Knowledge Organisation for a Customisable Training Programme Service Implementation

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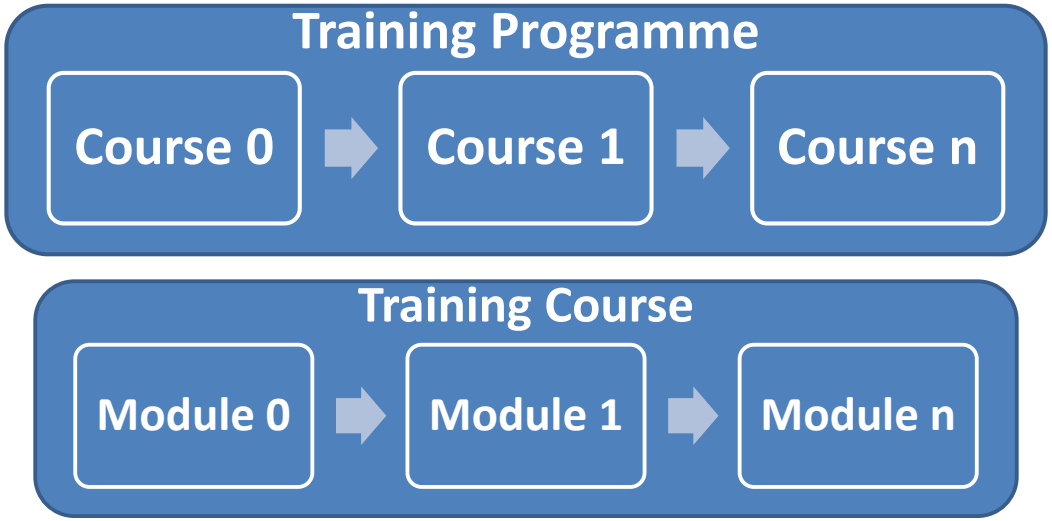
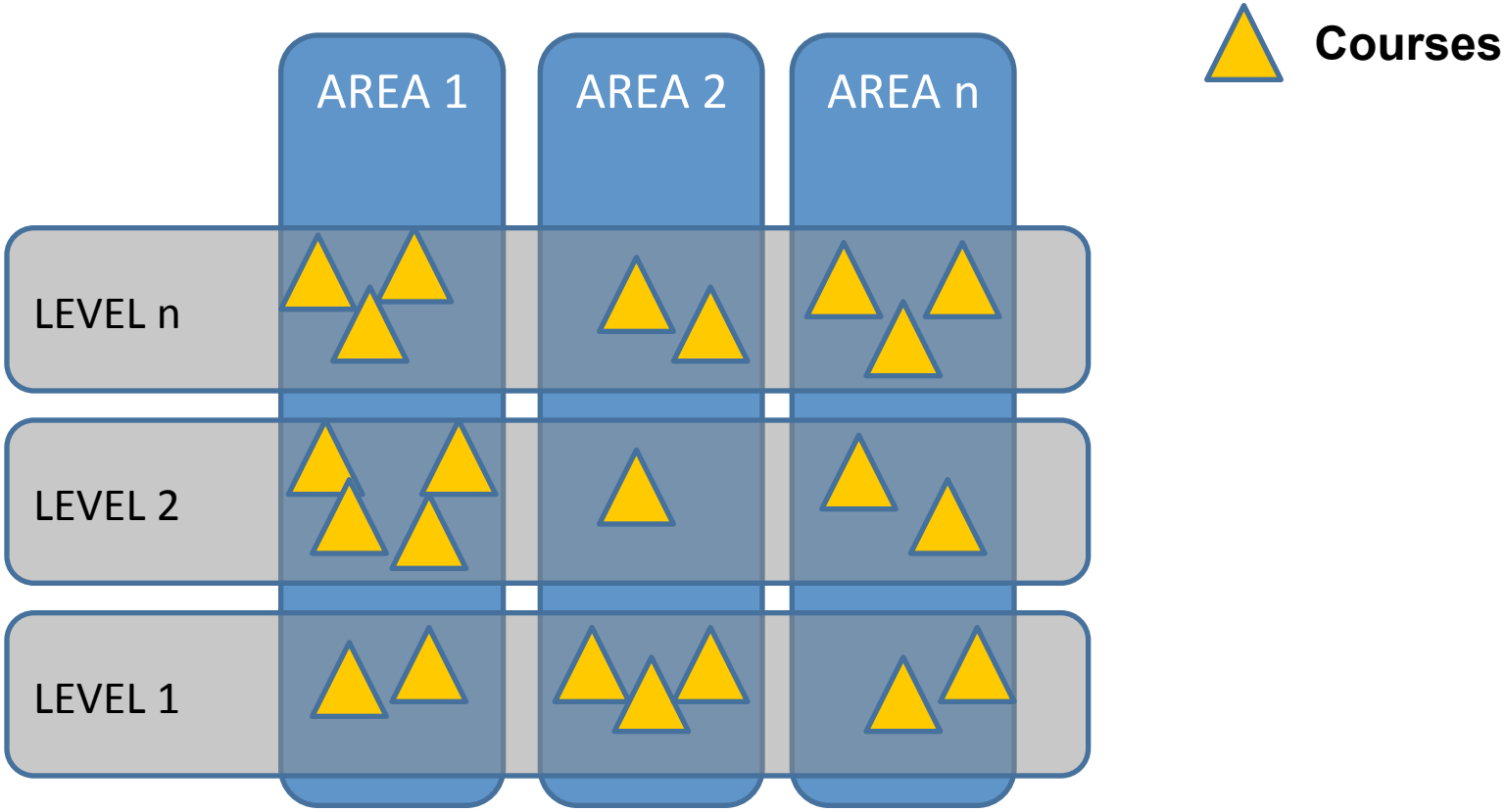
Training Objects (definition)

