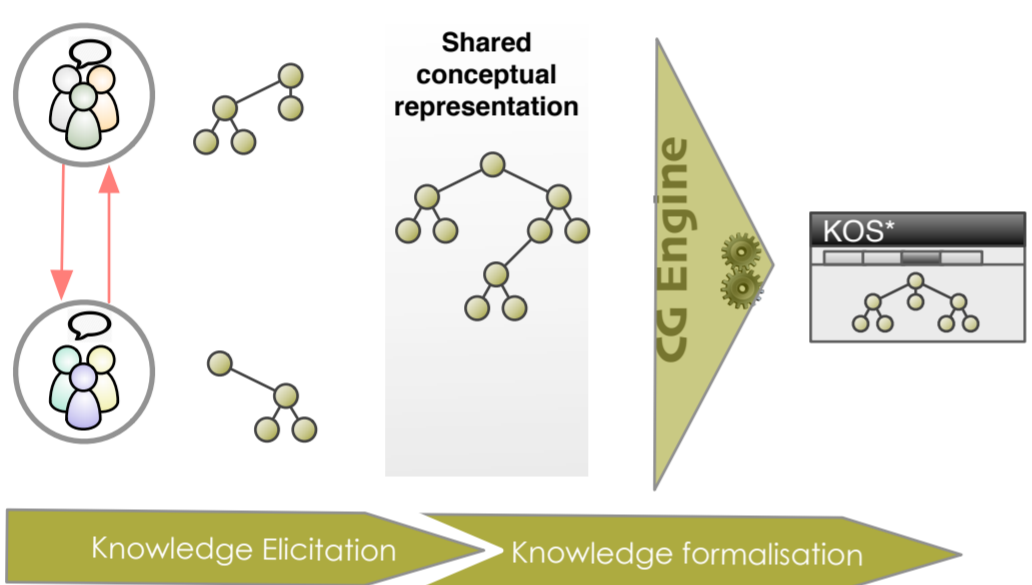


Semantic Processes for Knowledge Representation in Collaborative Networks

MOTIVATION

Models and other conceptual representations (CR) are fundamental in collaborative technical activities;

- The effectiveness of CR depends on the shared understanding and the acceptance of the underlying conceptualisation;
- Expressing CR, should require the least commitment between domain experts and the formalisms that compose them, focusing on the elicitation, organization and knowledge sharing;

