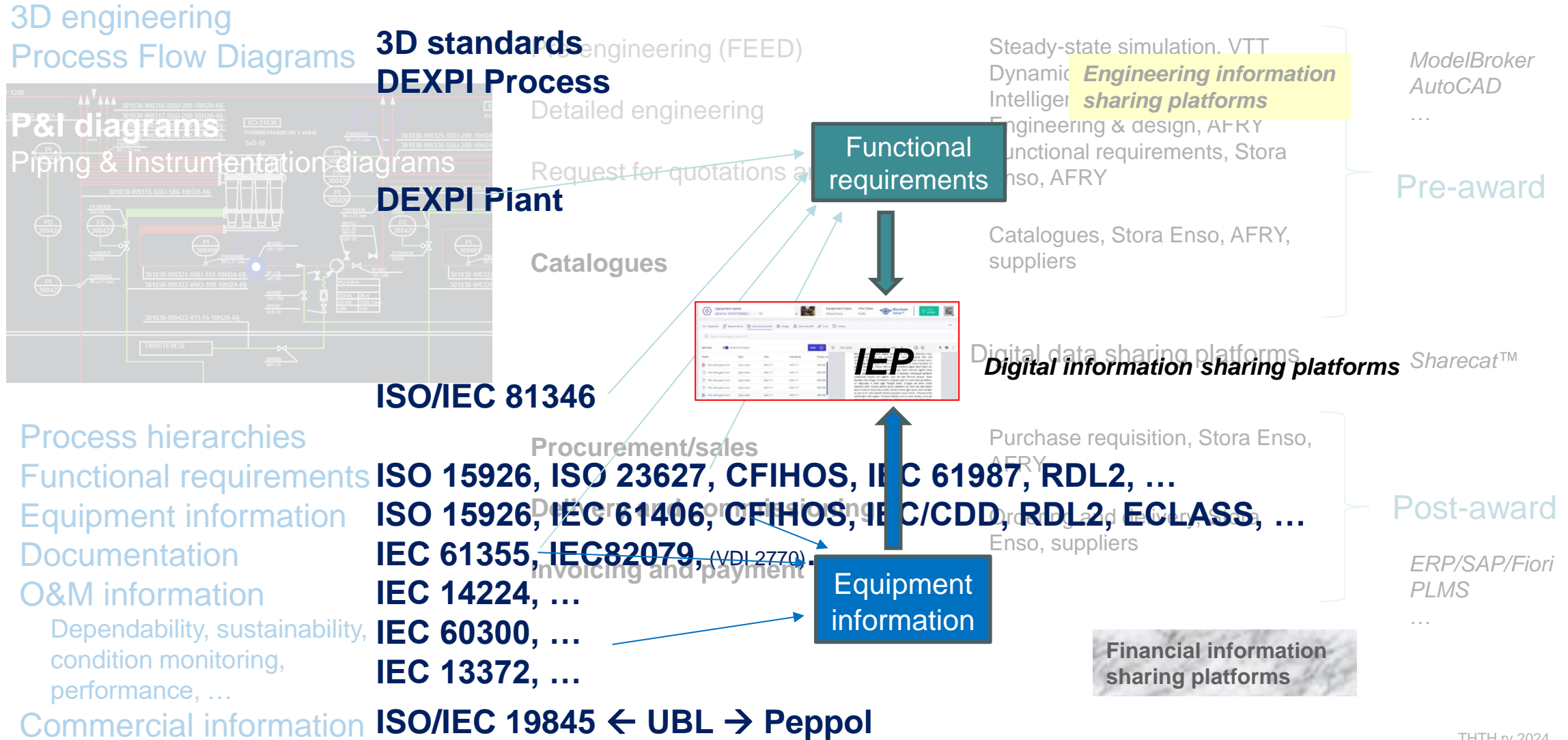
*ERP/SAP/Fiori
PLMS*

...