- Training Programme
- Training Course
- Training Module
- Training Curriculum



Training Curriculum (definition)

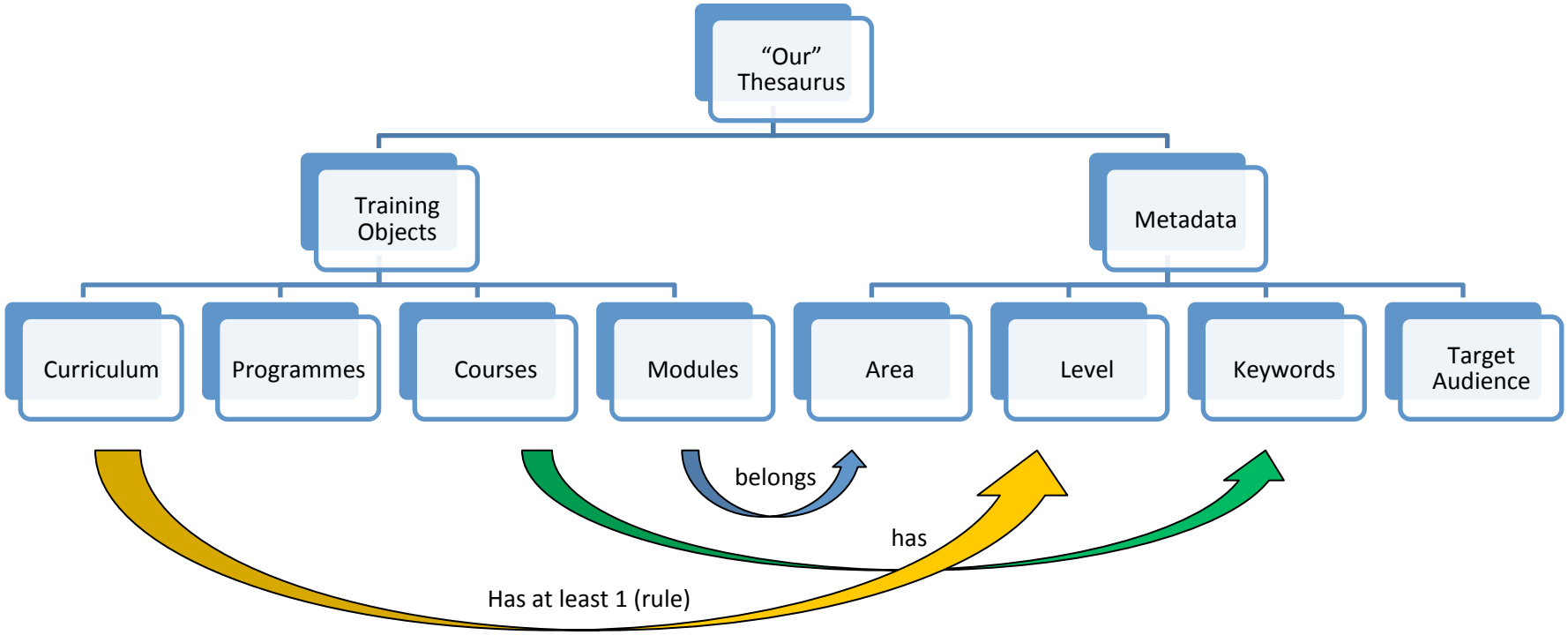


