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# **Service Lifecycle and Service Documentation Results from TEXO and PROCESSUS**

## **Service-Lifecycle und Servicedokumentation** Ergebnisse aus TEXO und PROCESSUS

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Gefördert durch das



Bundesministerium  
für Wirtschaft  
und Technologie



## Agenda

- » TEXO: Service Lifecycle
- » PROCESSUS: Service Documentation
- » Integration of TEXO and PROCESSUS
- » Demo PROCESSUS Pilot 2



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## Top 1 TEXO: Service Lifecycle



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## TEXO Mantra - Project Goal

### Services will

- » become tradable &
- » composed from services of different providers
- » be offered, delivered & executed automatically & supported by IT

### TEXO will offer

- » customized & personalized services
- » community involvement to improve services, both for providers & consumers of services
- » seamless & smooth adaptation and integration of services into the user environment

TEXO will provide the concepts, components and infrastructure for the Internet of Services



Technische Universität München



Universität Karlsruhe (TH)

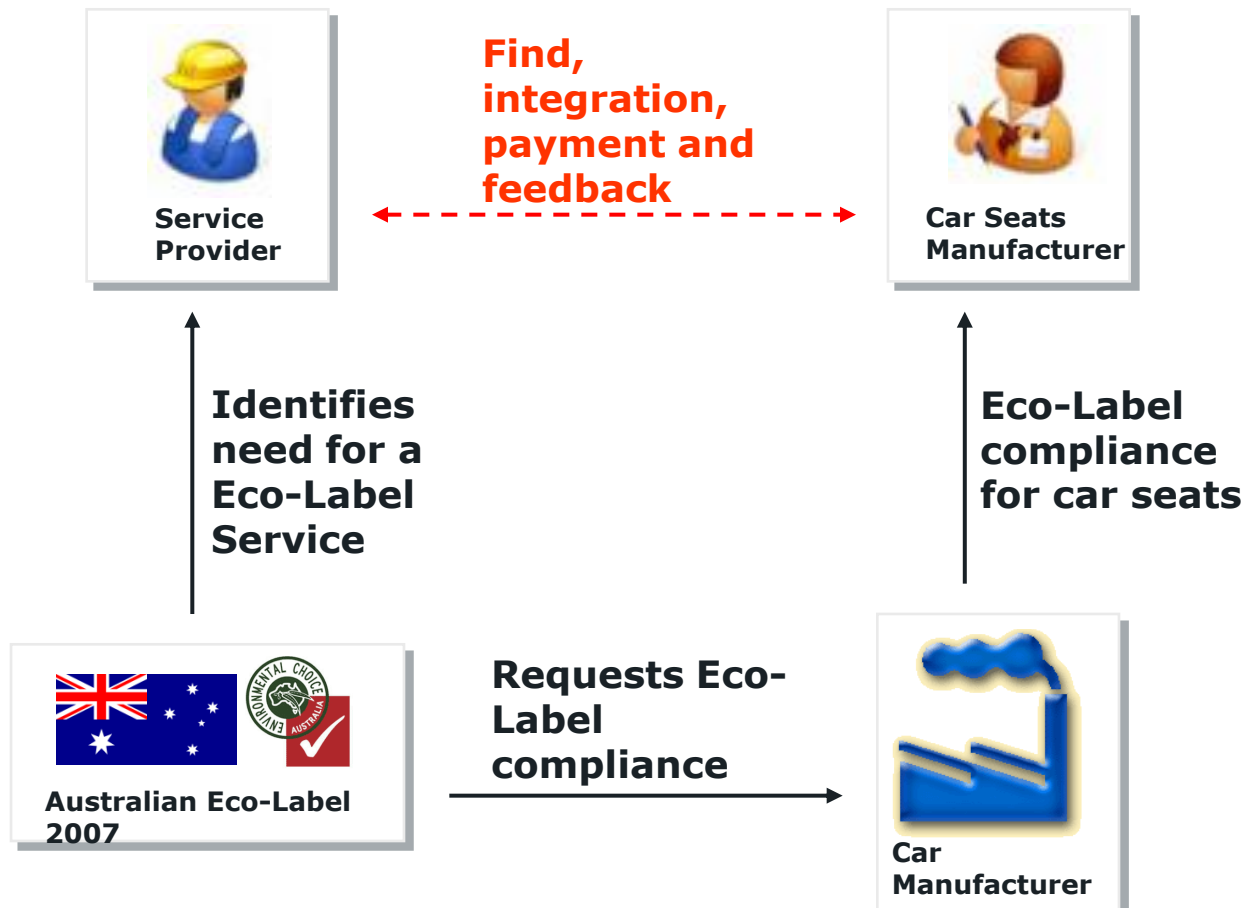
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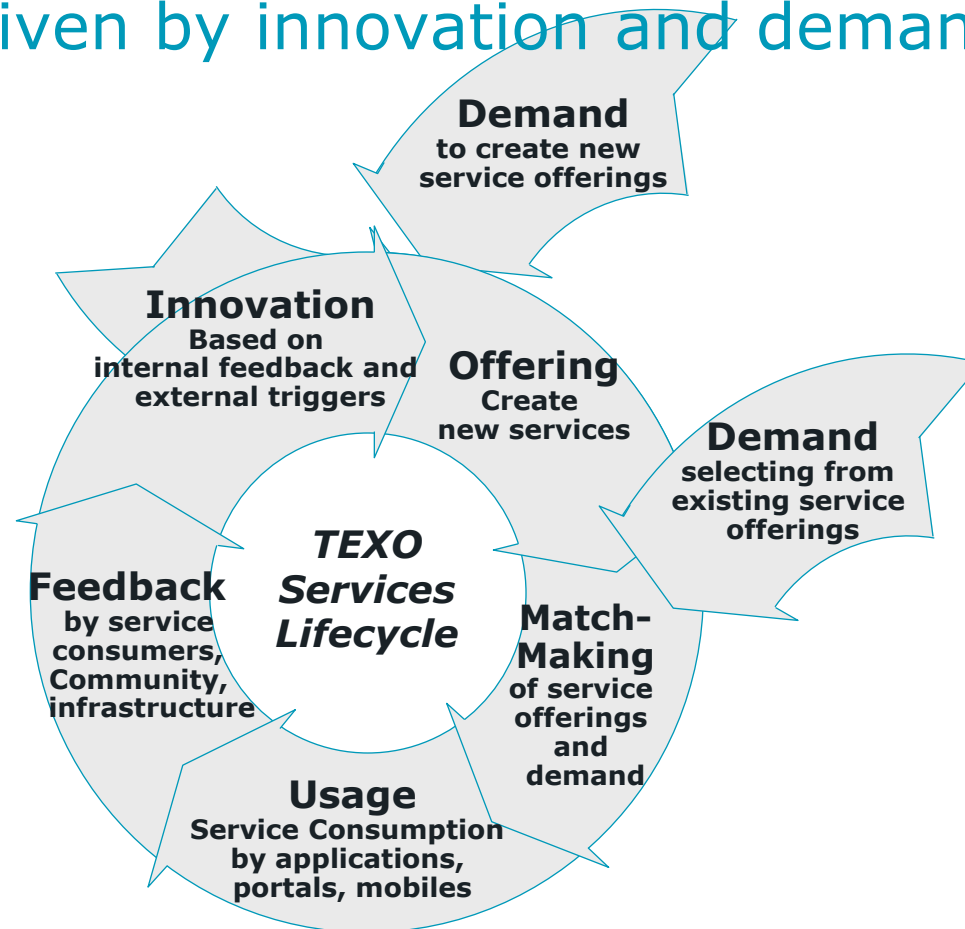
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## Formulation of the Problem: Story Example





