



FAKULTÄT  
FÜR INFORMATIK

Faculty of Informatics



# ERPEL

## Enterprise Registry Permitting Enterprise Liaisons or ERP Exchange Language

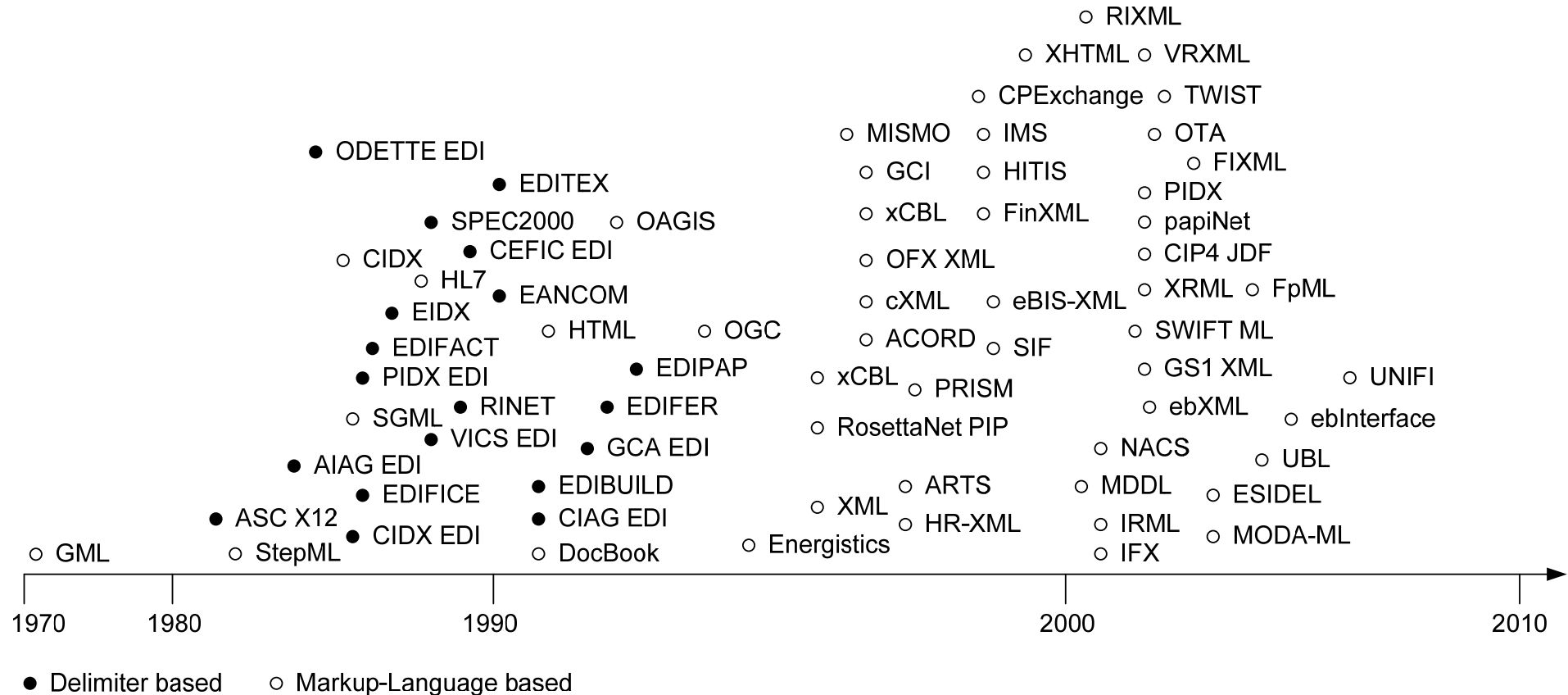
**Christian Huemer**, Gerda Ilger, Gerti Kappel, Philipp Krenn,  
Philipp Liegl, Dieter Mayrhofer, Peter Nowak, Michael Pöttler,  
Rainer Schuster, Mario Topf, Hannes Werther, Marco Zapletal

Vienna University of Technology

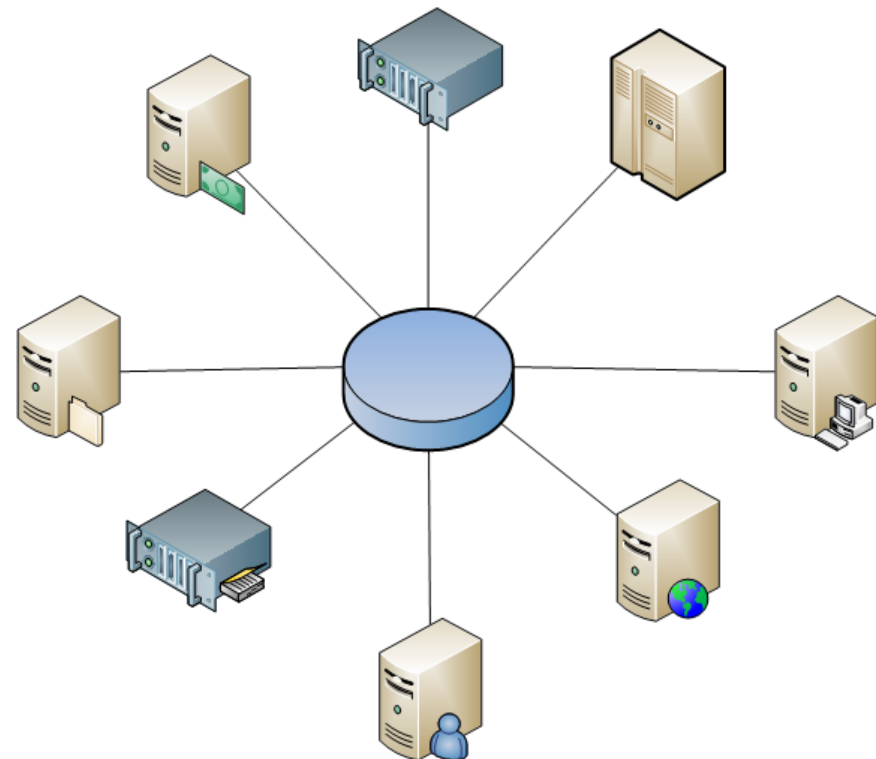
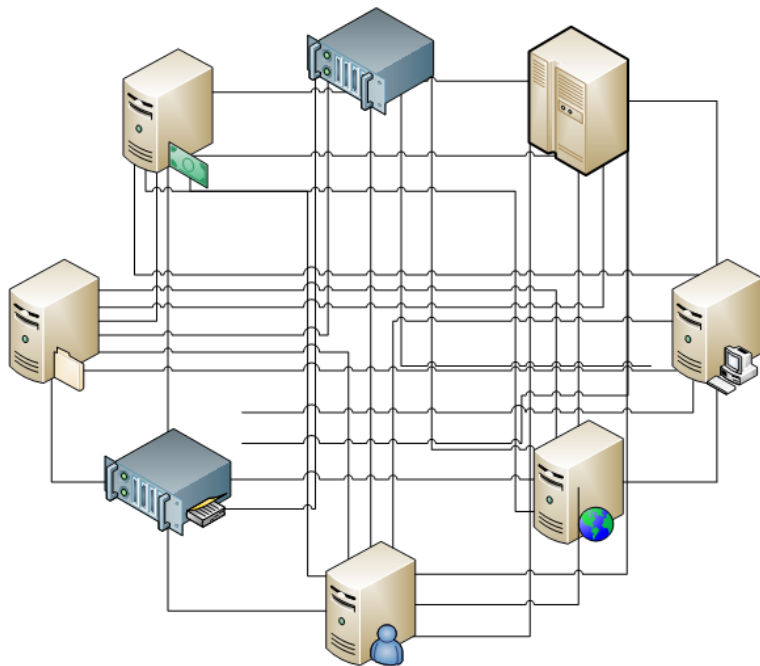
- This is not an academic paper presentation
- The presentation is rather about experiences and opinions of an academic participating in the standards world and creating a start-up company
- Statements in this talk are not scientifically justified
- Not agreeing to this statements may cause a headache ;-)