Training Objects Metadata

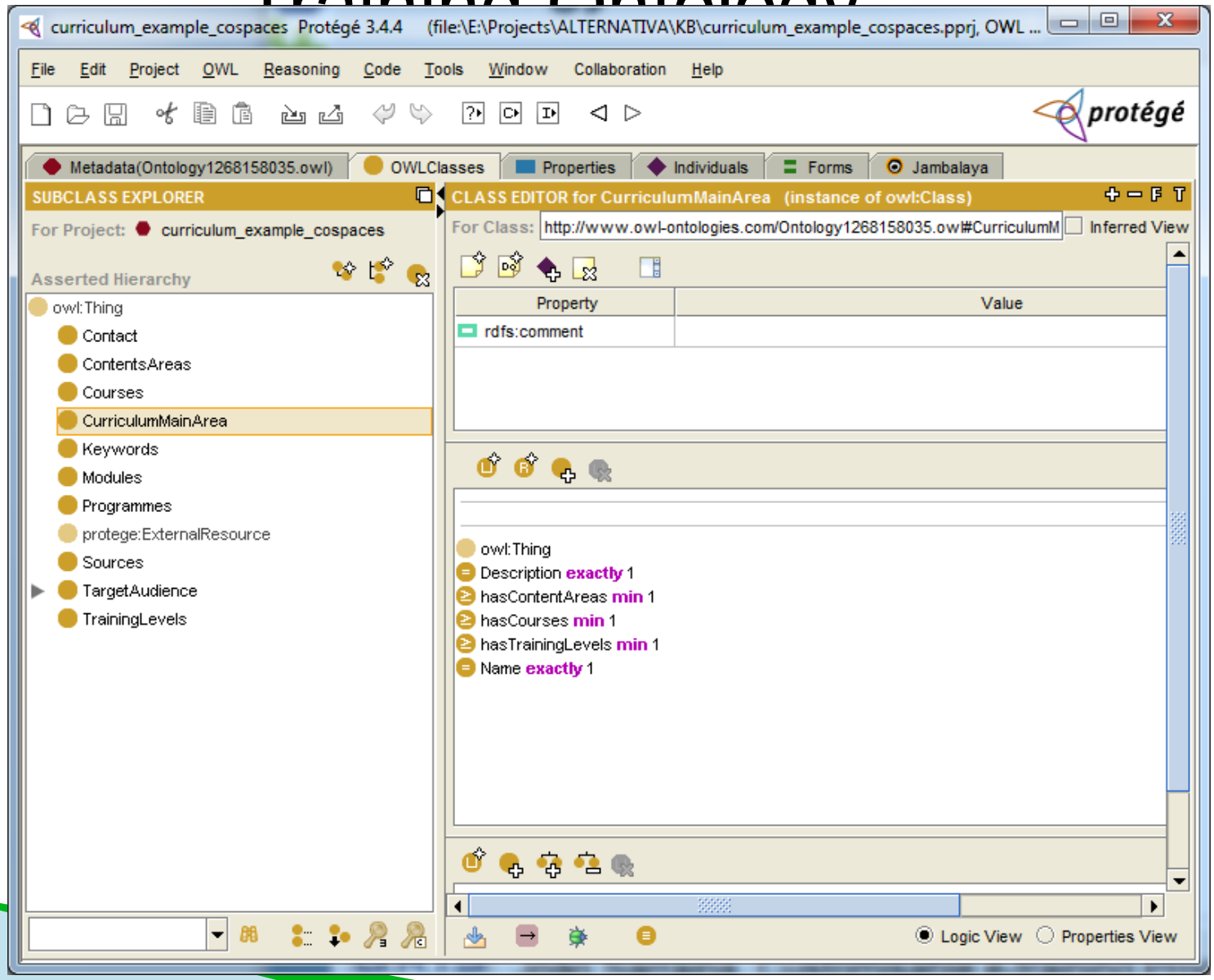
- For example, the course:
  - Area
  - Level
  - Keywords
  - Target Audience
  - Etc...