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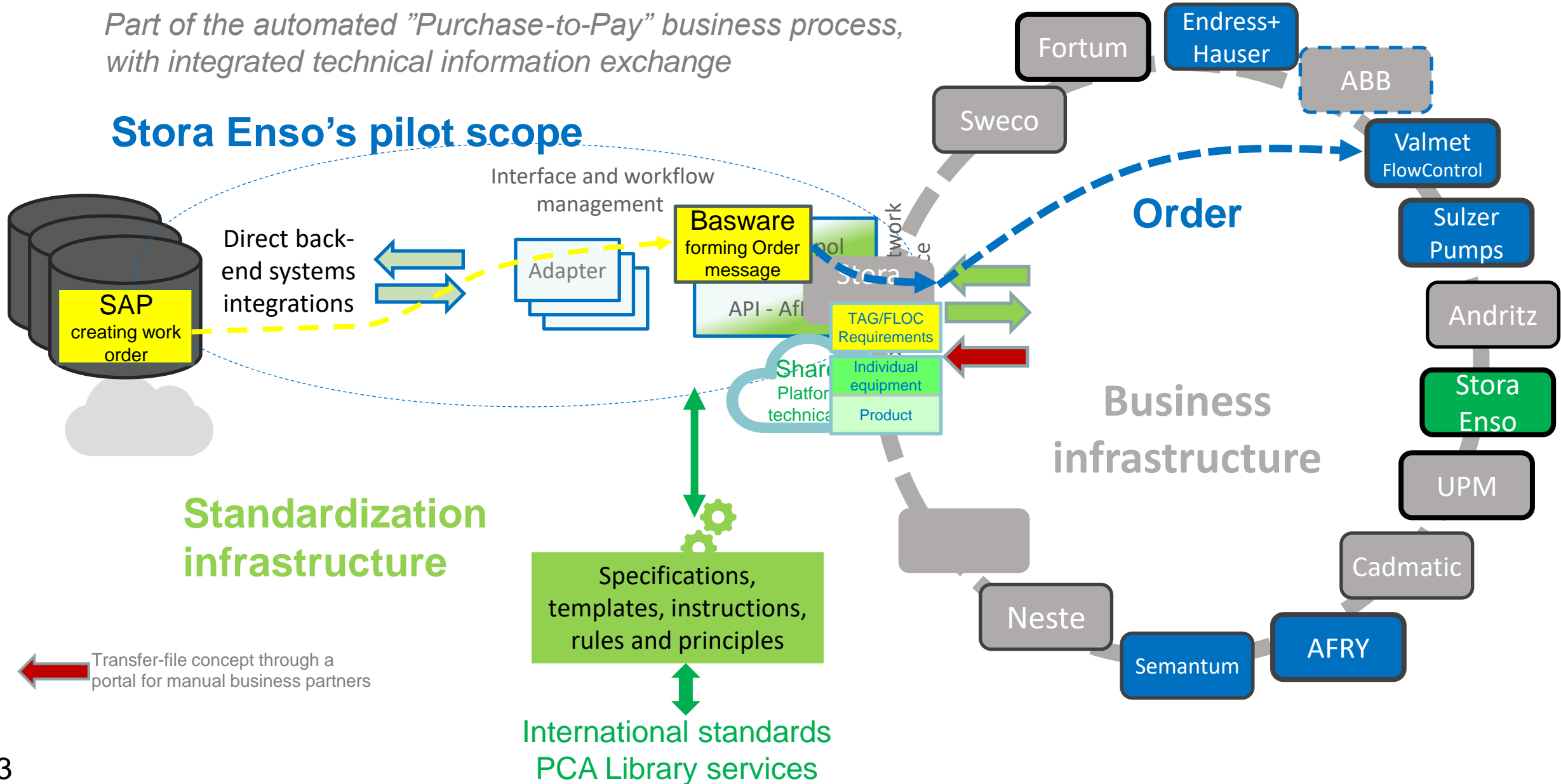
Arrowhead fPVN use-cases in WP9.3



Use-case goal – Order

Part of the automated "Purchase-to-Pay" business process, with integrated technical information exchange