# TEXO addresses the complete Services Lifecycle which is driven by innovation and demand



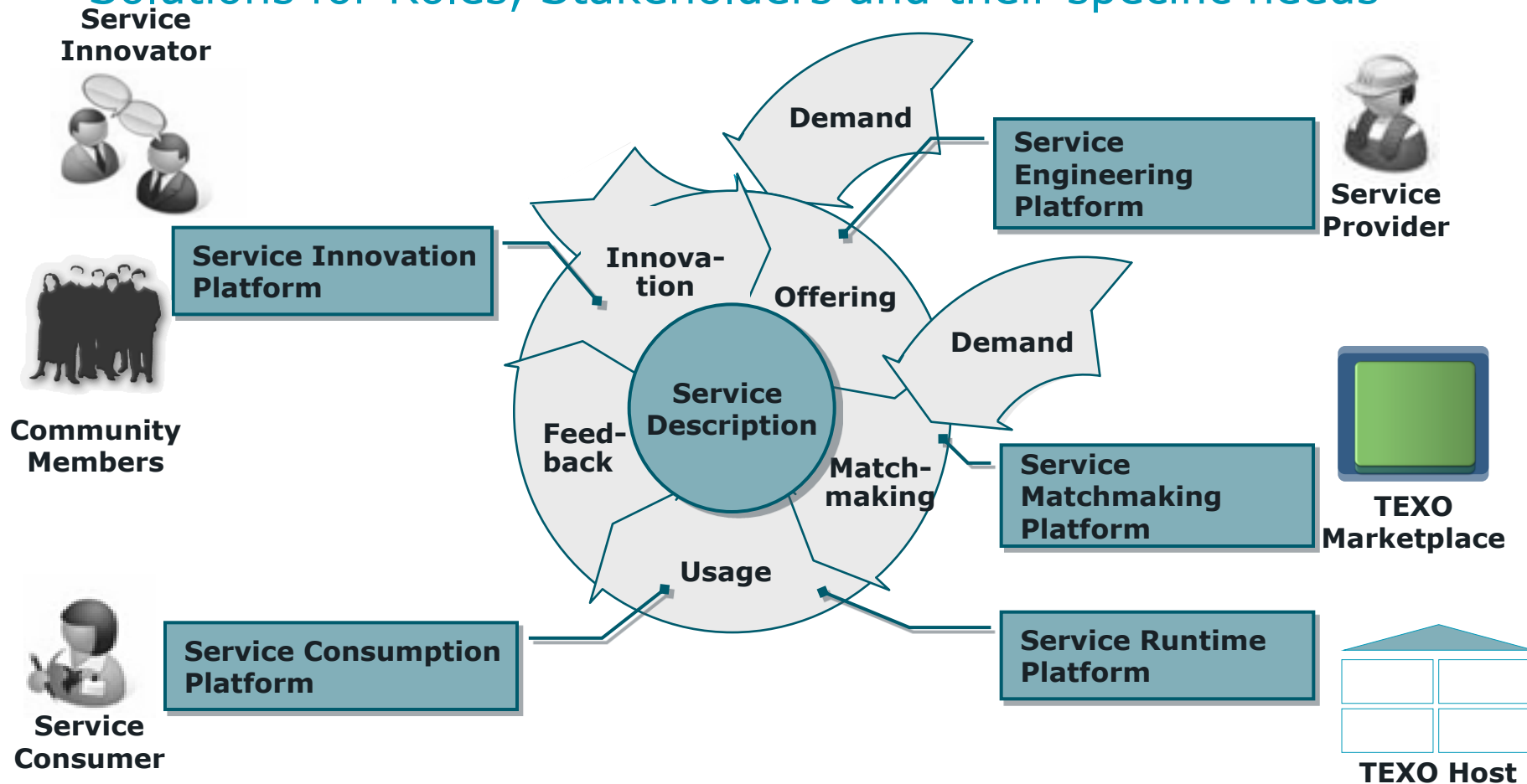


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# Aggregated Results in TEXO

