

# Localizing Business Process Repository Content

Jörg Schütz & Alexandra Weissgerber  
biloom group

# Summary

In Business Process Modeling (BPM) one of the major challenges is to solve the “naming” problem to ensure and assure the global use of business components and artifacts within process models across languages and cultures. By taking into account localization and internationalization aspects during modeling, and combine them with information elements from language-oriented processes, such as information development content and customer care content creation, the merging and aggregation of process knowledge allows effectively to deal with multiple meanings in contexts.

The methodology we employ is to combine semantic modeling with BPM through a knowledge matrix (KM) as the universal semantic data model and structure.

The approach integrates seamlessly with the existing exchange formats XLIFF and ITS. However, in the enterprise context the question is if we really need these strictly content associated formats because our approach already includes all loc & int specific knowledge, and additionally guarantees extensibility, interoperability and scalability.

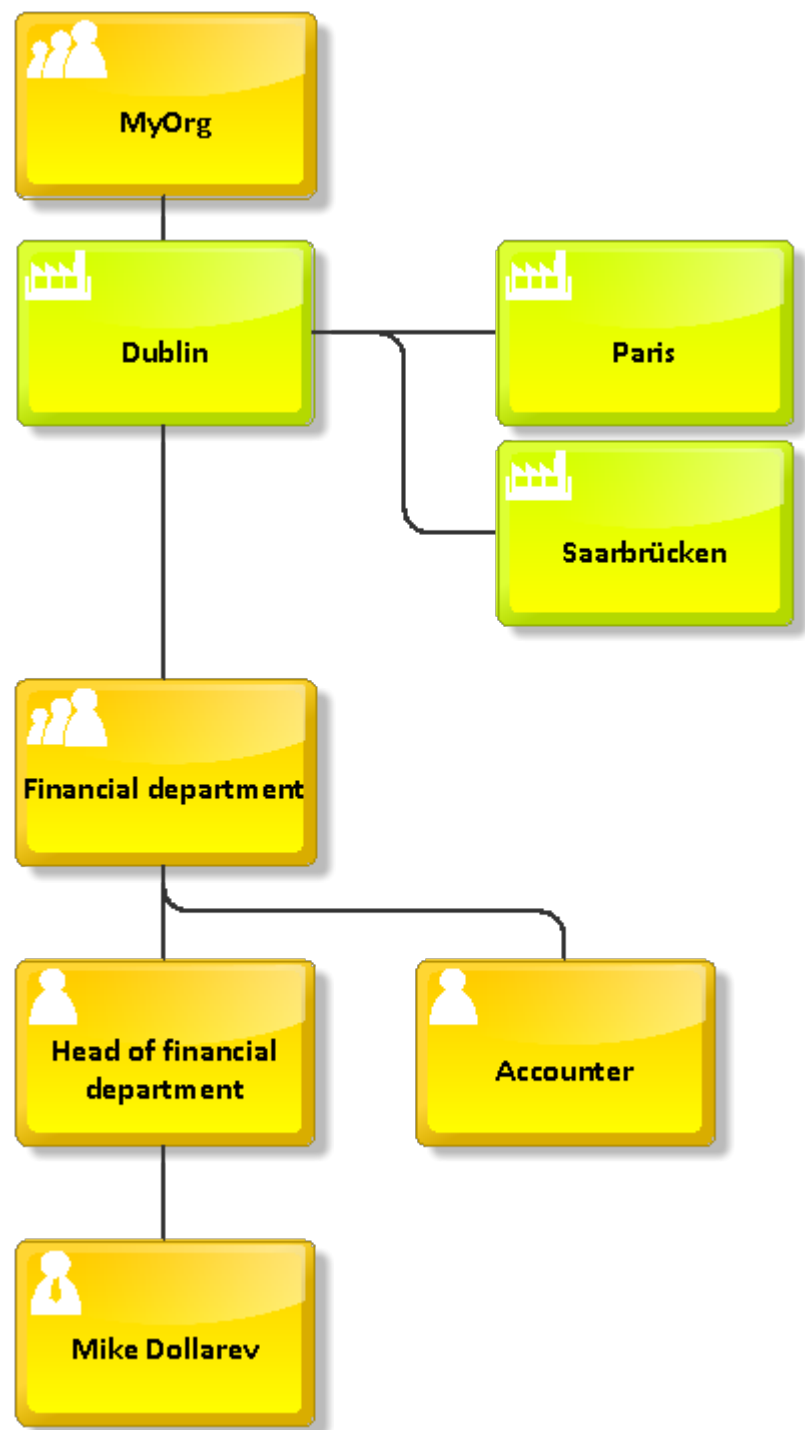
# Enterprise Organizational Structure

location - factory, building, office, workplace, ...