Thesaurus building

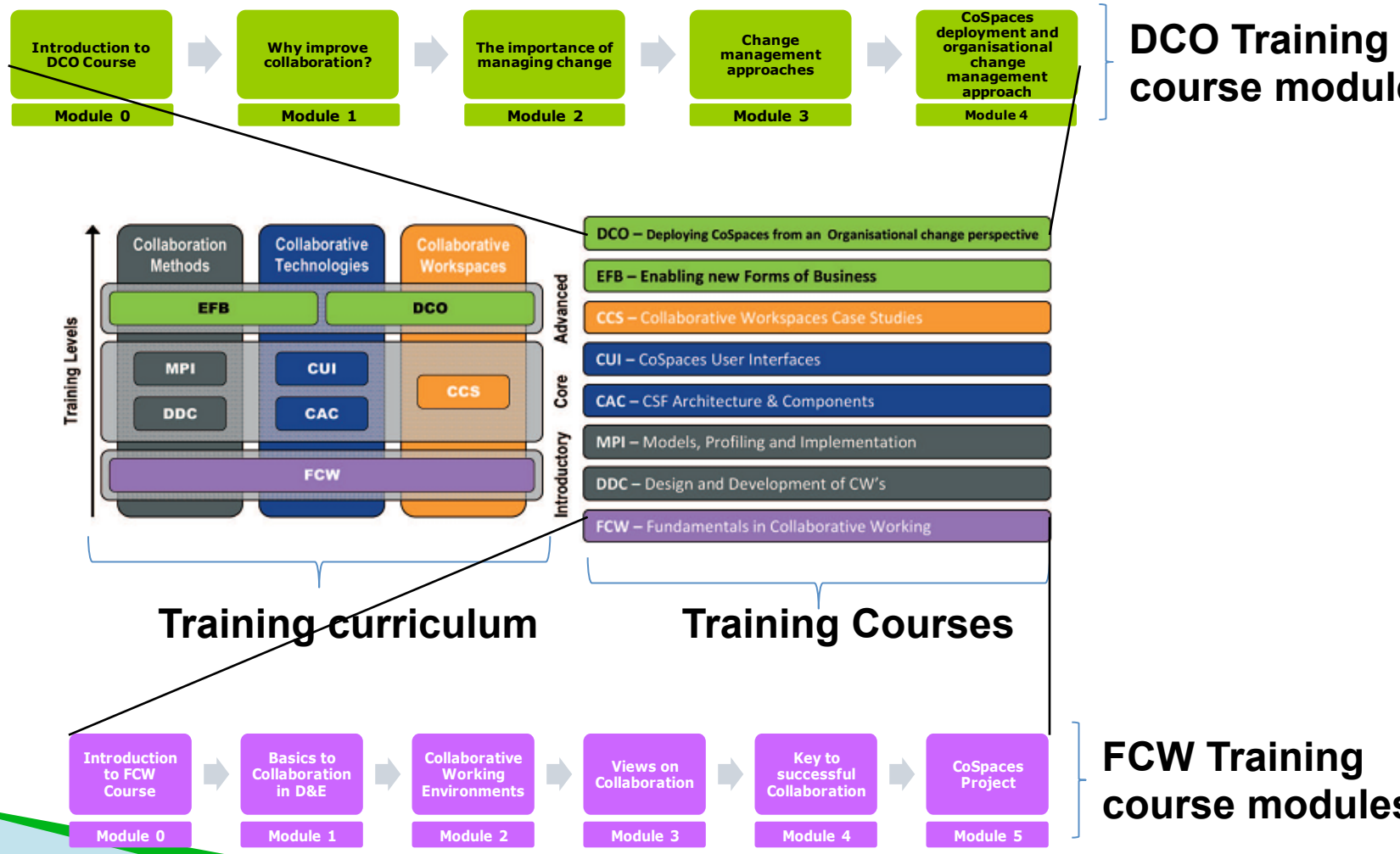
Becomes an ontology...



Training Ontology



Training Organisation (Example)



Training Knowledge Base

TrainingCurriculumv0 Protégé 3.4 beta (file:\F:\Orientacao_de_MSC\training\TrainingCurriculumv0.pprj, OWL / RDF Files)

File Edit Project OWL Reasoning Code Tools Code Window Help

protégé

Metadata(Ontology1268158035.owl) | OWLClasses | Properties | Individuals | Forms | Jambalaya

CLASS BROWSER

For Project: TrainingCurricul...

