

TEXO Service Ontology

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USDL vs. TEXO Service Ontology

In essence the same exercise

- Pricing and Legal modules are mostly identical

Major differences

- **Representation:**

- OWL instead of Ecore -> eligible for linked data

- **Content:**

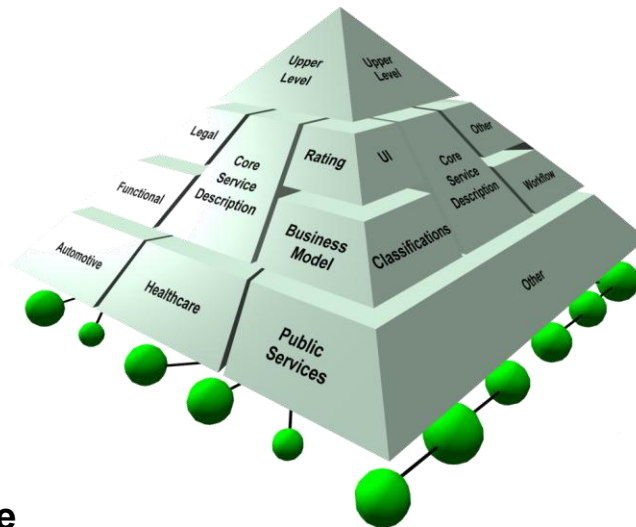
- Ontological Analysis
- Schema for master data and transactional data
- Aims at covering the whole service lifecycle

- **Effort and scope**

- USDL is pragmatic and so far not positioned academically
- TEXO Service Ontology has been published extensively

Service Ontology Overview

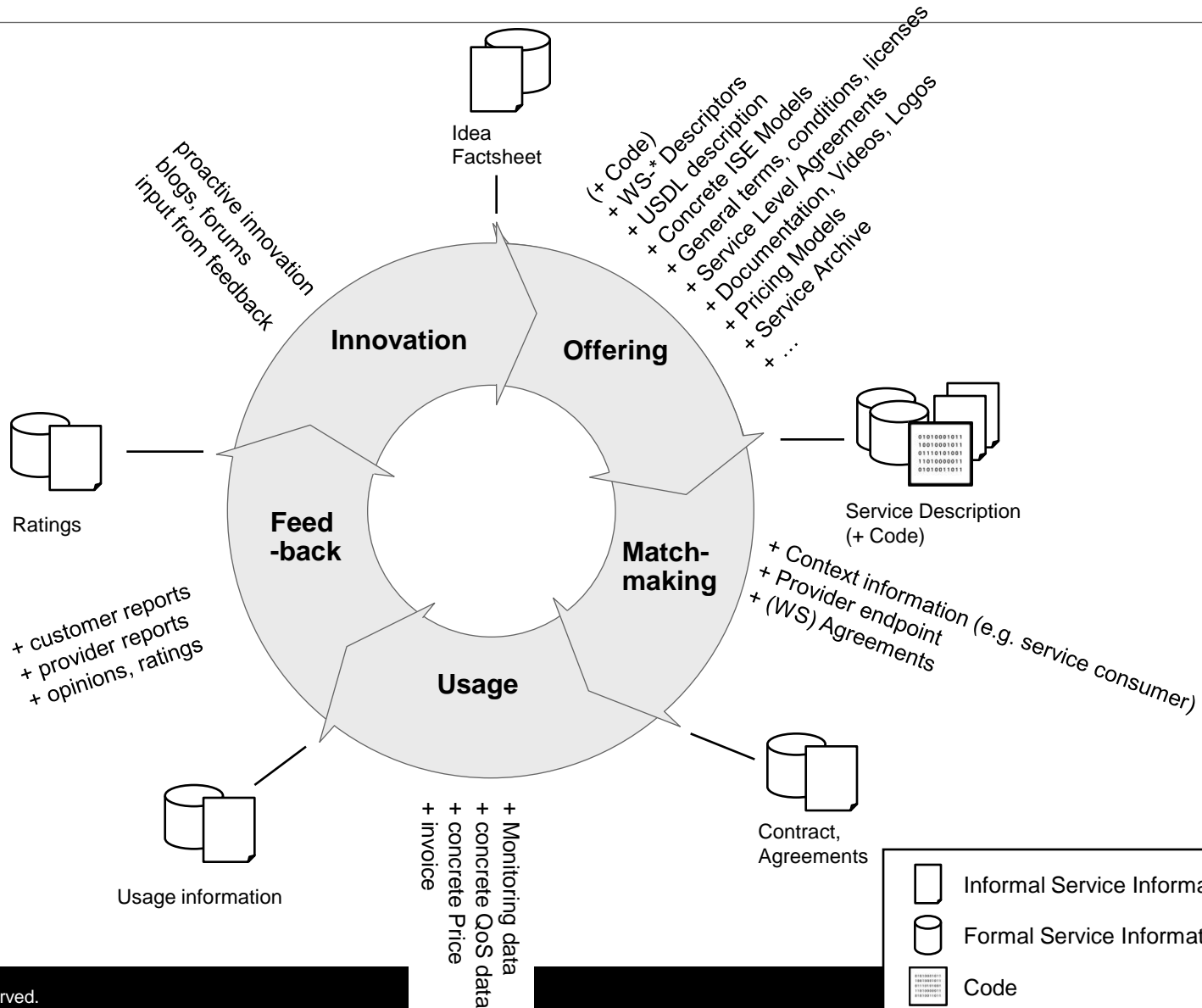
- **Overall Approach [1][2]**
- **Upper Level Module**
- DOLCE foundational ontology
- **Core Service Description Module**
- Ontological Foundations of Service Science [3]
- In cooperation with N. Guarino, ISTC, LOA, Italy
- **Idea Module [4]**
- www.ideaontology.org
- **Pricing Module [5]**
- **Legal Module [6]**
- **Rating Module**
- **Classification Module**
- **Documentation Module**



