

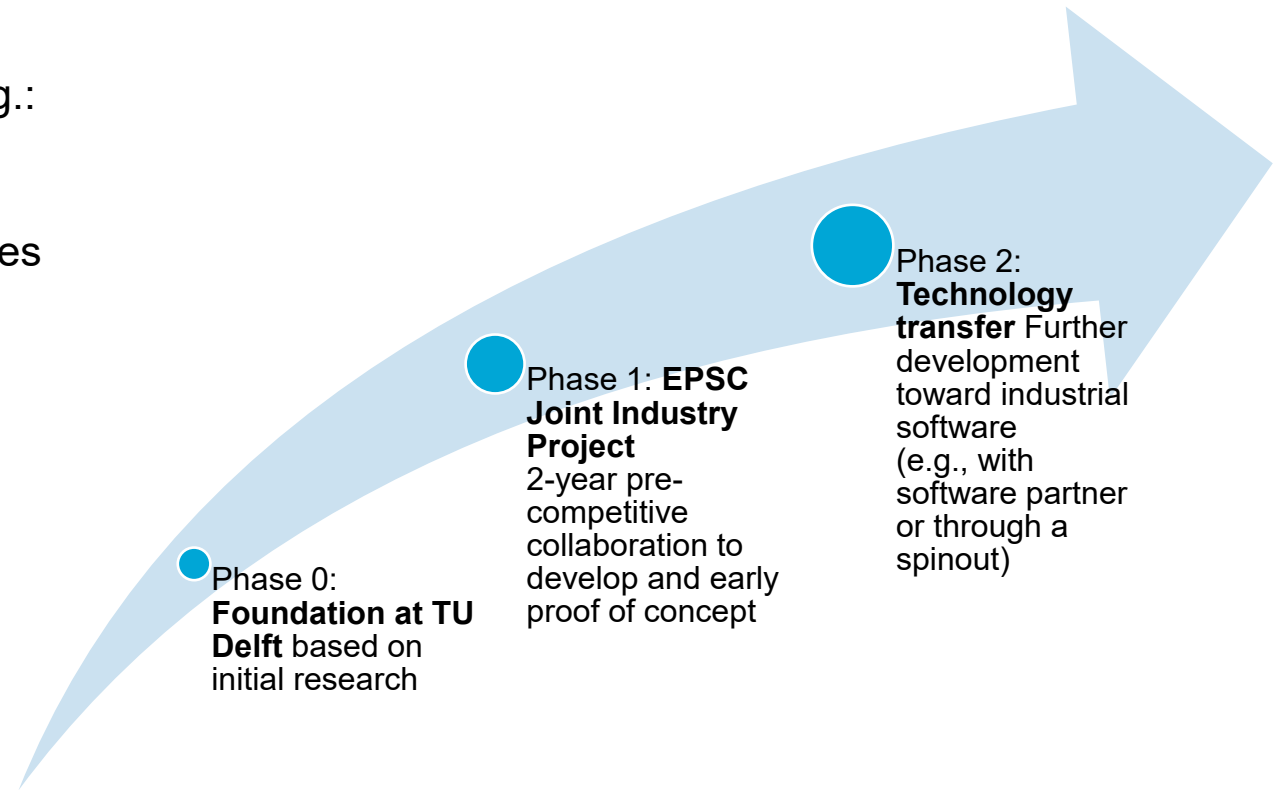
Joint Industry Project with EPSC on AI-assisted support for HAZOP preparation and execution

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From initial research to a Joint Industry Project

