Interoperability

the ability of computer systems or software to exchange and make use of information
Standardization

A common language that both parties understand and can exchange information with
Mattias Sällström

- National Admission System
- Ladok, National Student Information System
- Involved in the Edu-API standardization
Business Agility

• Flexibility is off essence!
  • new needs or regulations
  • requirements for new tools
  • public procurement acts force us to switch suppliers

• In order to support business change, we need to change processes and system support

• In order to change, we need to control integration
A better learning environment
A better learning environment

- Correct information over many systems
- Smooth transition between systems
- Common language between systems
Efficient and cost effective

- Standards increase portability
- Requirement in procurement process
- Configuration of new integrations
- Cooperation between universities
No standard

- Tailor made integration for each System
- LMS
- SiS
- Digital examination
- Mobility system
Working with a standard
Synchronous communication

- A request and a response
- Direct communication
- Typically implemented with REST
Asynchronous communication

- A signal that something have happened
- Clients empties their mailbox
- Loosely coupled system
HOW STANDARDS PROLIFERATE:
(SEE: A/C CHARGERS, CHARACTER ENCODINGS, INSTANT MESSAGING, ETC)

SITUATION:
There are 14 competing standards.

14?! Ridiculous!
We need to develop
one universal standard
that covers everyone's
use cases. Yeah!

SOON:

SITUATION:
There are 15 competing standards.
1EdTech Consortium

- LIS – Learning Information Services
- LTI – Learning Tools Interoperability
- QTI – Question & Test Interoperability
LIS – Learning Information Services

is the definition of how systems manage the exchange of information that describes people, groups, memberships, courses and outcomes within the context of learning.

• Defines response to requests
• Supports REST and .csv
LIS in Sweden

- Created an LIS-adapter between Ladok and Canvas
- Part of Ladoks integration interface
- Generalized to handle other systems than Canvas
- Provides information from Ladok in LIS format
- Asynchronous communication
Applications

- LMS
- Business-based training
- Digital Examination
- Student mobility
- Schedule Manager
- Staffing planning
- Alumni system
- Digital archive
- ...
LIS – challenges

- Missing some attributes for Swedish Universities
- Limited functionality for extension
- No support for asynchronous communications
Edu-API

- Meeting the needs of education interoperability
- Future-proofing the solution to ensure long-term sustainability and value.
- Focuses on the payload - emission, not transmission
- Standardized exchange of data
- Not tied to a singular technology platform
- Building on LIS and experience from OneRoster and LTI
Edu-API – Sweden’s contribution

- Working with the information model
- Proof of concept – mapping information from Ladok to Edu-API messages
- Identities vs. Code – Organization & Academic Session
- Localization framework
- Asynchronous communication with pub/sub
Edu-API – what’s next?

- Candidate final
  - There are issues to solve or decide on
- Certification process
- Implement the specification in order to get certified
- Result and degrees in future versions
Workshop - goals

- get an understanding how Edu-API can help in your local environment
- get an understanding how Edu-API maps to your information model
Workshop - instructions

- Groups of 4-5 as you are sitting
- Take notes on a flipchart page
Workshop - questions

• Do you see any challenges with Edu-API in your local environment?
• What advantages do you see with Edu-API?
• Are there use cases not covered by the model/api?
• What do you see as shortcomings and areas for improvement in the model?
• Do you have a case for moving from synchronous to asynchronous communication?