**Context**
- Systems and applications are designed independently according to constantly evolving technical and domain-related standards.
- We need systems that are resistant to change, especially for communication purposes to ensure interoperability.
- It is essential to develop scalable interoperability mechanisms.

**Scientific questions**
- How can connectors be made more flexible and easily scalable by exploiting their commonalities?
- Is it possible to completely decouple the connector from the business code and make it independent?

**Keywords**
Delta-Oriented Programming, Information System, Interoperability, Model-Driven Engineering, Software configuration, Software Product Line

**Expected results**
**Research**
- Automatic generation of interoperability connectors
- Update of existing connectors
- Automatic generation of configuration for low code connectors
- Monitoring the behavior/state of the connectors

**Development**
- Reduced connector development time
- Increased responsiveness by making it easier to update the existing connectors

**Achievement**
**Domain engineering**
- Variability analysis: performed manually from source codes and specifications of industrial connectors and literature.
- Variability modeling: we have proven that the connector is a first-class element of the system, and we propose a functionality model for connectors.
- Connector product line: We propose a core model of the connector and prepare a set of delta modules for the implementation of a use case.

**Approach**: automatic generation of interoperability connectors using software product line engineering and model-based delta-oriented programming

**Application engineering**
- From specification to the source code generation: we have proved the feasibility of the approach by generating connectors domain engineering.
- Use case implementation: [https://cvs.disp-lab.fr/demo-approach-spl-dop-connector](https://cvs.disp-lab.fr/demo-approach-spl-dop-connector)