Solutions for Roles, Stakeholders and their specific needs

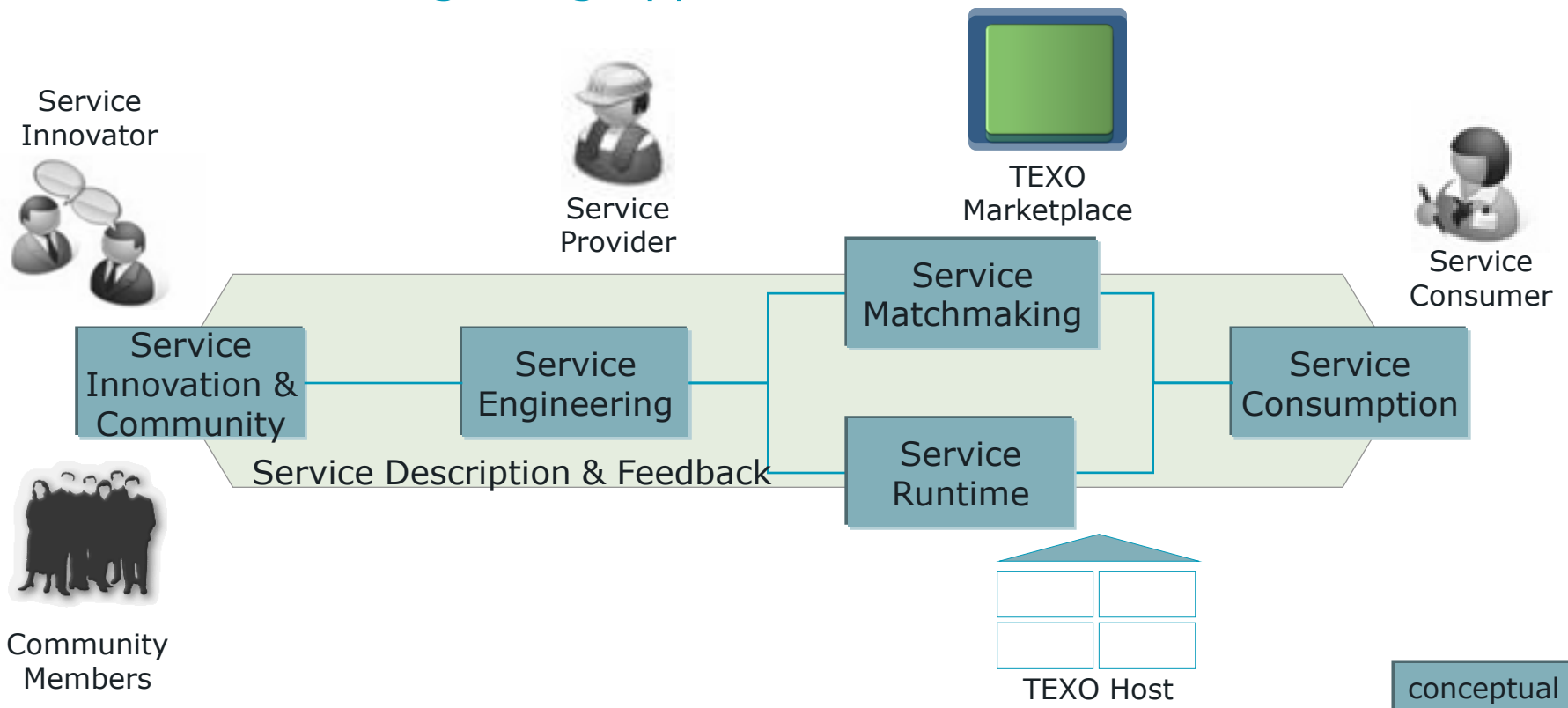




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# IoS Reference Architecture Towards an integrating approach

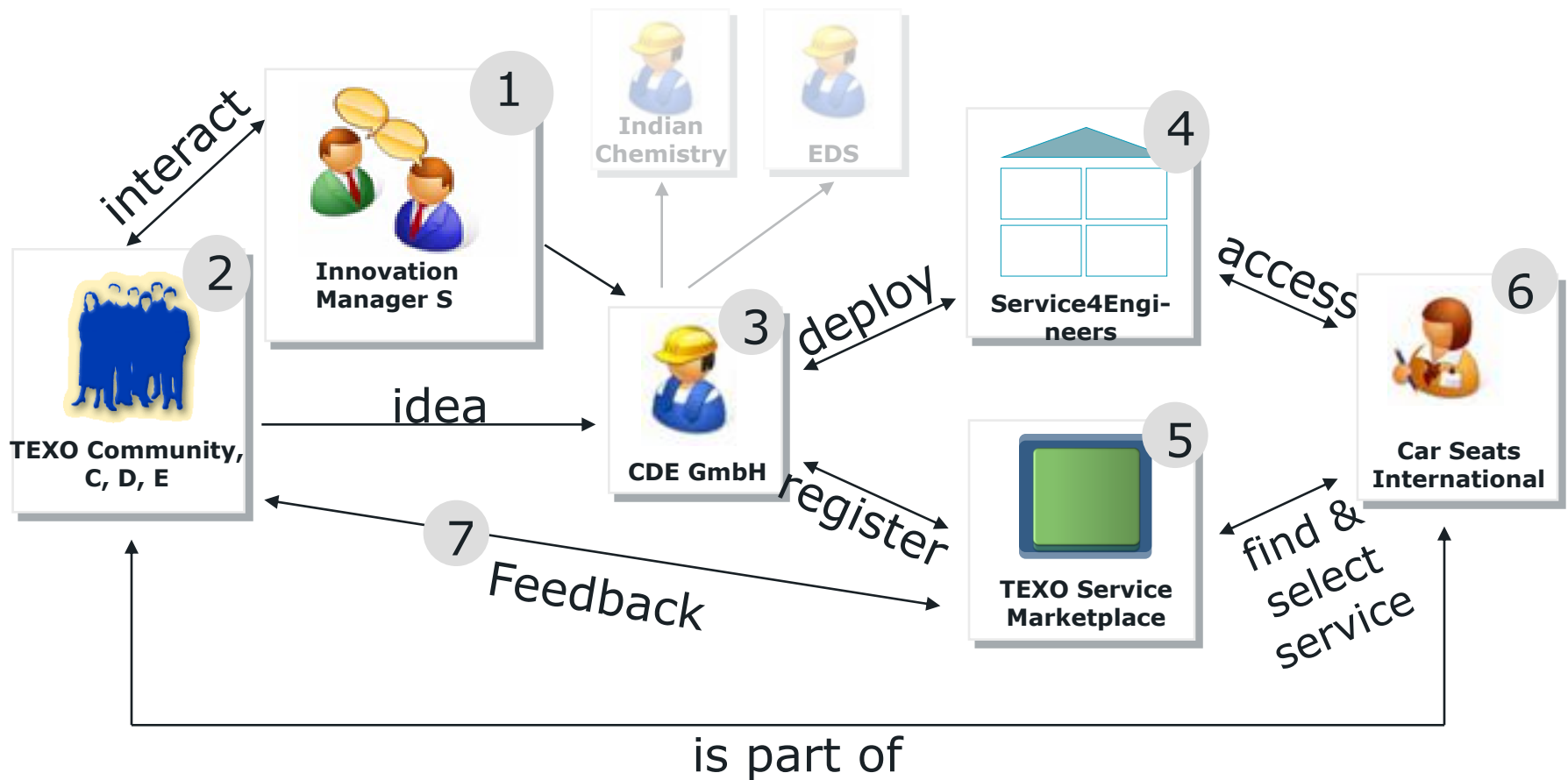




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## Lead Business Scenario: Story Flow