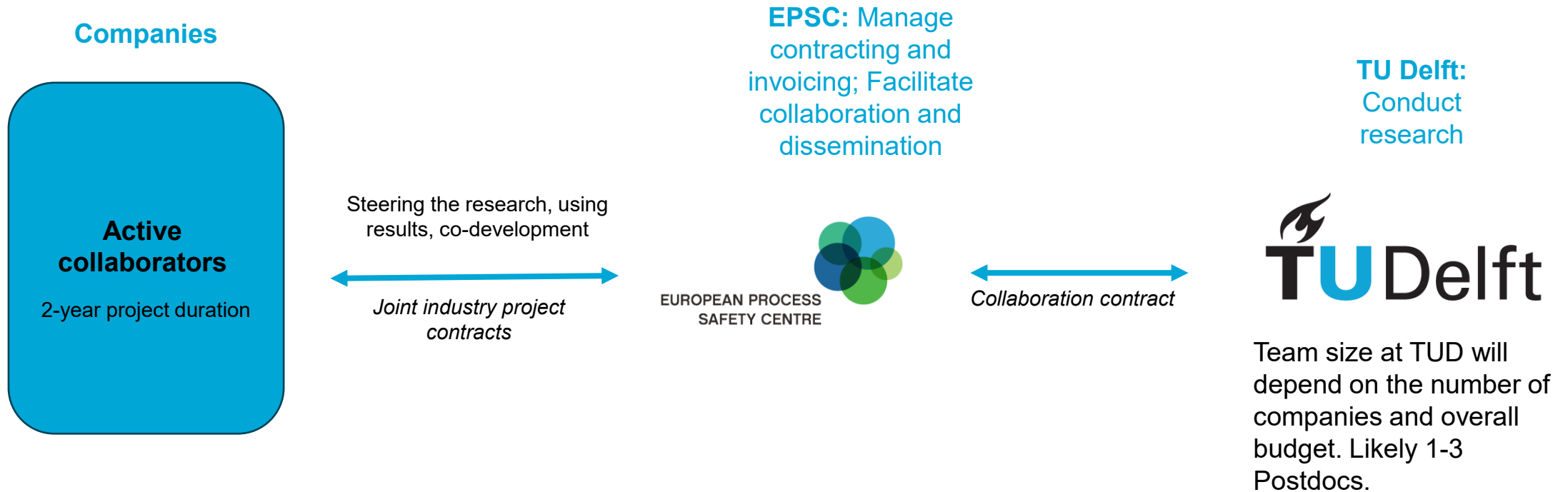
- The potential for AI-supported HAZOP is great, but industrial adoption needs shared research and development
- Key challenges are common across companies, e.g.:
 - expert-intensive workflows
 - fragmented data, knowledge and historical studies
 - need for trust, explainability, and validation
- A joint project allows companies to:
 - de-risk development
 - shape practical use cases
 - share cost in a pre-competitive setting
 - be of top of new development and opportunities



Research plan for 2-year project

- **Knowledge foundation**
Structuring engineering data (P&IDs), HAZOP knowledge, terminology, and historical study data into knowledge graphs
- **Hybrid AI methodology**
Developing integrated AI and rule-based support for deviations, causes, consequences, and safeguards
- **Human-in-the-loop workflow**
Designing assistive workflows that support experts rather than replace them
- **Industrial validation**
Testing and benchmarking on selected company case studies and data with industry experts.
- **Prototype software development**
Translating the methods into prototype software for industrial investigation and feedback

Setup for joint industry project



Data sharing remains under company control and can be arranged bilaterally with TU Delft or within the consortium, depending on sensitivity and project needs.

Tiered participation

Associate Partner

- Join consortium discussions and workshops
- Access project updates and shared learning
- Visibility into project progress and outcomes
- Access to software demonstrations, but no user license
- **15k EUR total → 7.5k EUR/year**

Full Partner

- All Associate Partner benefits, plus:
- Active role in the consortium
 - User license to software prototypes and project results for internal evaluation/use
 - Input into shared priorities and evaluation
 - **50k EUR total → 25k EUR/year**

Strategic Partner

- All Full Partner benefits, plus:
- Major contribution to project scope, for example through a nominated case study
 - Stronger role in shaping technical priorities and project direction
 - Additional workshops/trainings
 - **200k+ EUR, subject to negotiation**

Invoicing can be in 2026/2027 or 2027/2028
depending on preference of the individual companies

Timeline & next steps

- 30. April 2026: EPSC will distribute slides and send out a feedback form
- 15. May 2026: Companies will provide initial feedback (general interest, preference tier)
- 30. May 2026: Detailed workplan, contracting
- Q3 2026: Start of the project
- Q3 2028: End of the project

Thank you very much for your attention!



Any questions?

Contact me at a.schweidtmann@tudelft.nl