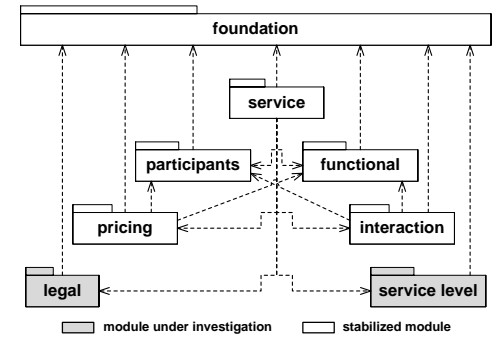
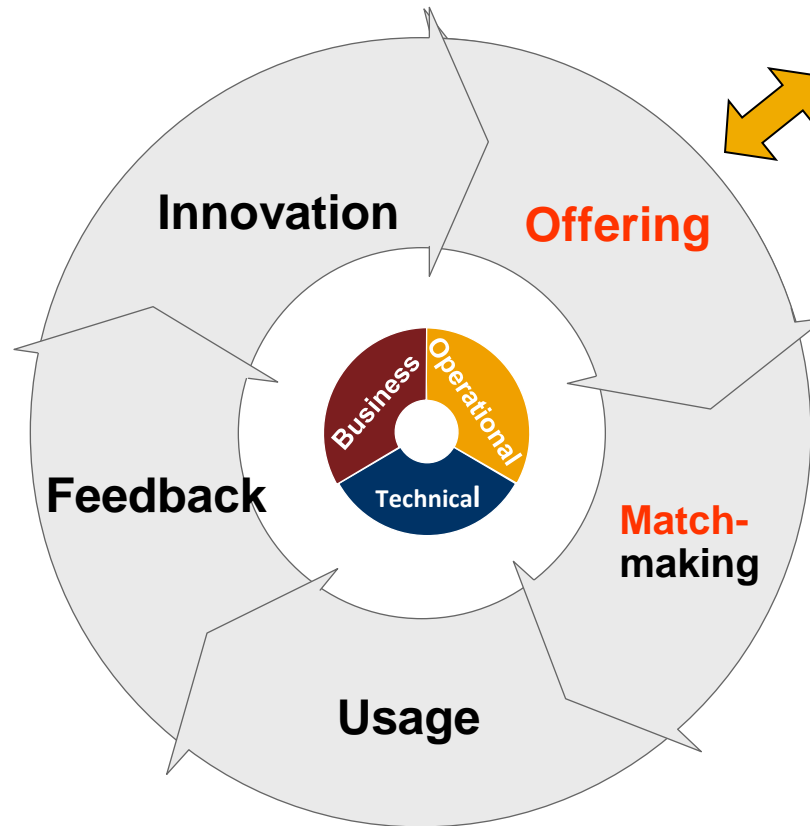
References