# Standards over time

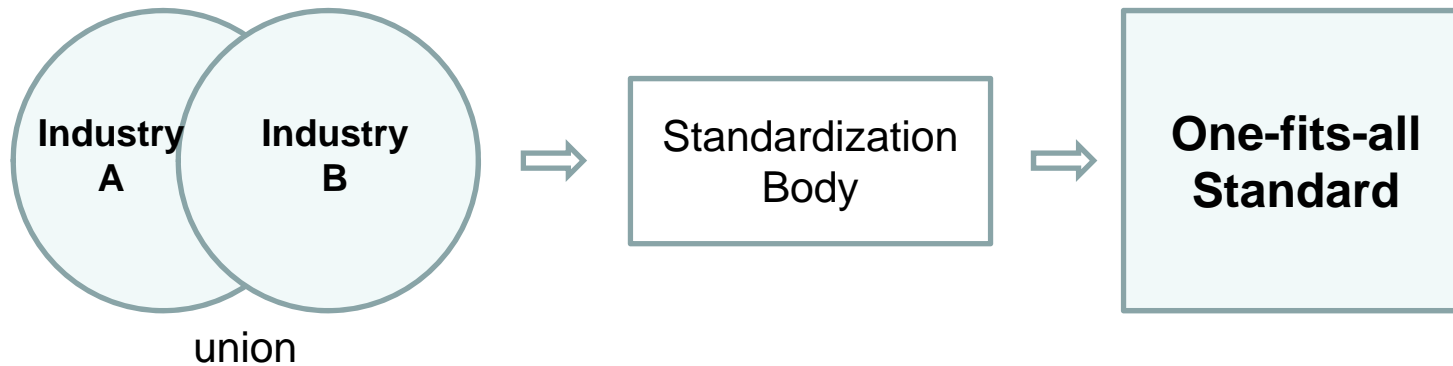


# The way we build standards has not changed

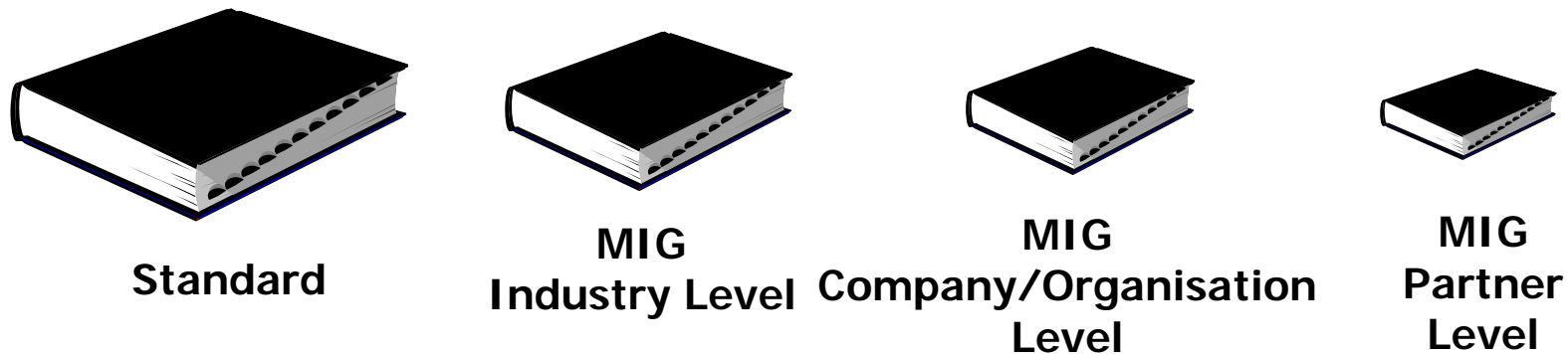


# Traditional EDI Standardization Approach

## The “Union” Approach



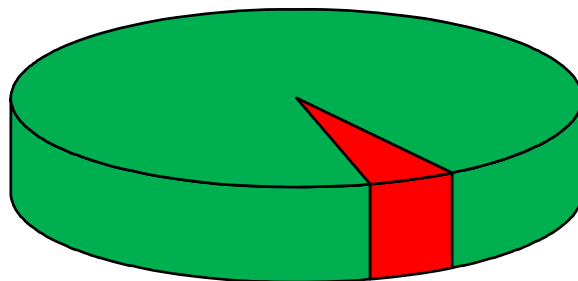
## ... and its proprietary customization