unit - department or location

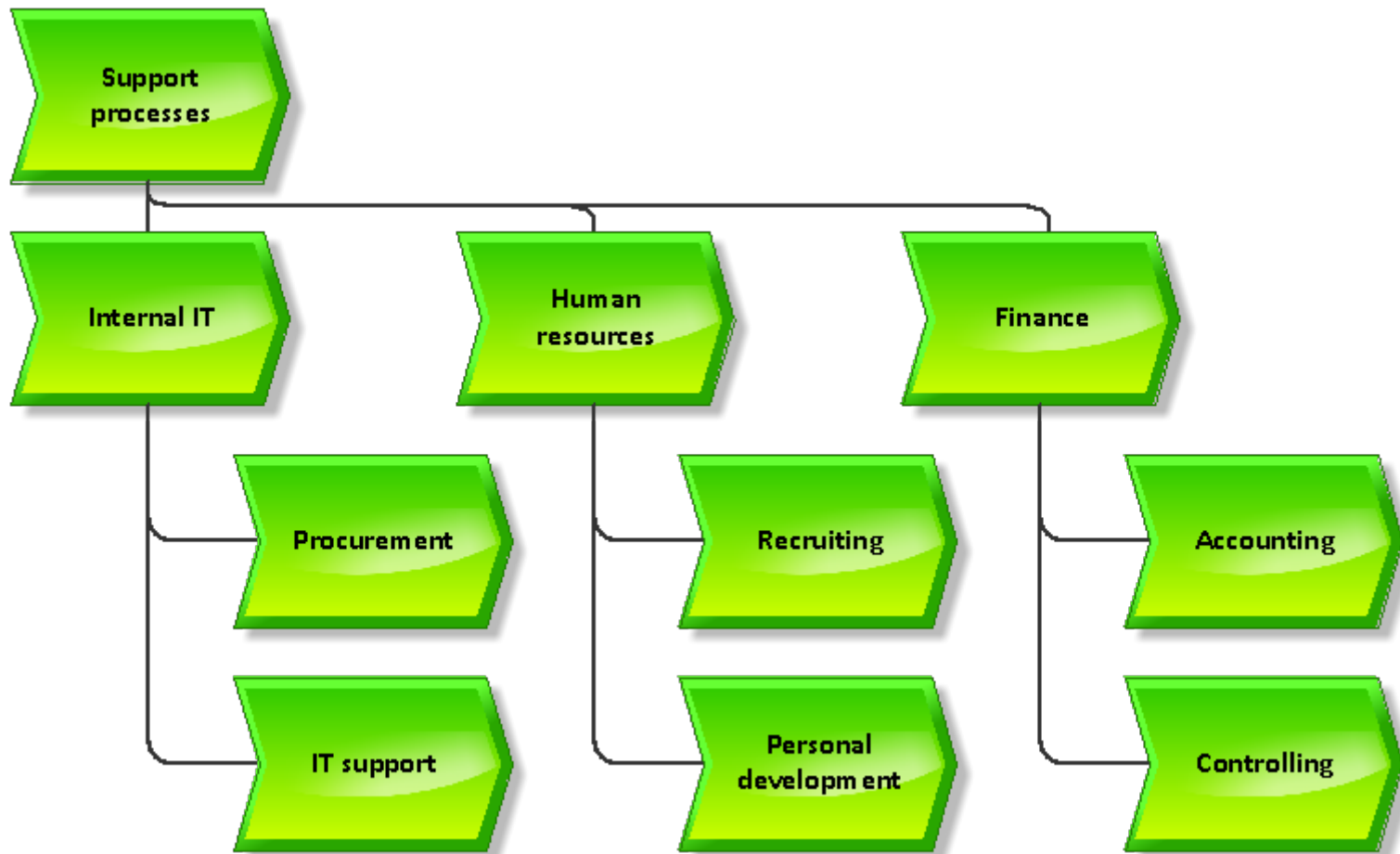
role - group of persons

person



STRUCTURAL ORGANIZATION INFORMATION