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## Top 2 PROCESSUS: Service Documentation



## Use Case PROCESSUS

### Pilot 1: Digital Solution Assistant

- Sample from mechanical engineering
- Annotation of existing documentation

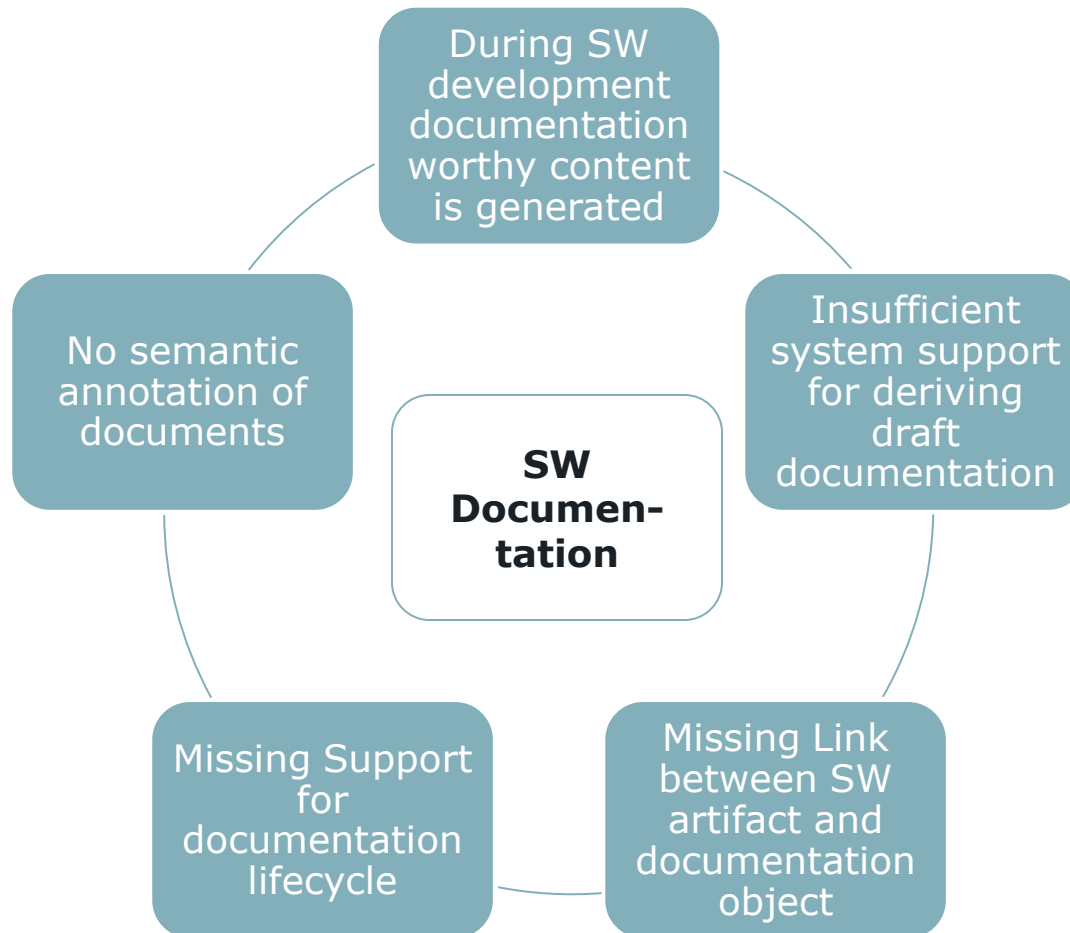
### Pilot 2: Content Aggregation

- SW Branch/TEXO Services
- Portable to all product documentation which is described in models
- Support of documentation generation and annotation

- Semantic Search
- Semantic Navigation



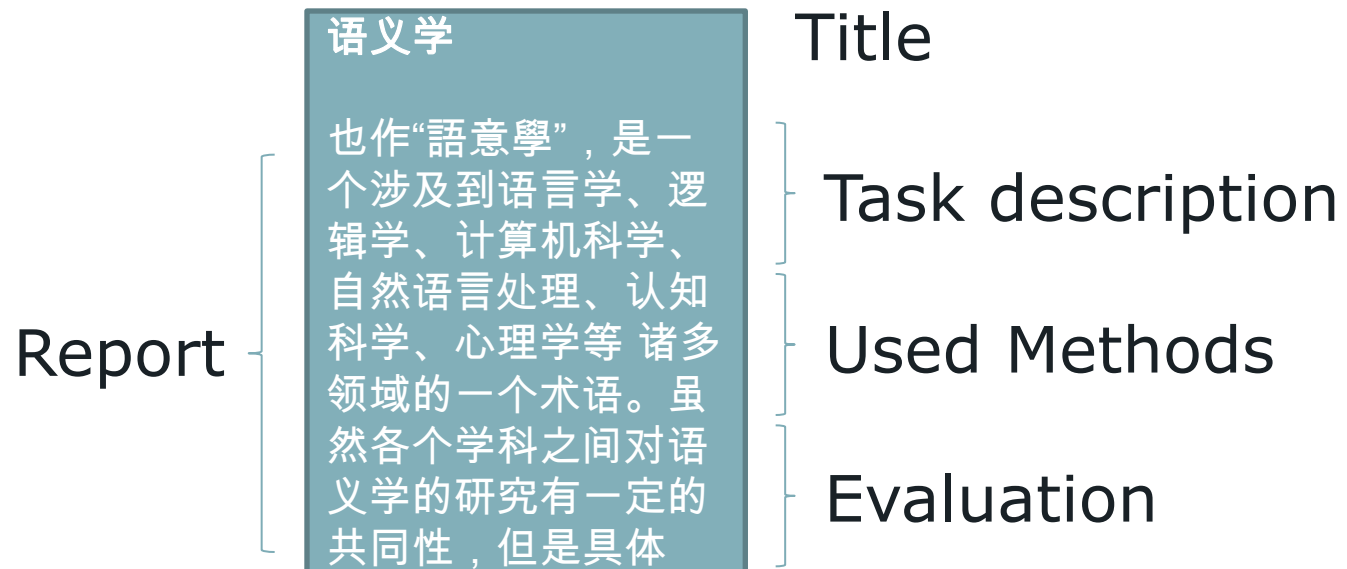
## Shortcomings of the Documentation Process