## Fortune 1000

using EDI

95%

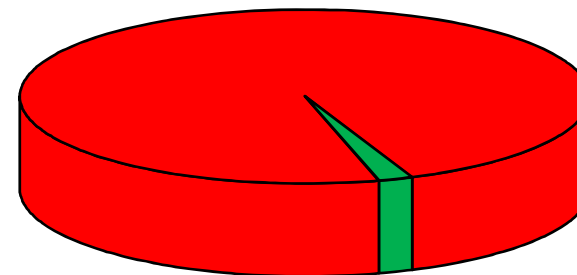


5%

... will not change this situation

## Small-and-medium sized enterprises

98% able to participate in e-Commerce



use EDI  
2%

EDI is too expensive to implement

- Usual classification
  - Large enterprises
  - Medium-sized enterprises
  - Small-sized enterprises
  - Micro enterprises

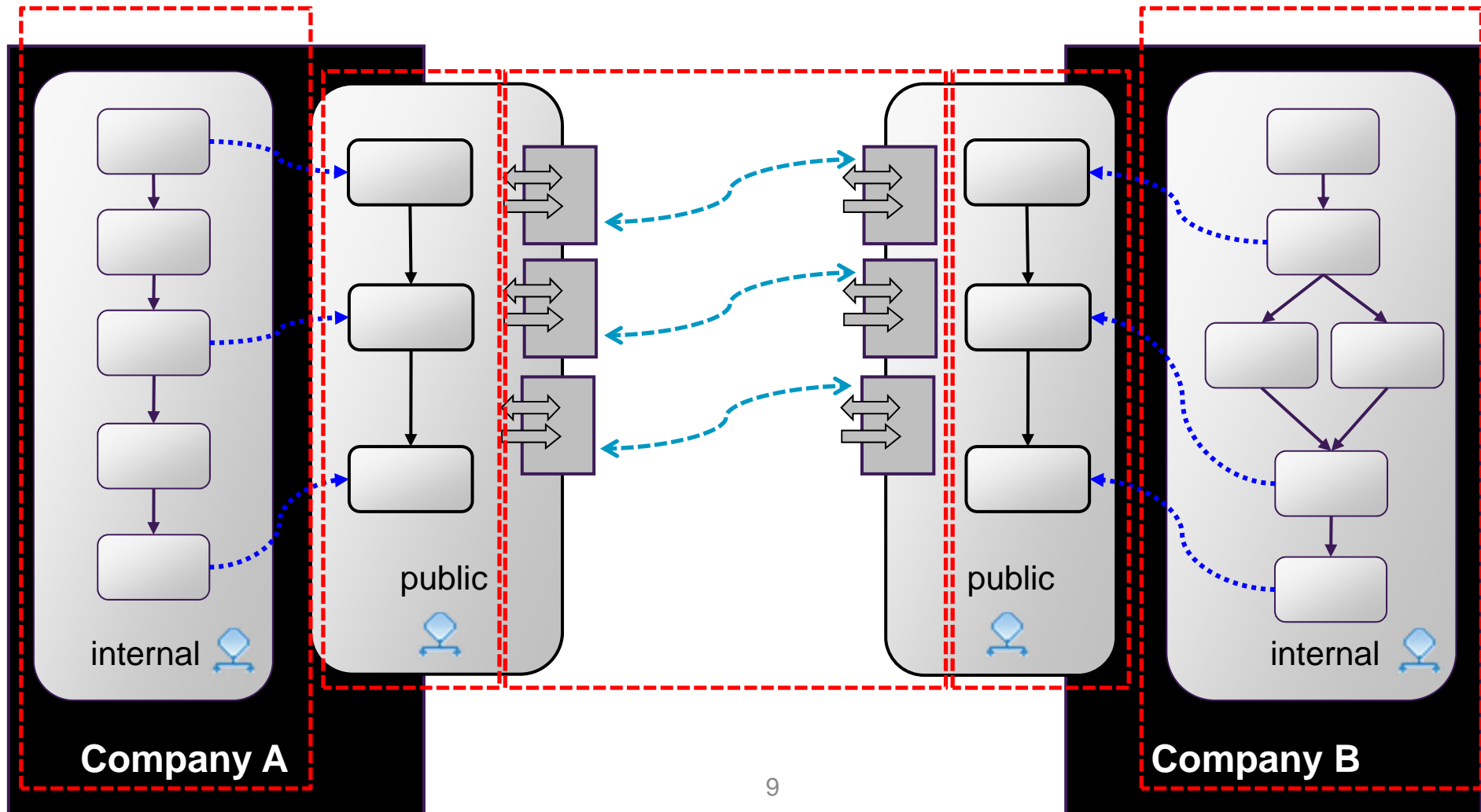
- EU classification

|                            | <b>Medium</b> | <b>Small</b> | <b>Micro</b> |
|----------------------------|---------------|--------------|--------------|
| <b>Employees</b>           | <250          | <50          | <10          |
| <b>Turnover</b>            | <40 Mio €     | <7 Mio €     | -            |
| <b>Balance sheet total</b> | <27 Mio €     | <5 Mio €     | -            |

## Information scientist`s classification:

- Large Enterprises
  - run business applications
  - develop software or customize software, i.e., control their interfaces
  - more or less able to participate in B2B
- Small and Medium Enterprises
  - run business applications
  - buy (or rent) off-the-shelf software
  - **Need Off-the-Shelf Software with B2B Functionality**
- Micro Enterprises
  - do NOT run business applications
  - act similar to consumers and are satisfied with „browser-based“ e-commerce





|                                    |                                     |   |                       |
|------------------------------------|-------------------------------------|---|-----------------------|
| Country of origin (1)              |                                     | Date, Reference No. etc. (2)            |                       |
| Consignee (3)                      |                                     | Buyer (if other than consignee) ... (4) |                       |
| Notify/Delivery address (5)        |                                     | Country whence consigned (6)            | Country of origin (8) |
| Transport details (10)             |                                     | Country of destination (9)              |                       |
| Shipping marks, Container No. (12) | Number & kind of packages, ... (13) | Commodity No. (14)                      | Net weight (15)       |
|                                    |                                     |   | Cube (16)             |
|                                    |                                     |   | Value (17)            |
|                                    |                                     |   | Free disposal (18)    |
| Free disposal (19)                 |                                     |   | Authentication (20)   |

- ① - [Consignor \(Exporter\)](#)
- ② - [Date, Reference No. etc.](#)
- ③ - [Consignee](#)
- ④ - [Buyer \(if other than consignee\) ...](#)
- ⑤ - [Notify/Delivery address](#)
- ⑥ - [Country whence consigned](#)
- ⑦ - [Country of origin](#)
- ⑧ - [Free text](#)
- ⑨ - [Country of destination](#)
- ⑩ - [Transport details](#)
- ⑪ - [Terms of delivery and payment](#)
- ⑫ - [Shipping marks, Container No.](#)
- ⑬ - [Number & kind of packages, ...](#)
- ⑭ - [Commodity No.](#)
- ⑮ - [Gross weight](#)
- ⑯ - [Cube](#)
- ⑰ - [Net quantity](#)
- ⑱ - [Value](#)
- ⑲ - [Free disposal](#)
- ⑳ - [Authentication](#)

## Consignor (Exporter)

This field is intended to show the name and address of the sender of goods or the originator of the documents, as the case may be.