# Process Landscape

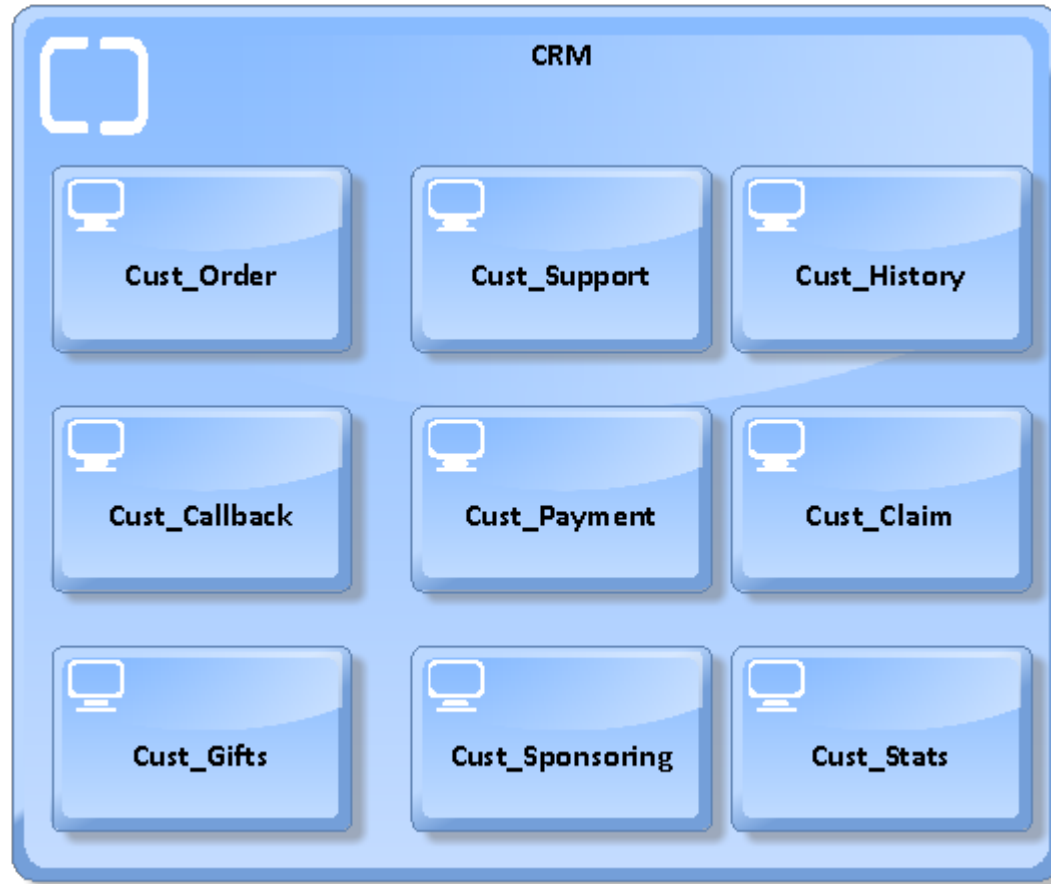


process map: inventory and portfolio

process hierarchy - here: some support processes