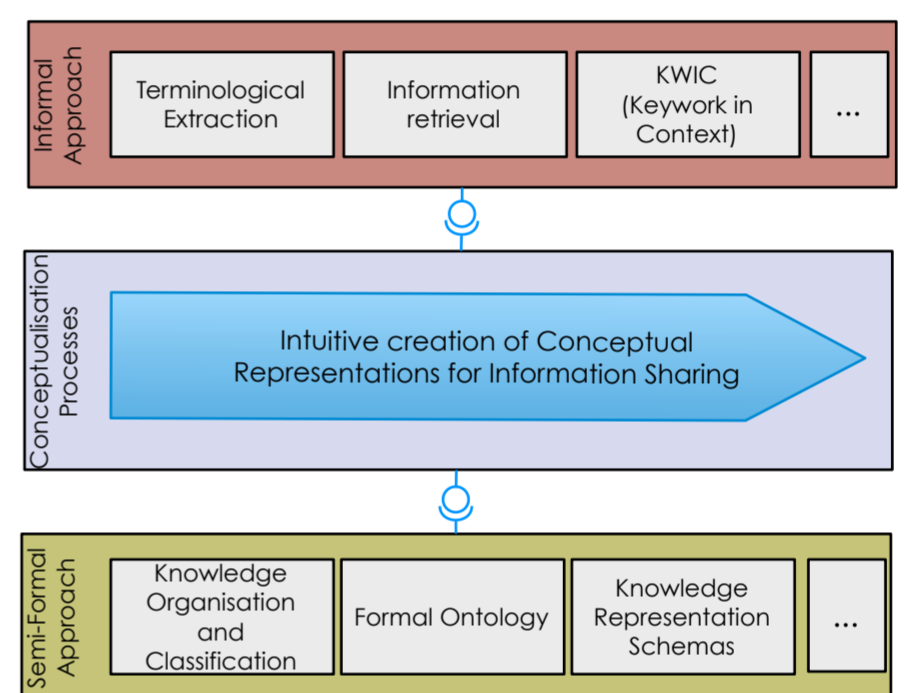


* Knowledge Organisation Systems

METHODS

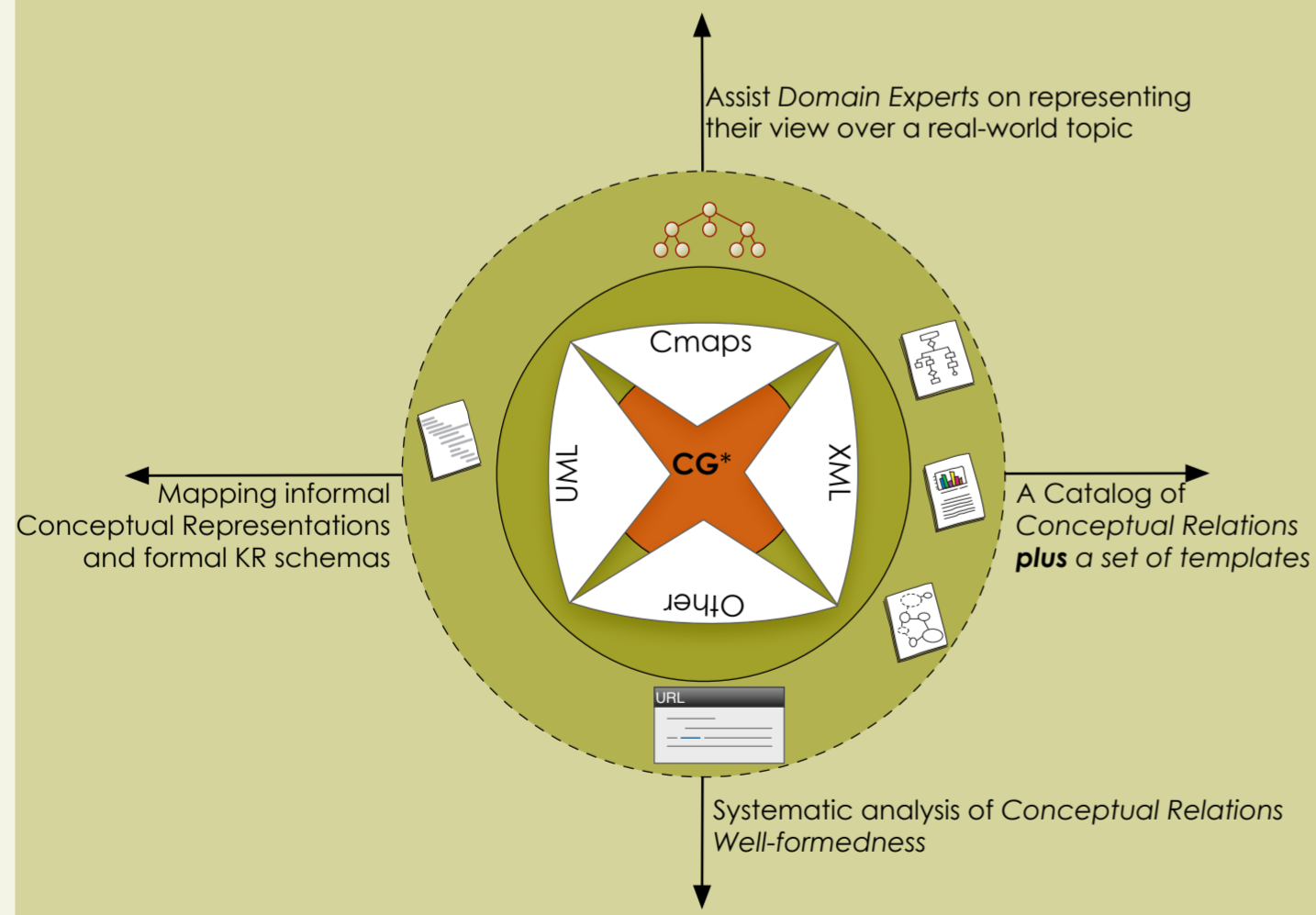
Tasks involving conceptualisation call for interplay between **terminology** and **knowledge representation** disciplines;

- Focus on **Concept** and **Conceptual Relations elicitation**;
- Focus on **Formal Ontology** for verification of conceptual relations well-formedness
- Focus on **Conceptual Graphs** (CG's) formalism as the core KR technique;
- Focus on **Model Mapping**, aiming at transforming informal CR into more computationally manageable formalisms, such as CG's



CONTRIBUTIONS

ConceptME Platform A Conceptual Modelling Environment



The screenshots show the 'production planning' conceptual graph with nodes like 'consumption factor', 'demand', 'requests', 'plan', 'order', 'is type of', 'is a', and 'delivery schedule'. Below it is a 'Term Extraction' table:

Name	Type	Domain	Author	Select
ACDC Deliverable D2100.1	File	Production Network	ACDC Project Team	<input type="checkbox"/>
ACDC Ontology version 1	File	Automotive Production Network	UPB	<input type="checkbox"/>
ACDC Resumo	Website/URI	<input type="checkbox"/>
Call-Off Production	File	Production	Stefan Eriksson	<input type="checkbox"/>
Glossary of Terms	File	Dynamic Supply Chain Management	ACDC Project Team	<input type="checkbox"/>

* Conceptual Graph Engine

Applications: New Product Development • Rich Enterprise Search • Intuitive Collaborative Modelling towards Consensus • Common Information Management Schemas

Autor:
 Cristóvão Sousa
Orientado por:

Prof. Doutor António Lucas Soares

Programa Doutoral em Engenharia Informática