Corresponding data elements:

[3130/1 Exporter](#)  
[3282/3 Despatch party](#)  
[3336/7 Consignor](#)

## 3030 Exporter

**Desc:** Name and address of party who makes - or on whose behalf a Customs clearing agent or other authorized person makes - an export declaration. This may include a manufacturer, seller or other person.

**Repr:** an. 35x5;

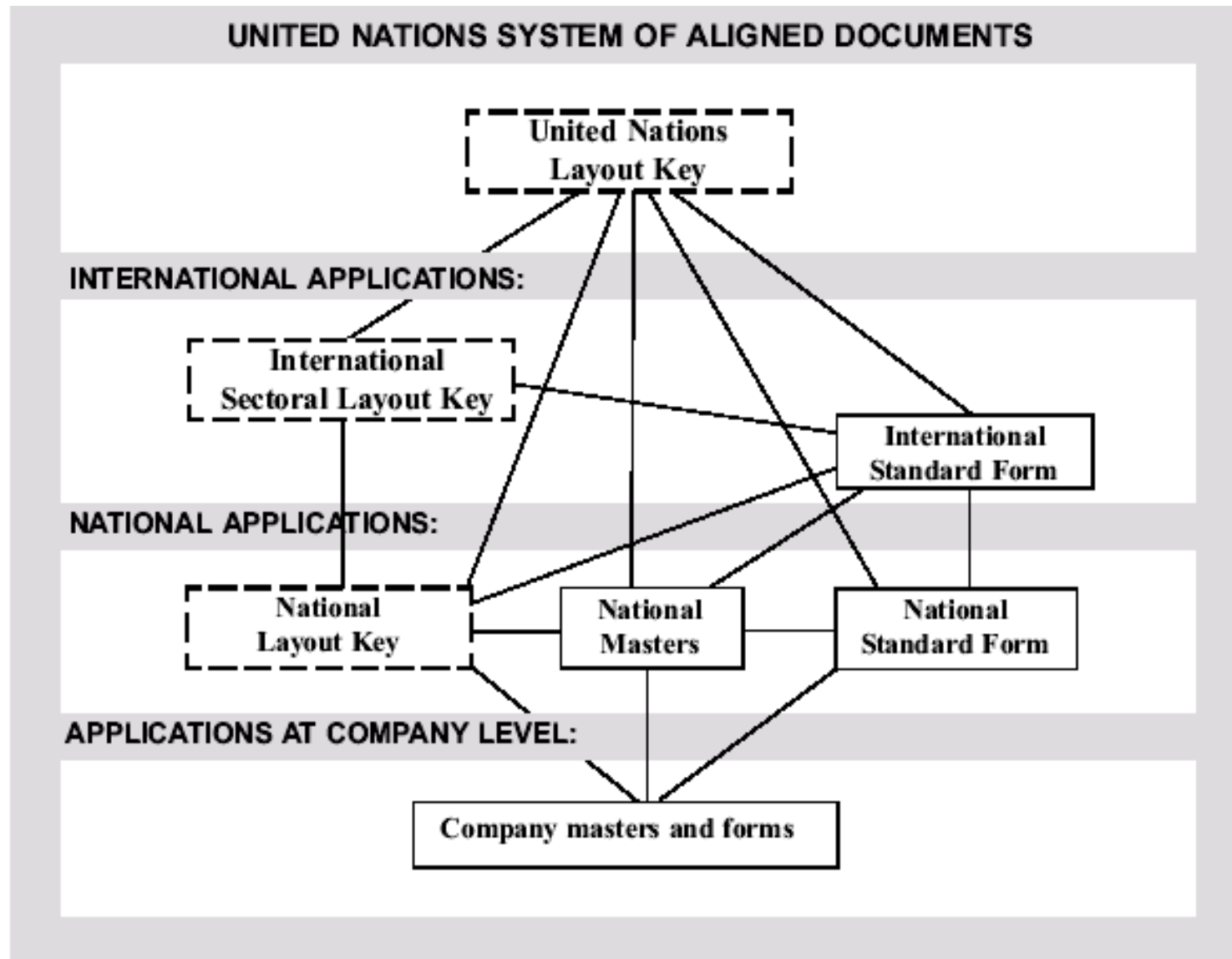
UNLK: an. 35x5: L 04-08, P 09-44