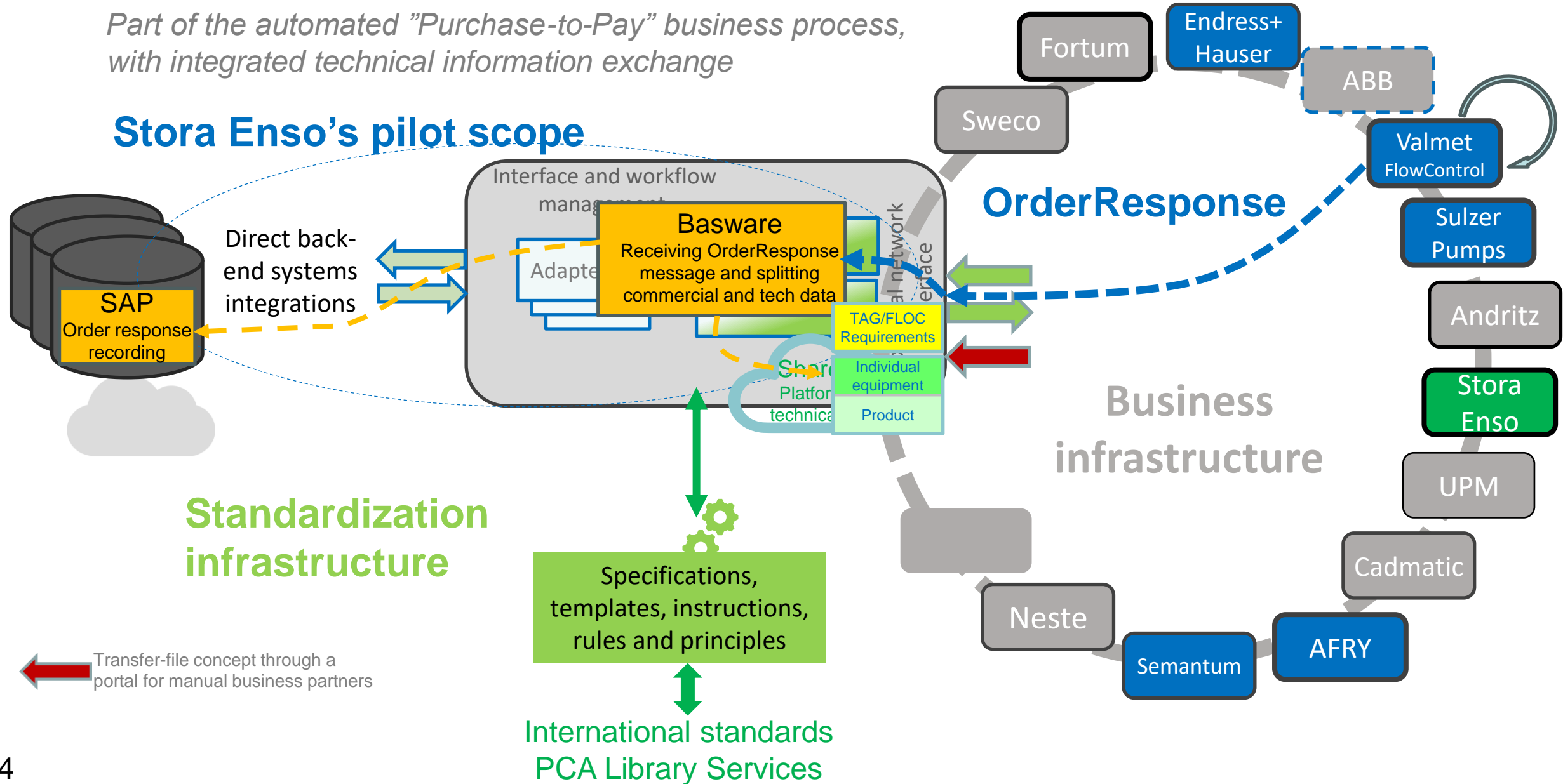
Stora Enso's pilot scope



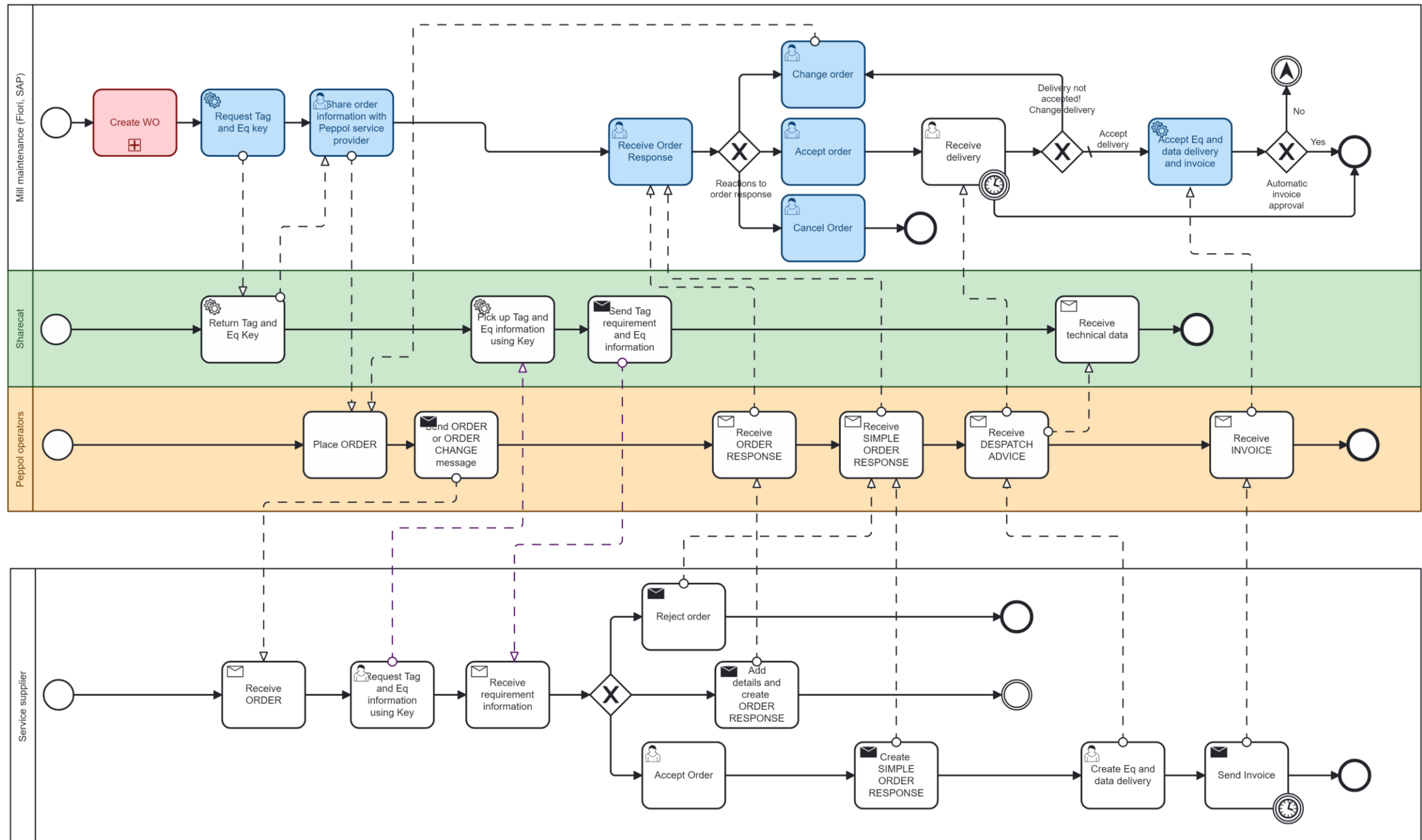
Use-case goal – OrderResponse

Part of the automated "Purchase-to-Pay" business process,
with integrated technical information exchange

Stora Enso's pilot scope



Peppol Post-award Purchase-to-Pay automation for use-cases



Summary

- Arrowhead fPVN goals to pilot and demonstrate
 - digitalized transactional business processes with collaborative information exchange platforms – not only for procurement, but also for engineering and logistics
 - common standardization infrastructure
 - PCA library service, international standards harmonized and supplemented for different industry needs
 - common standardized integration interface specifications for application vendors
 - shared ecosystem rules and principles (a.k.a. traffic rules for parties) for all above
- Strong Nordic development cooperation as EU regulation evolves
- THTH connects the interests of national companies with the international common interests of the Arrowhead fPVN and DISC projects and other industry groups.

THTH

THANKS

Arrowhead fPVN & DISC joint workshop meeting in Oslo May 6th-7th, 2025