## Why Semantics? 1/2

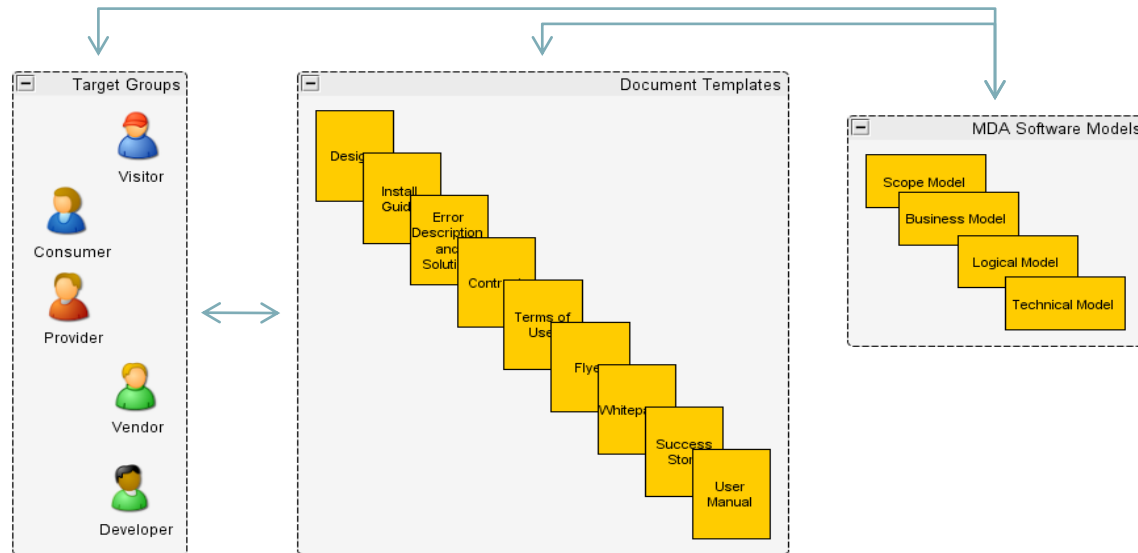
1. Computers don't understand the content of documents
  - » Semantic Annotation for comprehension of content





## Why Semantics? 2/2

### 2. Mapping of multi-dimensional relations



### 3. Extraction of implicit facts

$A = B \text{ and } B > C \rightarrow A > C$



## State-of-the-art

» Meta data attached to documents as name value pairs

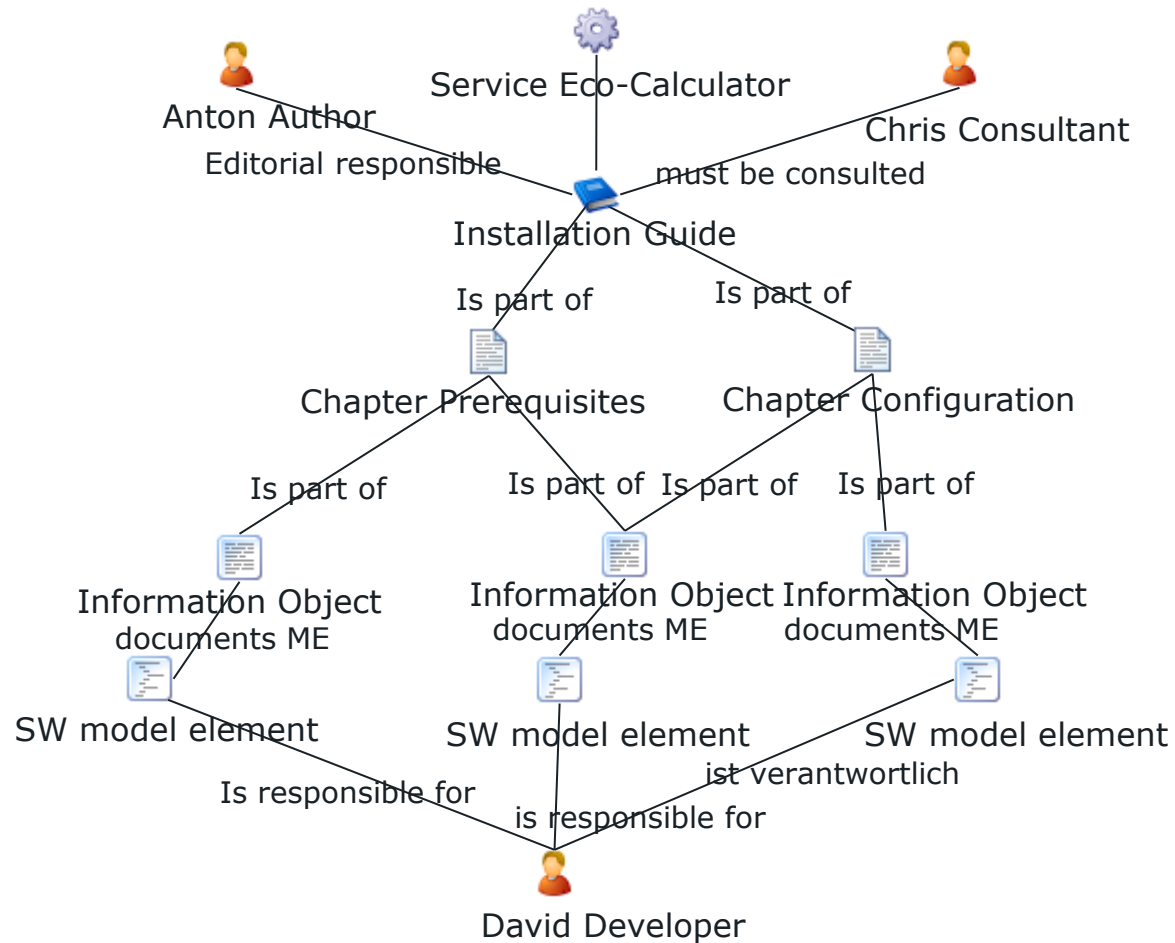


Installation  
Guide

- » Author= Anton Autor
- » Service Name = Eco-Calculator Service
- » Version = 1.0
- » Status = Released
- » ...