## 3031 Exporter, coded

**Repr:** an. 17

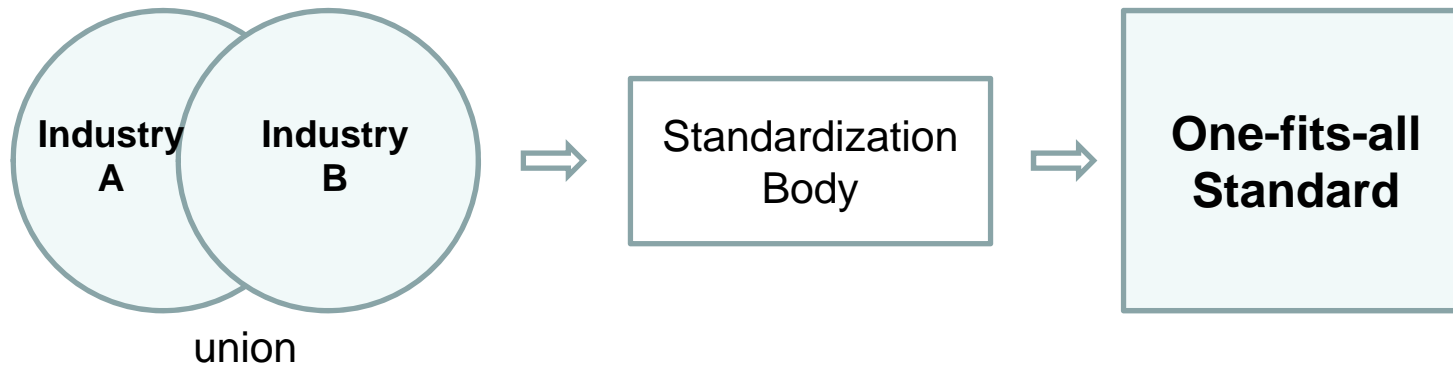
UNLK: L 03, p 27-44

**Note:** No international code available; national code not to exceed 17 characters

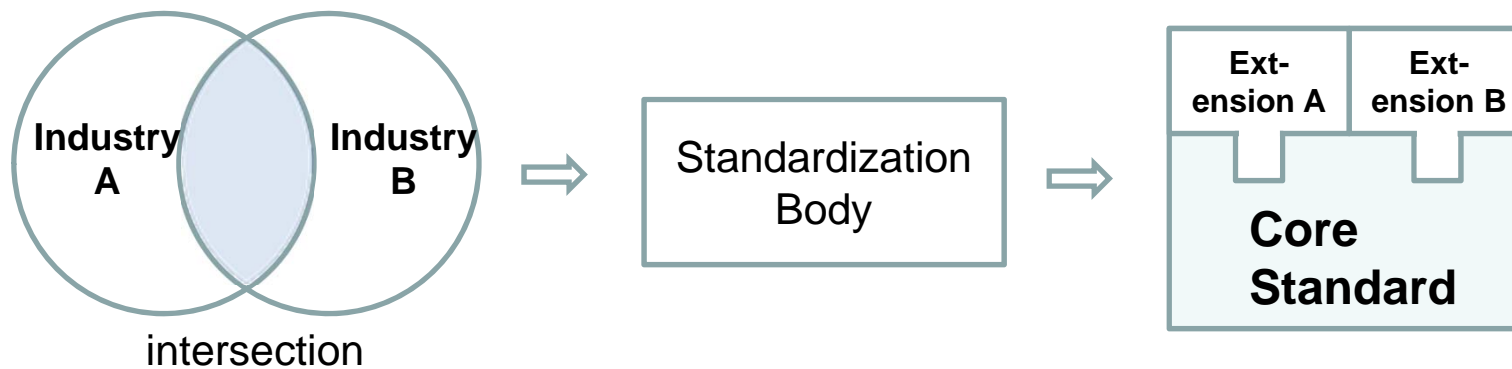


# Standardization: Union vs Intersection

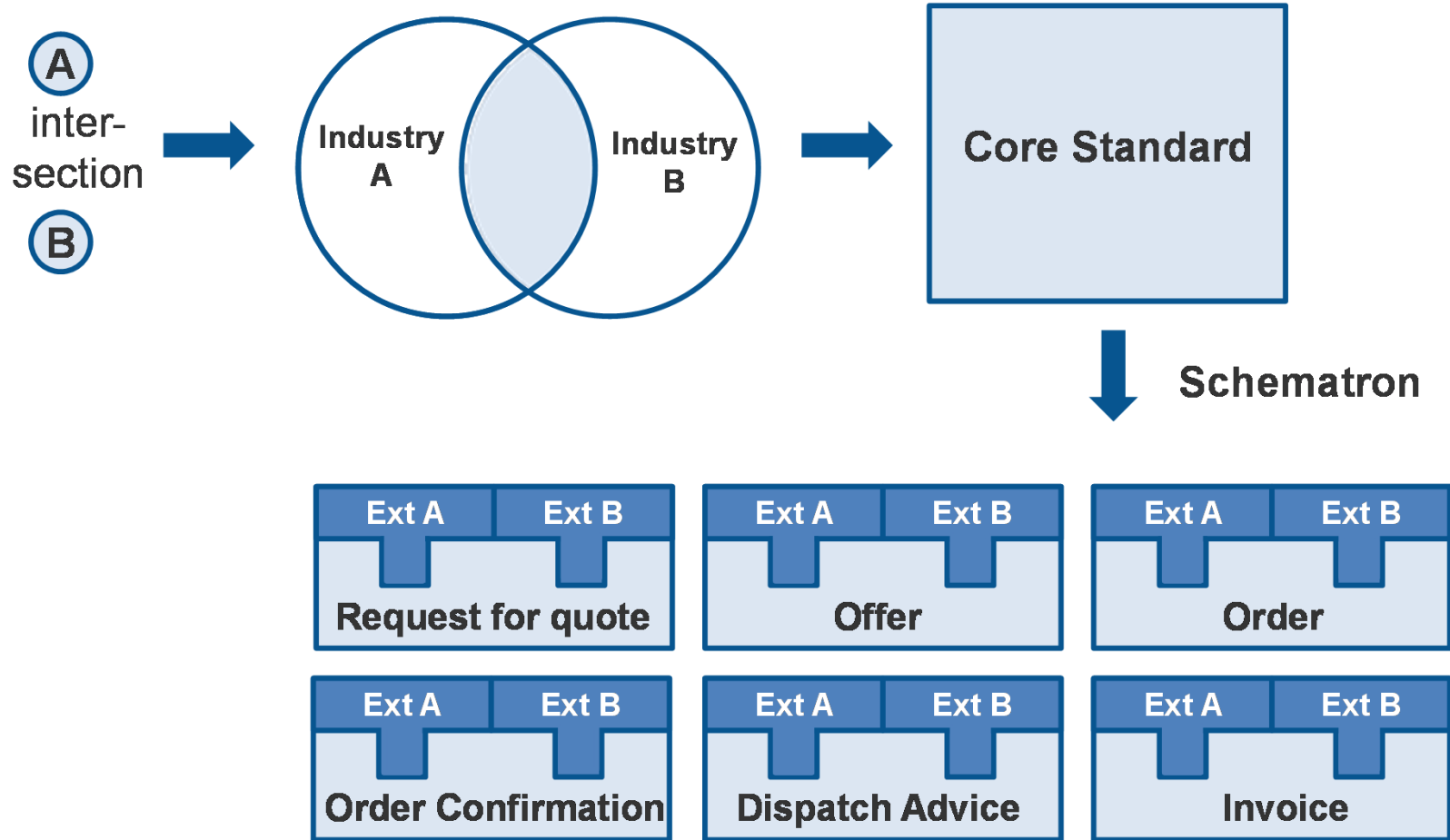
## The “Union” Approach



## The “Intersection” Approach



# ERPEL business documents





## Strategic Alliance



WIRTSCHAFTSKAMMER ÖSTERREICH