- [1] Oberle, D.; Bhatti, N.; Brockmans, S.; Niemann, M. & Janiesch, C. Countering Service Information Challenges in the Internet of Services. *Journal of Business & Information System Engineering (BISE)*, 2009, 5
- [2] Oberle, D.; Bhatti, N.; Brockmans, S.; Niemann, M. & Janiesch, C. Effiziente Handhabung von Service Informationen im Internet der Dienste. *Wirtschaftsinformatik*, 2009, 5
- [3] Ferrario, R.; Guarino, N.; Janiesch, C.; Kiemes, T.; Oberle, D.; Probst, F. (2011): Towards an Ontological Foundation for Services Science – The General Service Model. In: *10th Int. Conf.on Wirtschaftsinformatik*.
- [4] Riedl, C., May, N., Finzen, J., Stathel, S., Kaufman, V., Krcmar, H.: An Idea Ontology for Innovation Management. *Int. J. Semantic Web Inf. Syst.* 5(4): 1-18 (2009)
- [5] Tom Kiemes, Daniel Oberle: Generic Modeling and Management of Price Plans in the Internet of Services. *Informatik 2010: Service Science. GI*
- [6] C. Baumann, C. Loes. Formalizing Copyright for the Internet of Services. In *Proceedings of the 1st Int. Workshop of the Internet of Services*.