PROCESS STRUCTURE OVERVIEW

# System Landscape

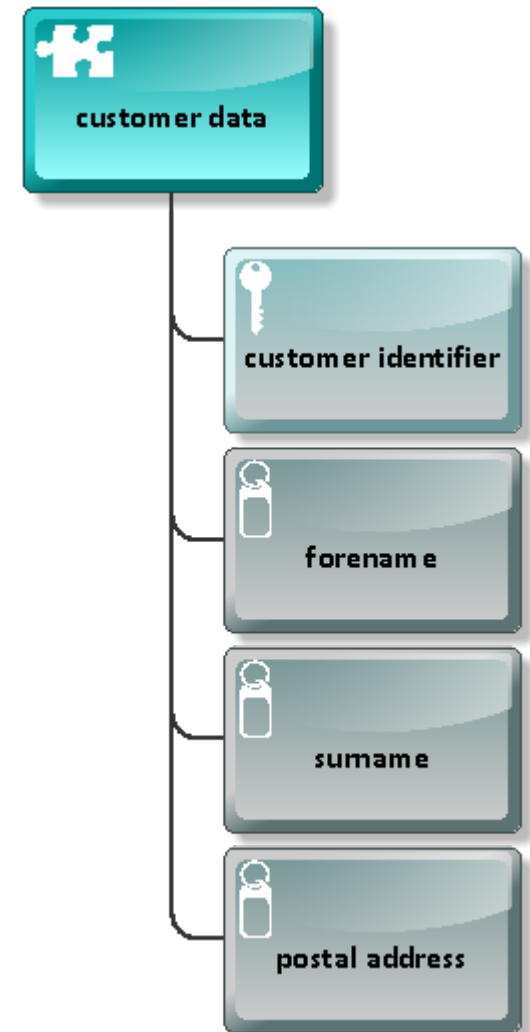
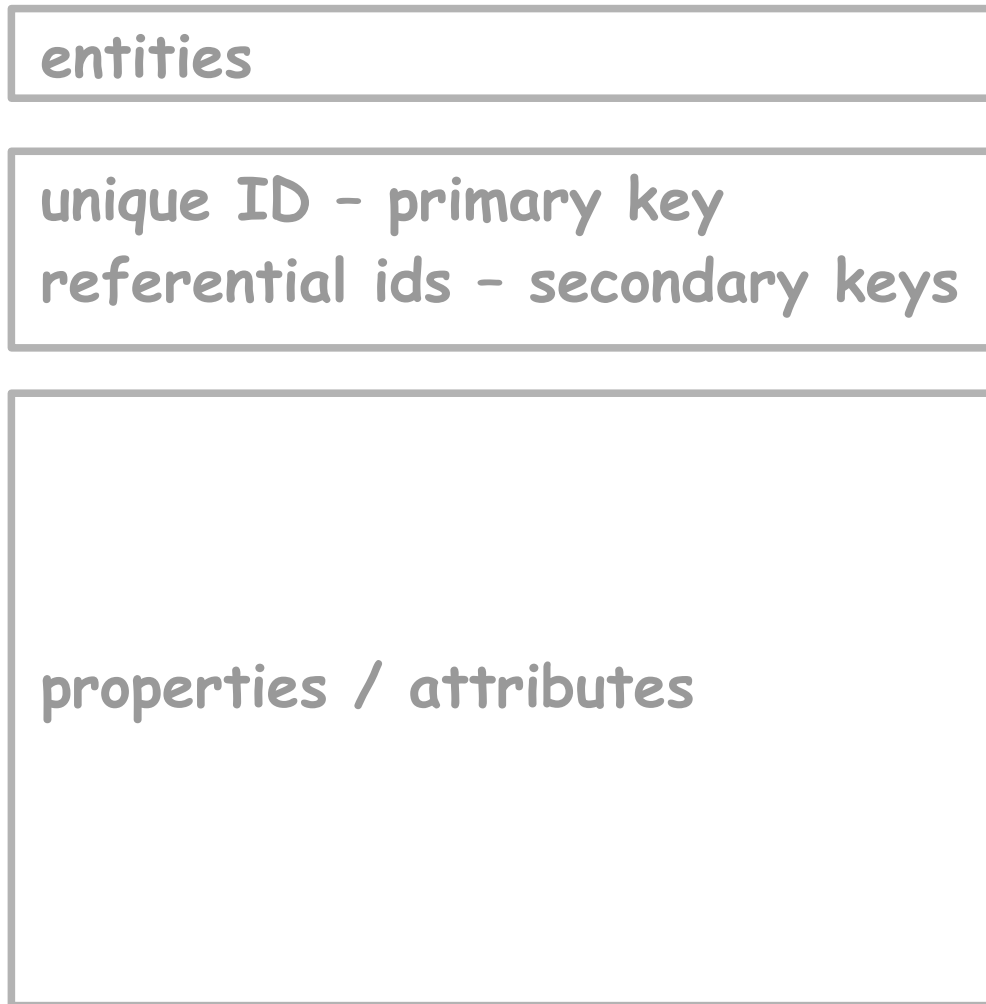