Class Hierarchy

- owl:Thing
  - Contact (6)
  - ContentsAreas (3)
  - Courses (13)
  - CurriculumMainArea (1)
  - Keywords (106)
  - Modules (48)
  - Programmes (1)
  - protege:ExternalResource
  - Sources (50)
  - TargetAudience
  - TrainingLevels (3)

INSTANCE BROWSER

For Class: Courses

Asserted | Inferred

- CAC
- CCS-CDW-Auto
- CCS-CDW-Cons
- CCS-DDW-Aero
- CCS-DDW-Auto
- CCS-MSW-Aero
- CCS-MSW-Cons
- CUI
- DCO
- DDC
- EFB
- FCW
- MPI

Asserted Types

- Courses

INDIVIDUAL EDITOR for CUI (instance of Courses)

For Individual: http://www.owl-ontologies.com/Ontology1268158035.owl#Courses_66

Annotations

Property	Value	Lang
rdfs:comment		

Accronym: CUI

Estimated_Time: 67

Name: CUI - CoSpaces User Interfaces

Narrative_Summary: esses which an enterprise could have.

Objectives: CoSpaces collaborative user interfaces.

Skills_Be

Value	Lang
N/A	

Student_Requirement

Value	Lang
Basic knowledge on col...	

Technical_Requireme

Value	Lang
Usage of personal comp...	
Windows operating sys...	

CoursesFromCurricul: CoSpaces Training Curriculum

includeinLevel: Core

hasContactPersons

hasModules: CUI-CUI_M0, CUI-CUI_M2, CUI-CUI_M1

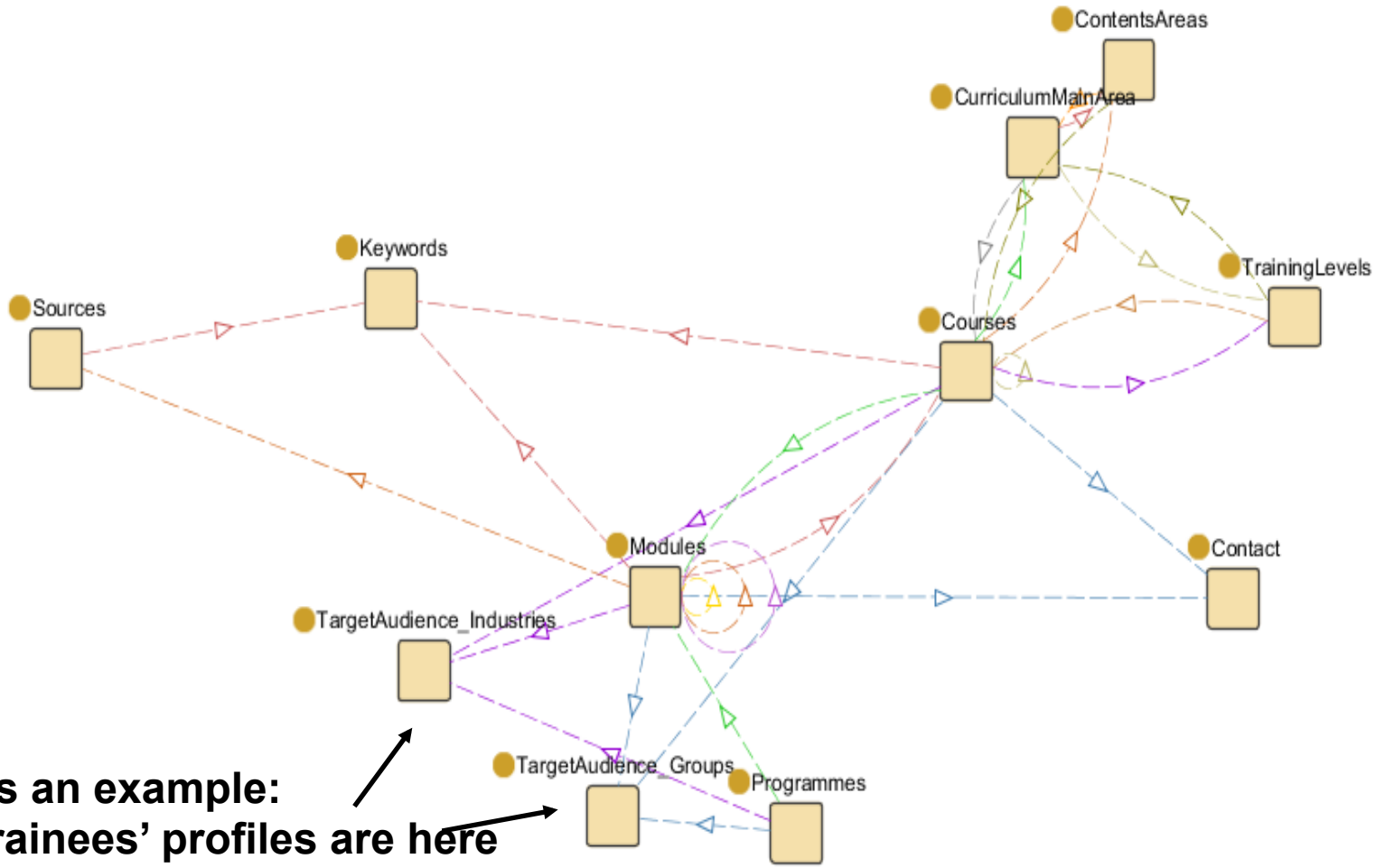
linkedToTheTopicAre: Collaborative Technologies