Service Information



Scope of USDL



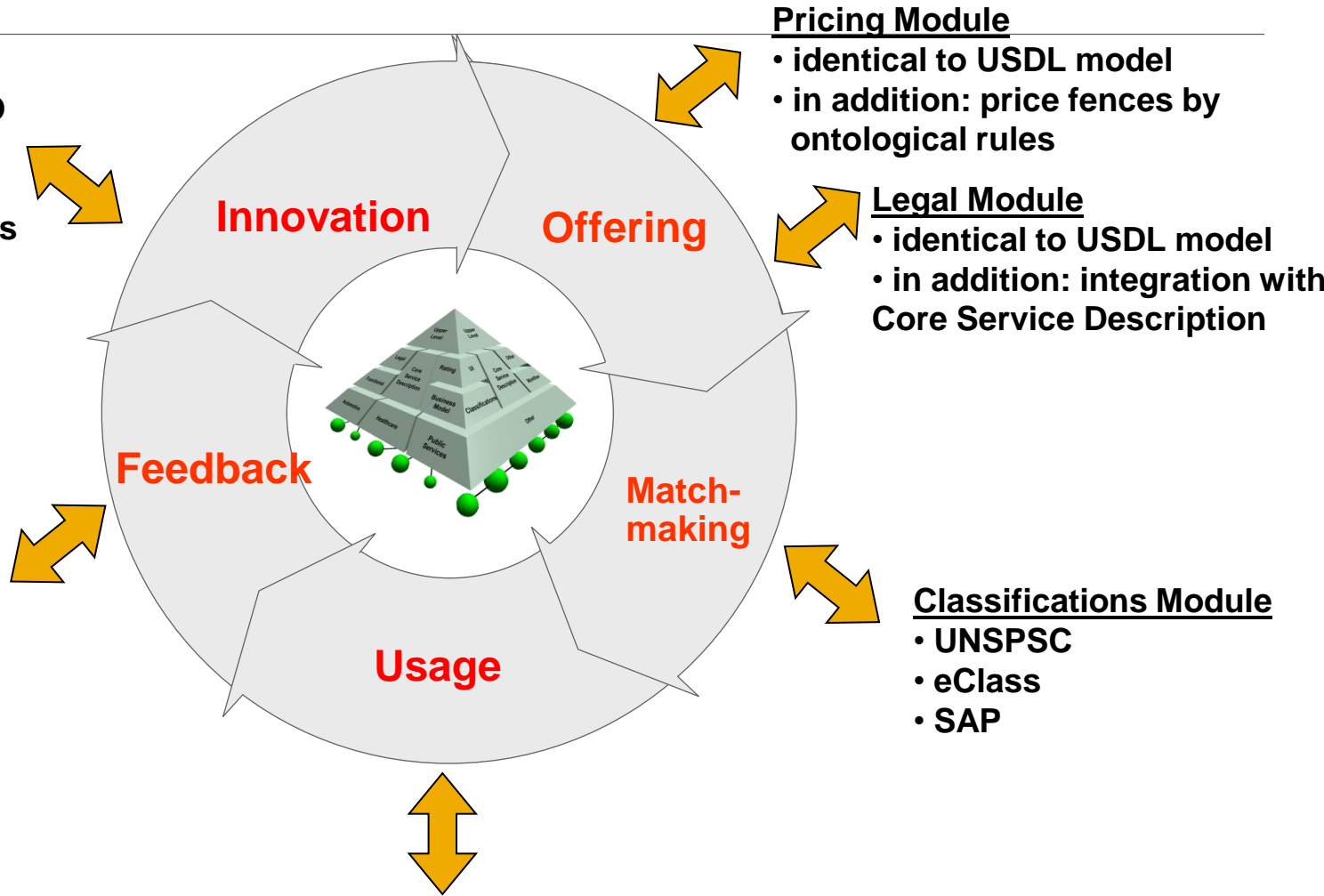
Scope of Service Ontology

Idea Module

- with Fraunhofer IAO
- with TU Munich
- published and open
- reuses microformats (FOAF, etc.)

Rating Module

- with Siemens
- built for flexibility
- builds on existing ontologies (FOAF, etc.)



Pricing Module

- identical to USDL model
- in addition: price fences by ontological rules

Legal Module

- identical to USDL model
- in addition: integration with Core Service Description

Classifications Module

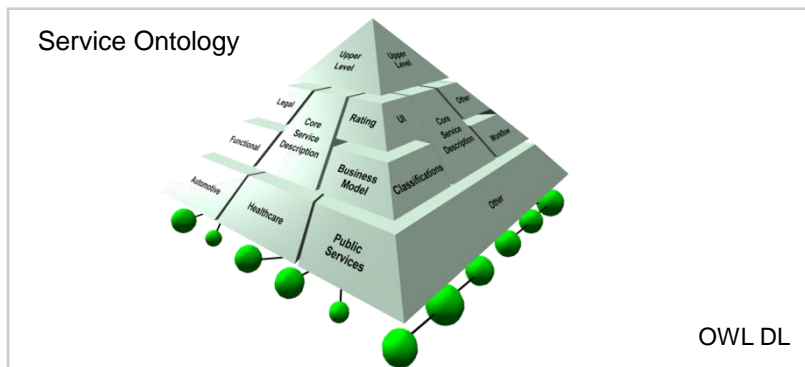
- UNSPSC
- eClass
- SAP

Core Service Description Module

- Ontological Foundations of Service Science
- Link between all the modules

Motivation for having two approaches

Additional
Use Cases



Master + Transactional Data

Ontology world

- + Higher expressiveness
- + Formal underpinning
- + Principles of ontology engineering
- + Capture intended meanings of terms
- + Addition of rules
- + Consideration of instances
- + Linked Open Data
- + Additional use cases
 - + Context-aware service descriptions
 - + Identification of legal consequences
 - + ...

USDL
Use Cases



Master Data

Software engineering world

- + Acquaintance of software engineer
- + Established tooling + development methodologies (Eclipse)
- + Existing transformations
- + Ideal for software engineering
- + Lower TCO
- + Facilitates exploitation



Thank You!

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