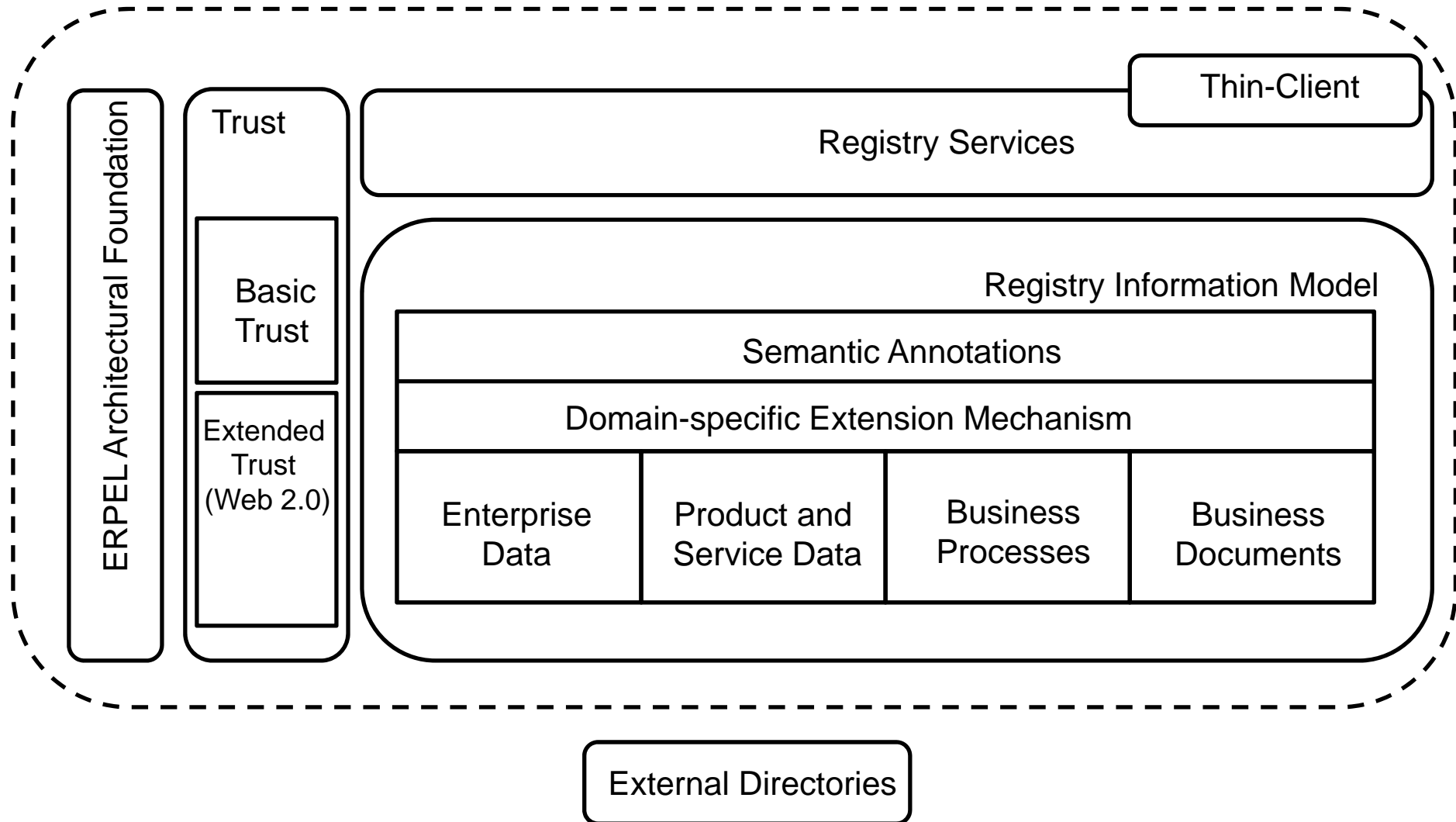
FACULTY OF **INFORMATICS**

## Challenges in B2B interactions: No central registry available



- Where is the company located?
- What kind of business is the company doing?
- Which (technical) services does the company offer?
- Which electronic business document types does the company accept?
- What are the product codes of the products the company offers?