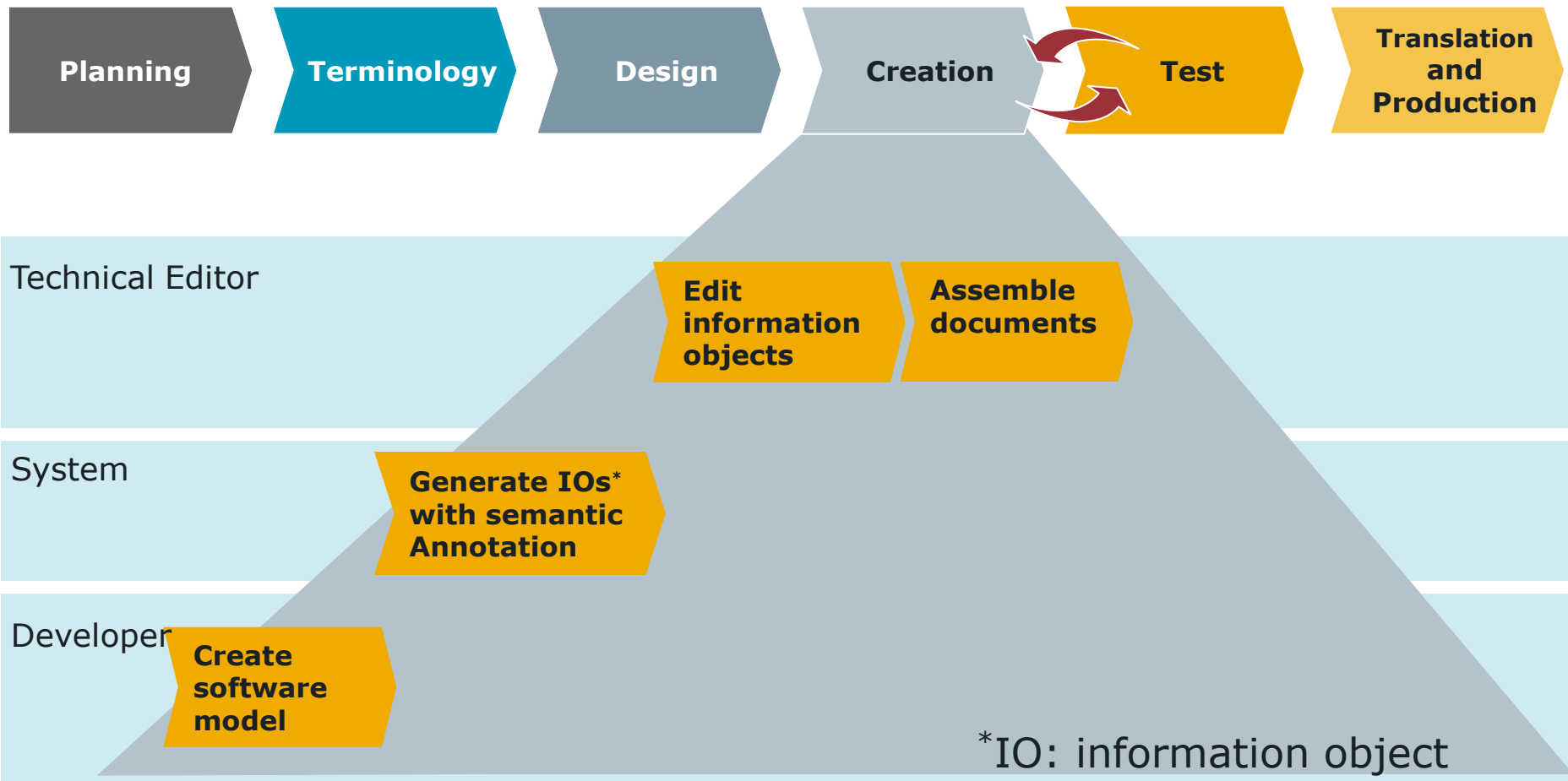


# PROCESSUS-Vision





## PROCESSUS Approach



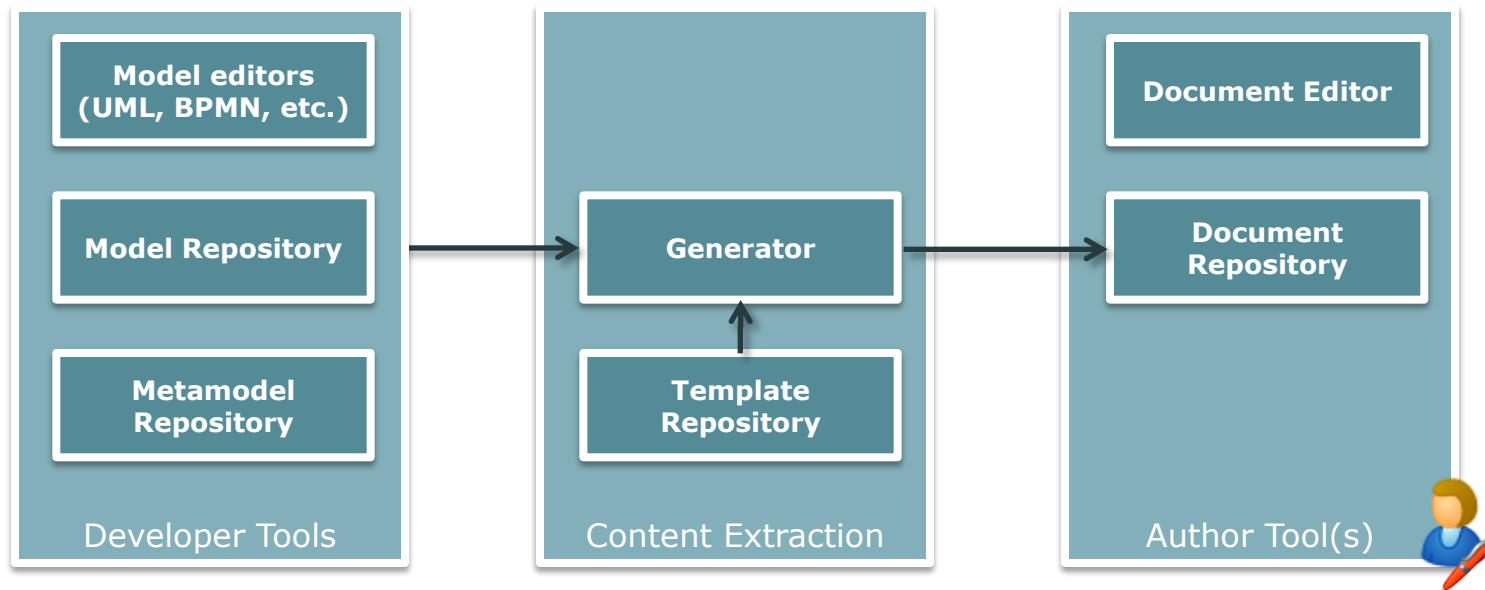


## Advantages

- » System support for IO generation
  - » Reduction of time and effort for developers
  - » Quality of draft documentation rises
- » Semantic Annotation offers
  - » Improved release management
    - » Version control, IO-to-document assignment, etc.
  - » Enhanced content comprehension for semantic search or semantic navigation
  - » System supported packaging of documentation for customers depending on a customer profile (e. g. combination of products, versions or service level)