Recommended_Prece: CAC, FCW

Target_Groups

Training Knowledge Organisation

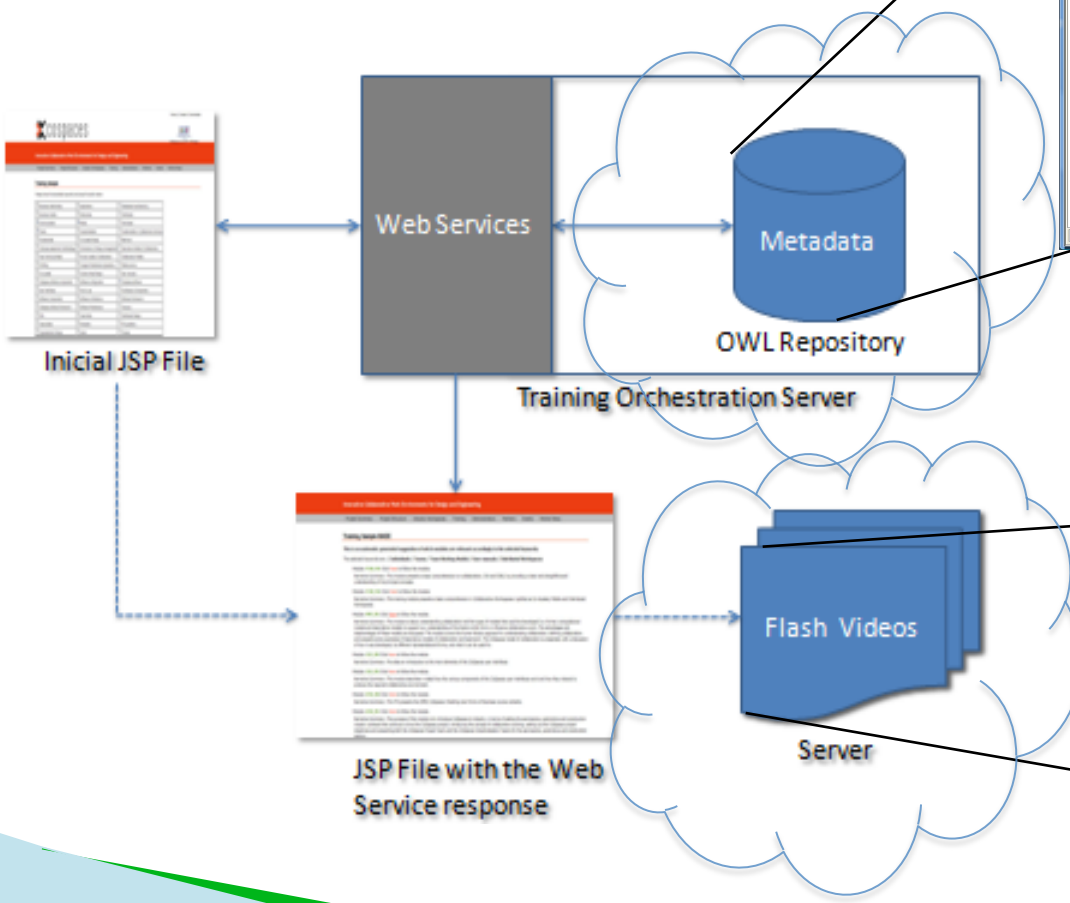
(Ontology geometric view)