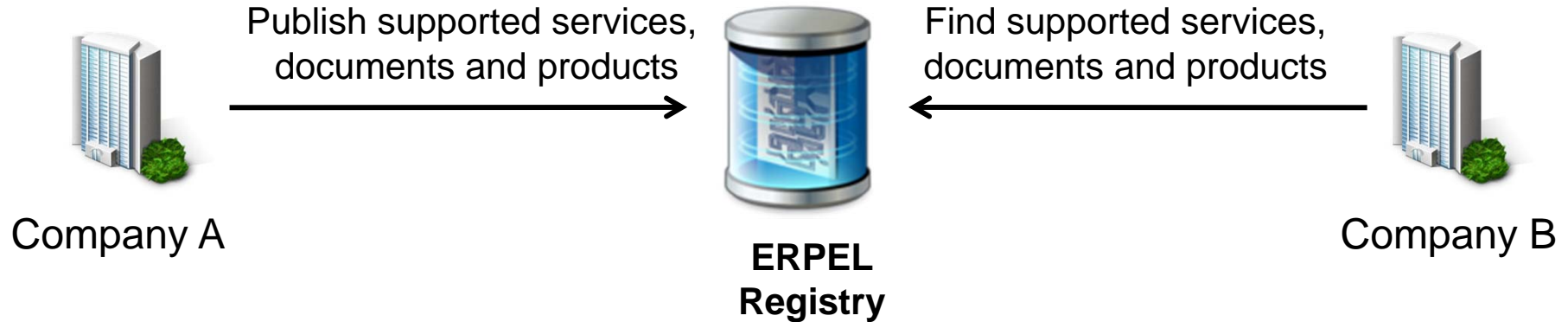
# The ERPEL Registry Architecture



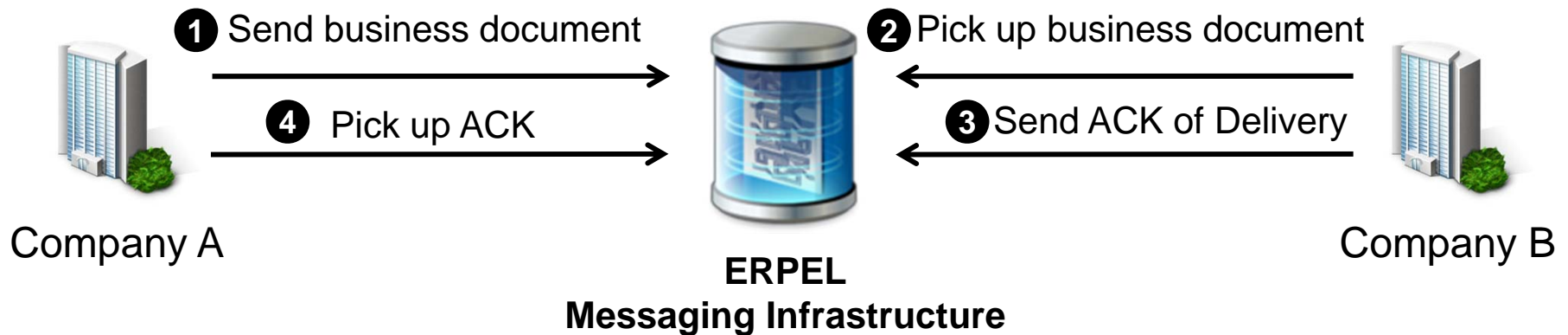


# Now what does ERPEL provide in order to help enterprises to connect?

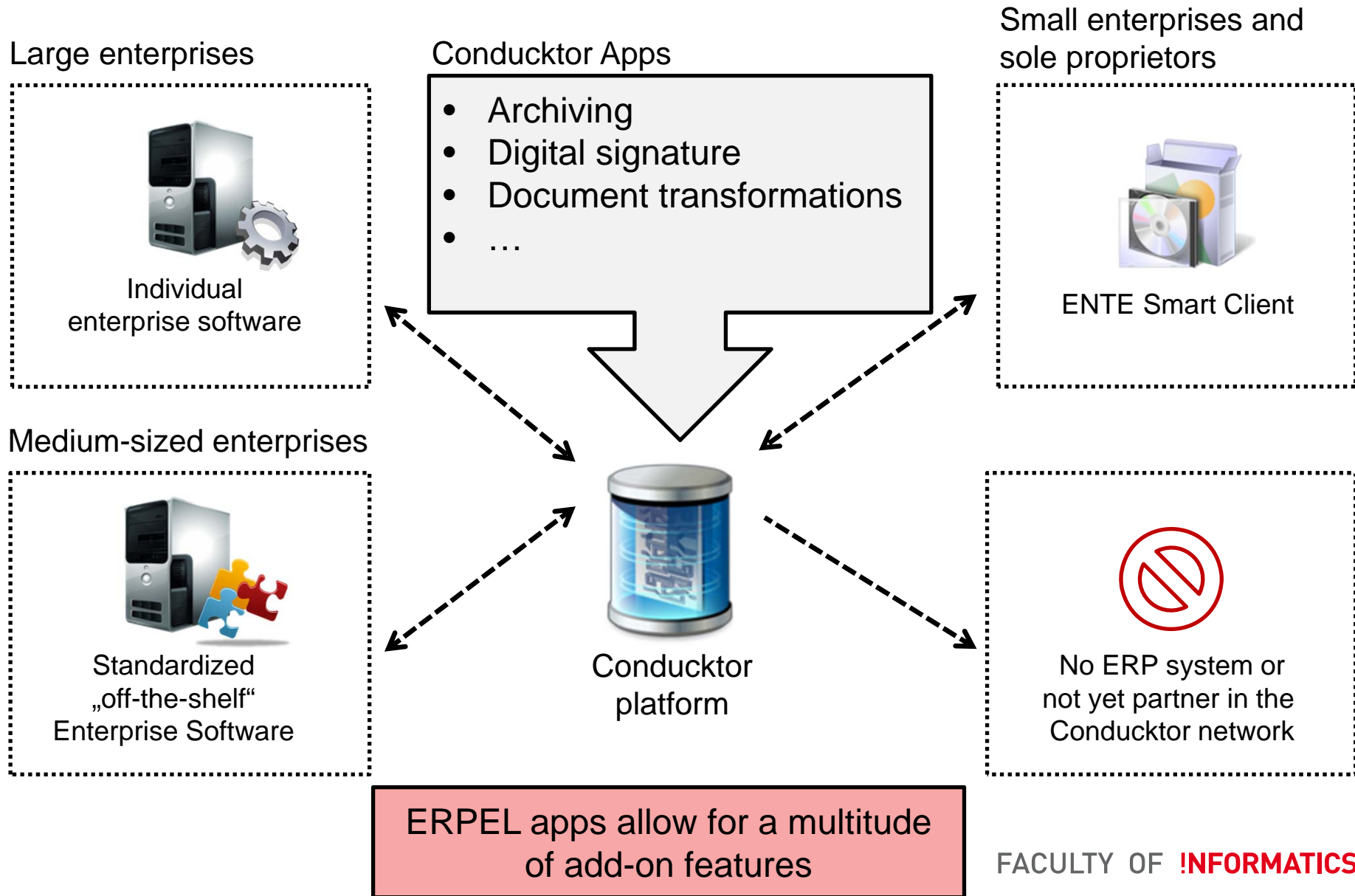
## 1. Registry



## 2. Messaging

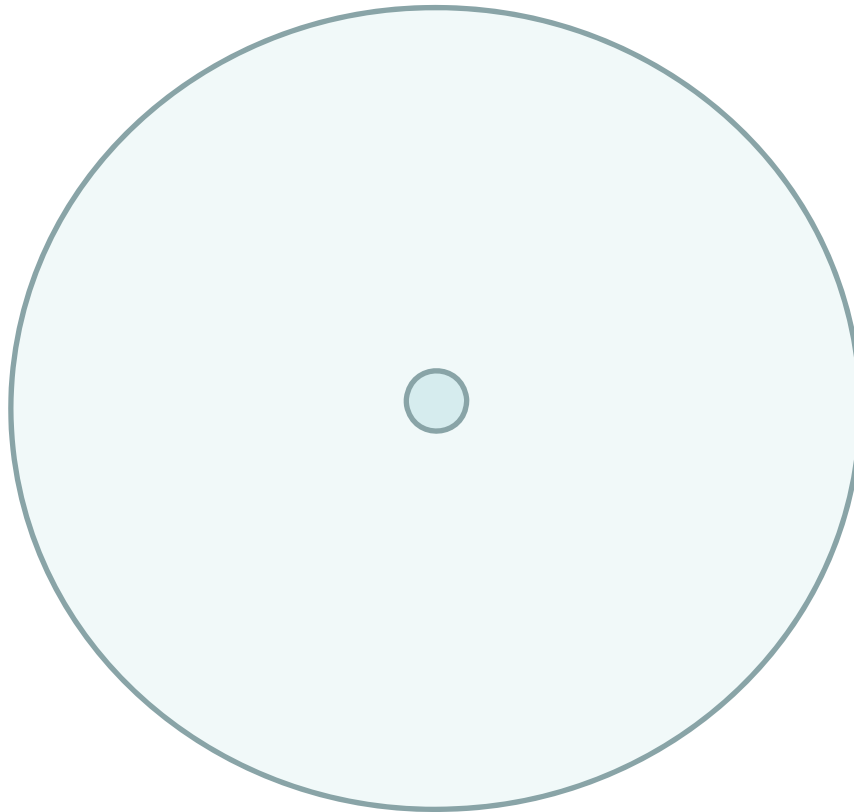


# ERPEL follows an „open-platform“ approach

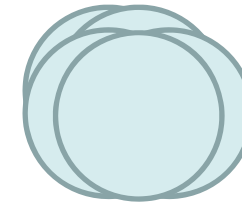