  - » Documentation aggregation derived from different systems and different formats by annotation



## Prototyp PROCESSUS Pilot 2



### » Prototyp - Implementation

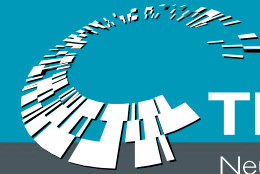
- » Developer Tools: Integration of different Eclipse tools (e.g. BPMN editor)
- » Content Extraction: openArchitectureWare Framework
- » Author Tool: Semantic Media Wiki



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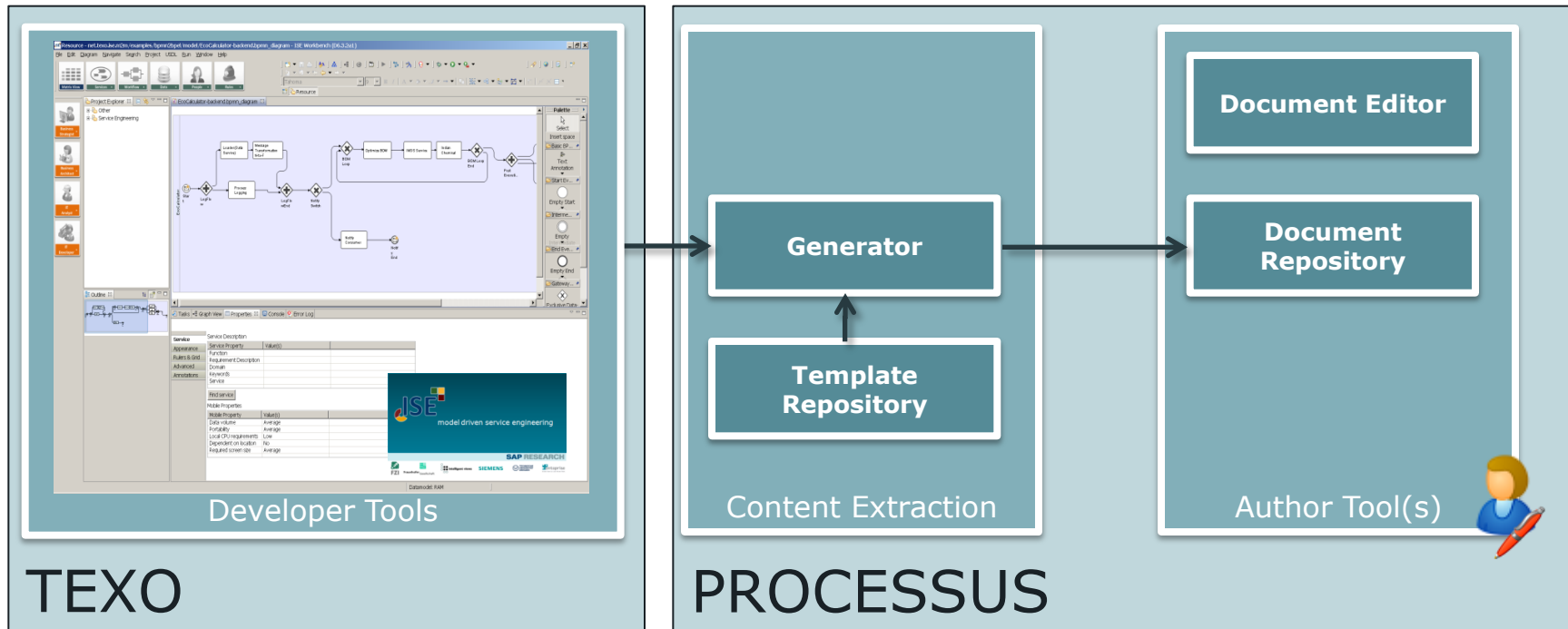
## Top 3 Integration of TEXO and PROCESSUS