IT systems and infrastructure  
implementation options of functions and objectives

here domain: CRM with Purchase Order Processing

IT SYSTEMS OVERVIEW

# Relational Data Model



RELATIONAL INFORMATION MODEL

# Business Process

formalisms: EPC (here) or BPMN

objects:

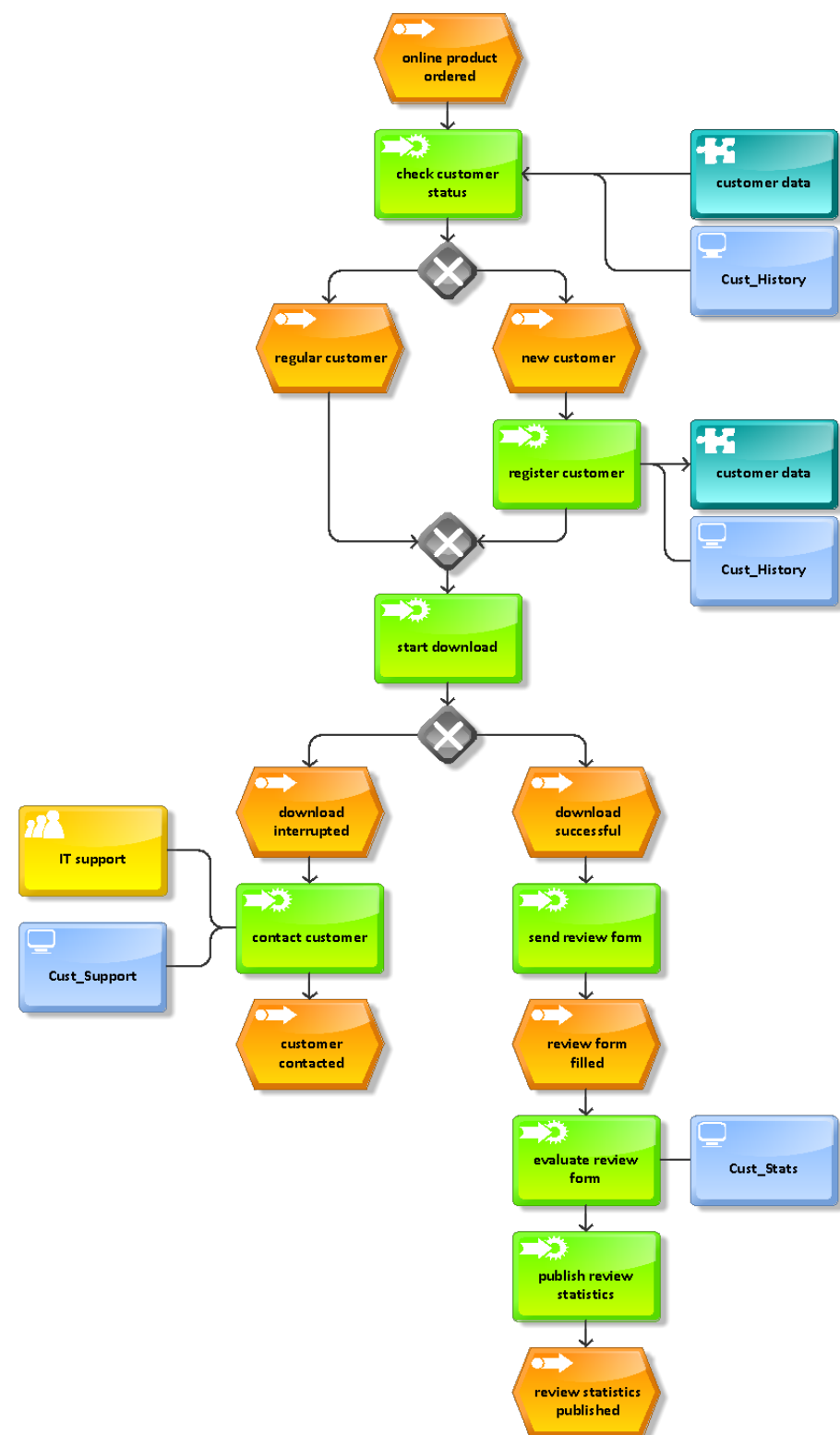
event, activity, role, risks,  
IT system, process interface,  
input/output data ...