# Standards and their usage

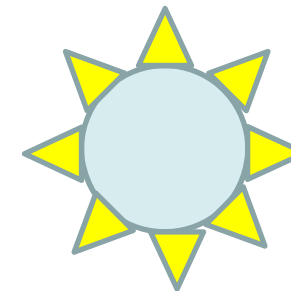
Union Standardization Approach



Standards Usage



Intersection Standardization Approach



# ecosio

business interchange



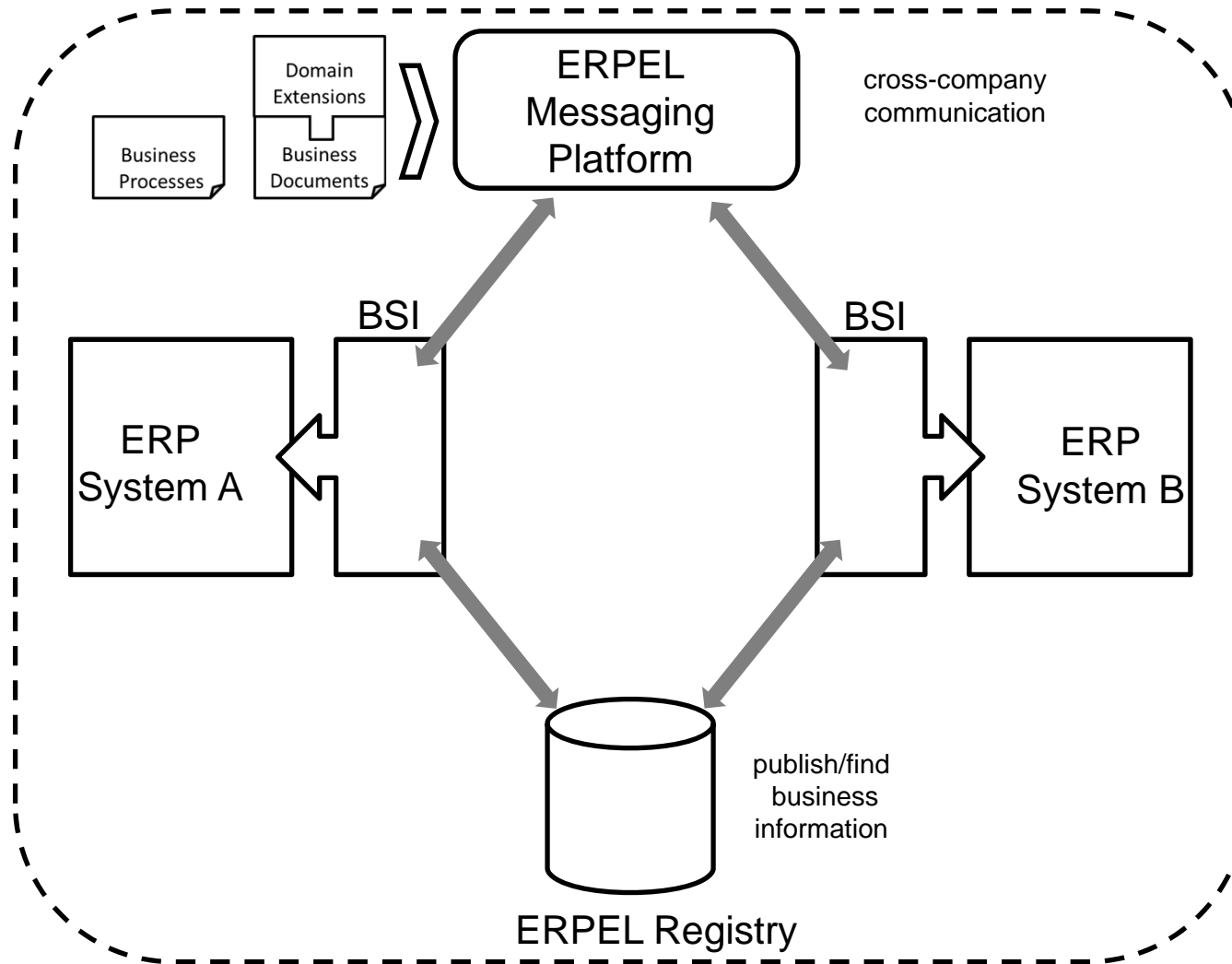
TECHNISCHE  
UNIVERSITÄT  
WIEN

Vienna University of Technology

INNOVATION INTO BUSINESS



# The ERPEL Messaging Infrastructure



# The ERPEL Messaging Protocol