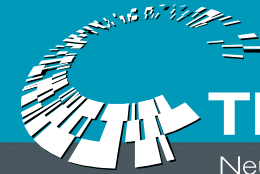
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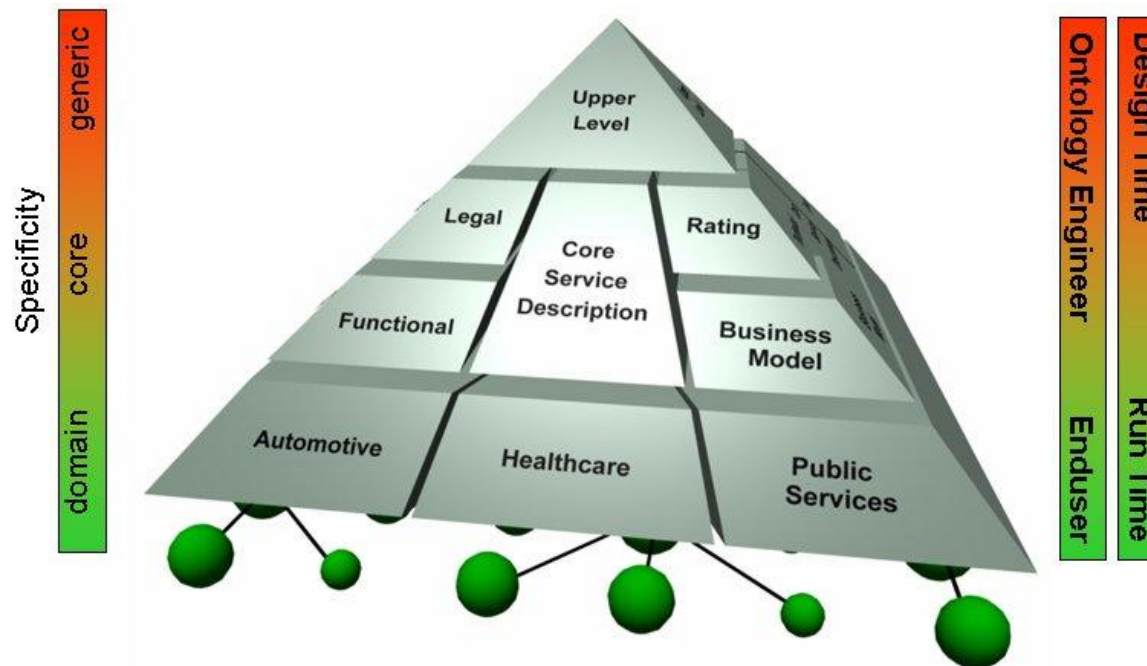
## Tool Integration



- » Draft documentation will be extracted directly from the SW models of the TEXO service



## Ontology integration



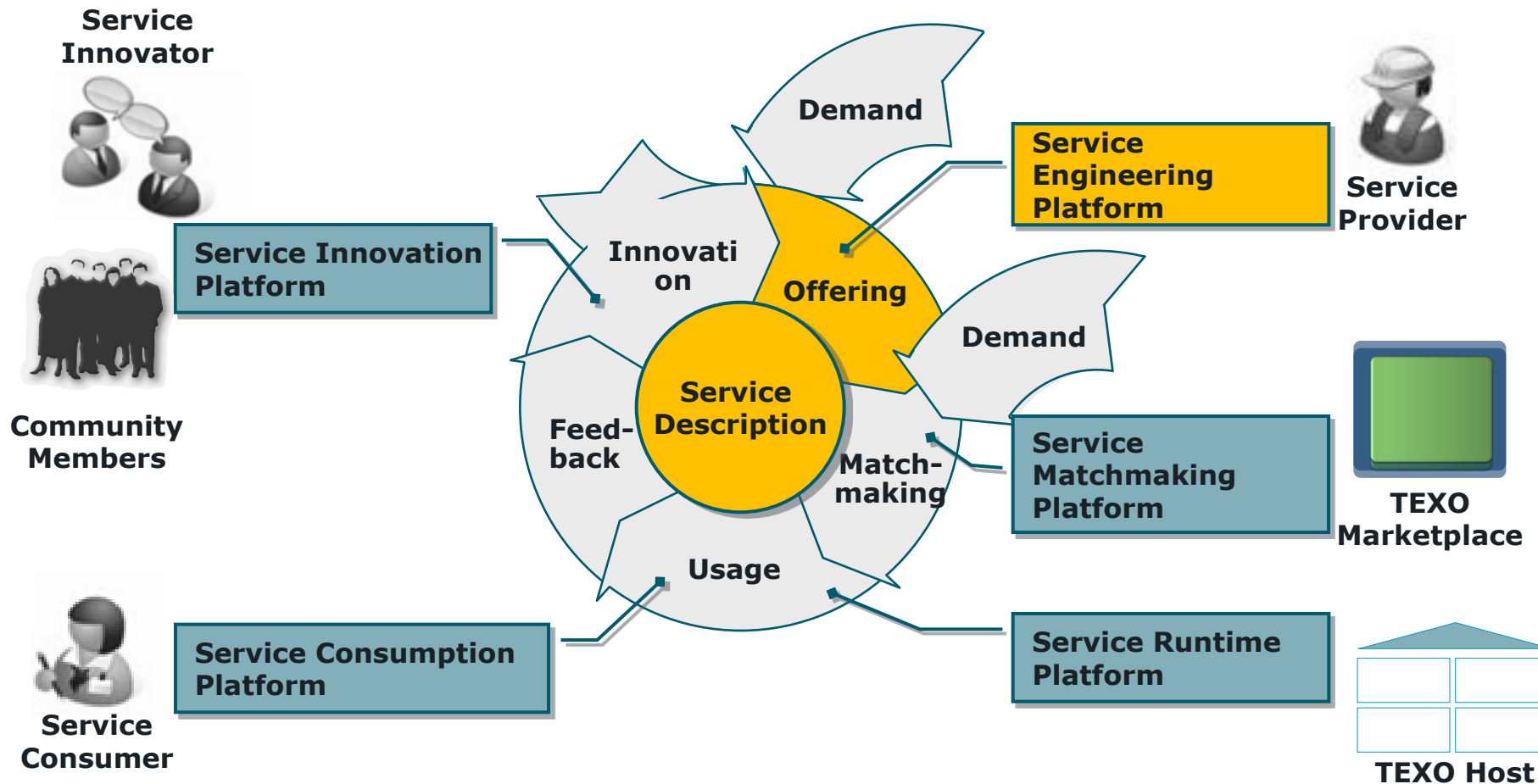
- » PROCESSUS ontology is module of TEXO service ontology
- » PROCESSUS Pilot 2 uses TEXO service ontology (e.g. concept of Service Provider)



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## TEXO and PROCESSUS Interaction





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# Top 4 Demo PROCESSUS Pilot 2 „Content Aggregation“



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Thank you for your attention!