rules (X, +, O)

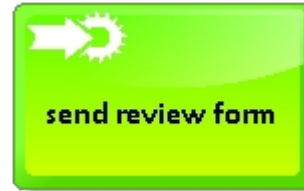
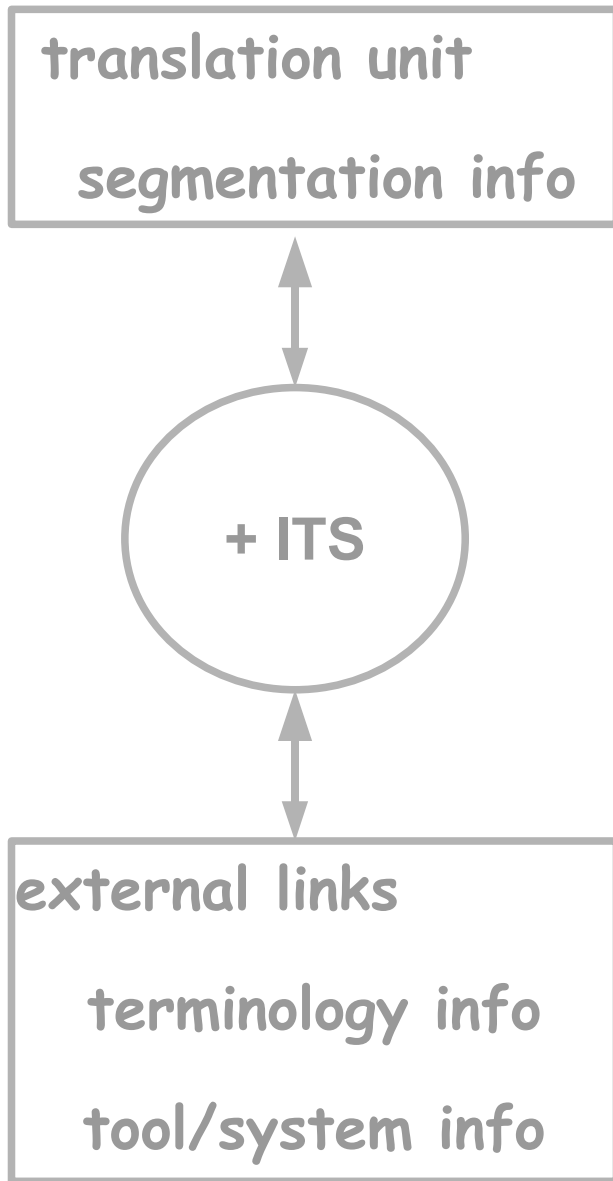
meta attributes:

description, author,  
creation date ...

PROCESS DETAILS & CONTROL



XLIFF



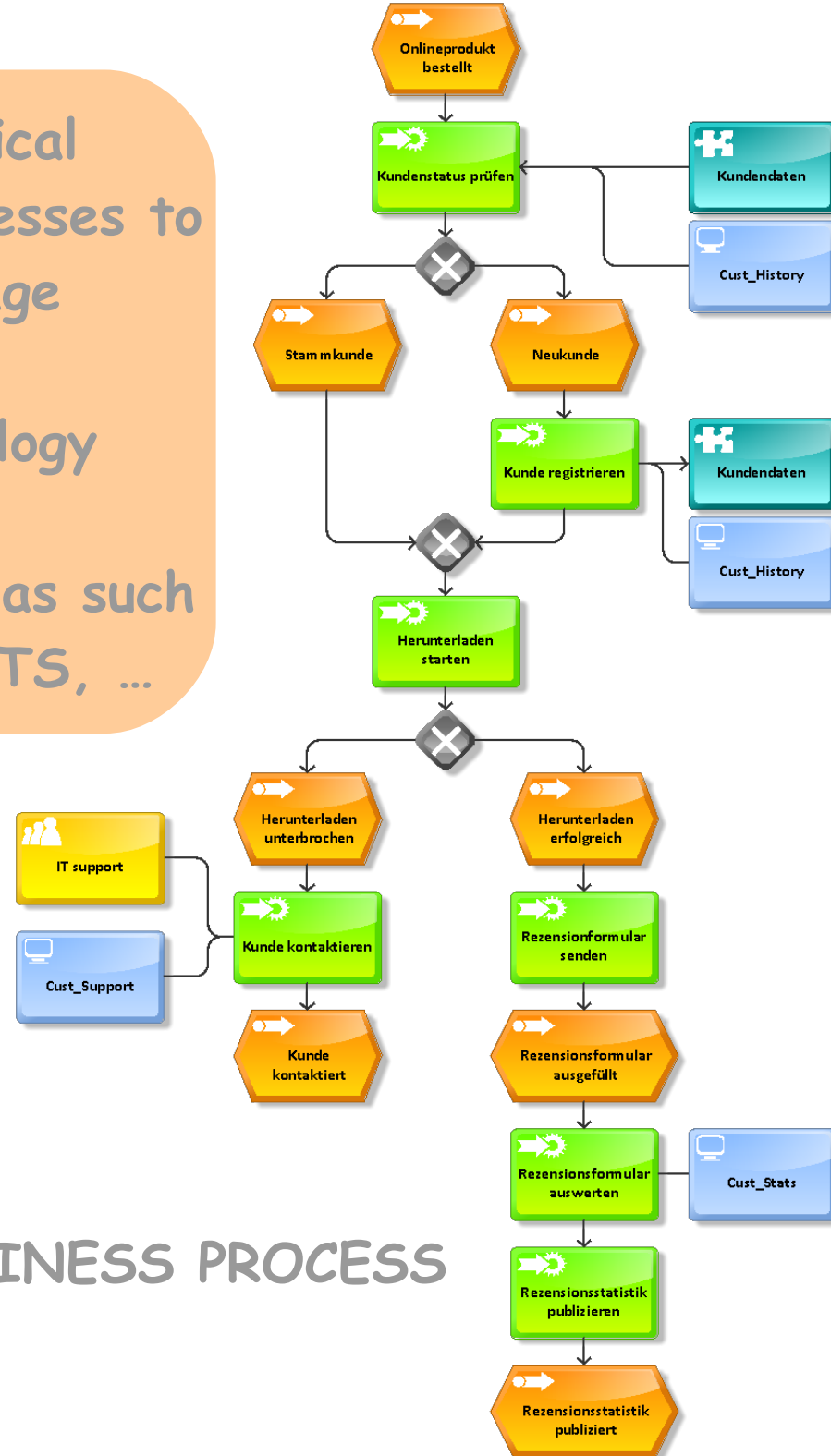
STRUCTURAL CONTENT INFORMATION FOR TRANSLATION

# EXAMPLE OF STRUCTURAL CONTENT INFORMATION

```
<trans-unit id="n1">  
  <source>send review form</source>  
  <target xml:lang="de">Rezensionsformular senden</target>  
  <alt-trans match-quality="100%" tool="TM_System">  
    <source>send review form</source>  
    <target xml:lang="de">  
      TM match for "send review form"  
    </target>  
  </alt-trans>  
</trans-unit>
```

# XLIFF: German result

Combine with technical documentation processes to benefit from language proofing, glossary generation, terminology linking, ... as well as developments in areas such as DITA, XLIFF, ITS, ...



TRANSLATED BUSINESS PROCESS

## multilingual continuous data streams

- no language proofing
- no glossaries
- no terminology

### Business Modeling Content Collaboration Platform

Welcome Ms Alex Müller -- Business content expert

Account

Tasks

[Business terms requests \(2\)](#)

Content management

- + Knowledge base
  - [Manage resources](#)
  - [Manage content](#)
  - [Model mining](#)
  - [Document mining](#)
- + Documents
  - [Classify into process map](#)
  - [Generate business objects](#)

Manage content [Top](#) > [Unterstützende Prozesse](#) > [Personalwesen](#) > Personalbeschaffung

Suche:

Vertrag		
alt	drucken	vorhanden
neu	erstellen	
	korrigieren	
	finalisieren	
	unterschreiben	
	überarbeiten	
	senden	
	verhandeln	
	weiterleiten	

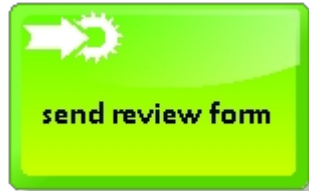
Abwicklungsvertrag	
anbieten	akzeptiert
korrigieren	abgelehnt

Arbeitsvertrag	
befristet	anbieten
unbefristet	korrigieren
	kündigen

Aufhebungsvertrag	
anbieten	akzeptiert
korrigieren	abgelehnt

Werkvertrag	
anbieten	
korrigieren	

# Knowledge Matrix



EN	TO_SEND	FILLED
REVIEW_FORM	send review form	review form filled

DE	TO_SEND	FILLED
REVIEW_FORM	Rezensionsformular senden	Rezensionsformular ausgefüllt

RDF - s-p-o triplets

RDFS / OWL - linking information models and process models

SKOS - terminology linking

BUSINESS PROCESS MANGEMENT & FAQ GENERATION

# XLIFF-KM-Bridge

- explicit in terms of XML, RDF, vocabularies, microformats, etc. ... - see the emergence of HTML5 as an evolutionary process (WHATWG & W3C)
- implicit formalism integration through namespace, etc.

SUPPORT OF

TRANSLATION PROCESS MANAGEMENT

INCLUDING

LOCALIZATION AND INTERNATIONALIZATION TASKS

# XLIFF-KM-Bridge Example

```
<trans-unit id="n1">  
  <source>TO_SEND + REVIEW_FORM</source>  
  <target xml:lang="de">Rezensionsformular senden</target>  
  <alt-trans match-quality="100%" tool="KM">  
    <source>TO_SEND + REVIEW_FORM</source>  
    <target xml:lang="de">  
      KM match for "TO_SEND + REVIEW_FORM"  
    </target>  
  </alt-trans>  
</trans-unit>
```

## Dark Side

Formalism shortcomings and overall complexity.

Still unresolved relations to language issues.

Dominance of (some) localization and internationalization stakeholders.

# Future Directions

Foster interdisciplinary awareness: communities should talk to each other.

Combination with other technologies to model fully fledged enterprise localization value chains with their own intrinsic key performance indicators.

More joint efforts across communities including user and customer collaborations.