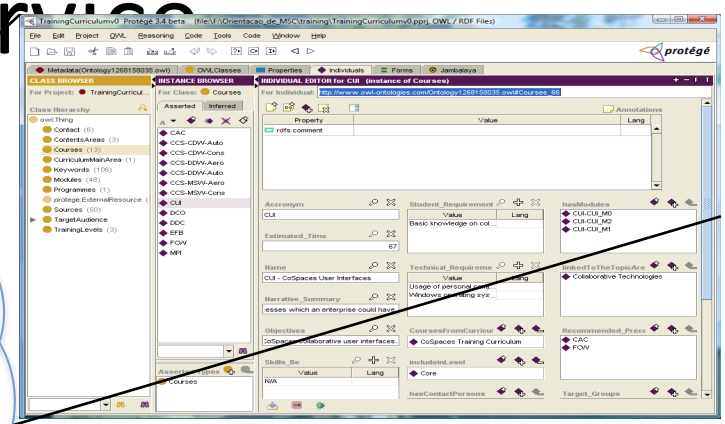


As an example:
Trainees' profiles are here

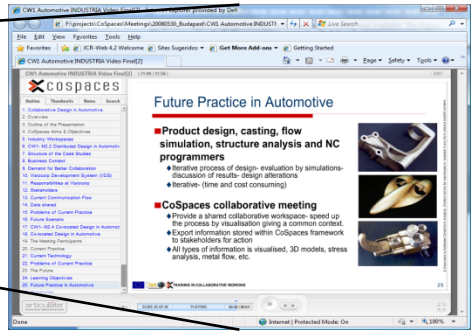
Customisable Training Service

Architecture of a Customisable Training Service





Ontology with all the knowledge associated to training (e.g. Courses modules, trainee profiles etc)



Training modules (available in a flash based format)

Knowledge Services Implementation

- Protégé "is a free, open source ontology editor and knowledge-base framework"[25], which is supported by a very active community.

- For implementing knowledge services it is needed to understand how to programmatically use protégé/owl.
  - OWL API is a good API for manipulating owl ontologies
  - Jena is also a good API for manipulating protégé ontologies.
    - Jena is a Java framework for building Semantic Web applications [26].
  - SPARQL Query Language for RDF is other possibility;
  - There are others…
- Conclusion:
  - A service could be easily integrate interactions with protégé/owl knowledge bases;

[25] – http://protege.stanford.edu/; [26] – http://jena.sourceforge.net/;

Adaptable Training Programme Service available @

http://gris-public.uninova.pt:8080/cospaces/ATPS_in.jsp

- It generates on the fly, a training programme adapted to trainees chosen topics

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cospaces

Information Society Technologies

CoSpaces is an IST- IP Project

Innovative Collaborative Work Environments for Design and Engineering

Project Summary | Project Structure | Industry Workspaces | Training | Demonstrators | Partners | Events | Partner News

Adaptable Training Programme Service

TiCW addresses the Researchers & Academia audience facilitating them a service able to build an adaptable training programme. Such training programmes are defined based on a set of chosen topics/keywords.

Please chose the keywords you are interested in and then press the 'Generate' button to build your own training programme.

Generate

☐ Aeronautics industry	☐ Applications	☐ Architecture Components
☐ Automotive industry	☐ Basics	☐ Bathroom
☐ Business models	☐ Business relationships	☐ CWE
☐ Case Study	☐ Case studies	☑ Challenges
☐ Change	☐ Change Management	☐ Co-Located
☐ Co-located Design	☐ Co-located Workspaces	☐ CoScope
☐ CoScope assessment methodology	☐ CoSpaces	☐ CoSpaces software
☐ CoSpaces software components	☐ CoSpaces software framework	☑ Collaboration
☐ Collaboration Models	☐ Collaboration profiling	☐ Collaborative Workspaces
☐ Collaborative solution	☑ Collaborative technologies	☐ Collaborative working
☐ Communication	☐ Compliance	☐ Construction industry
☐ Cost	☐ Course Contents	☐ Current Collaborative Practices
☐ Cylinder Head Design	☐ DCO	☐ DMU
☐ Definitions	☐ Delivery	☐ Demonstration
☐ Demonstrator	☐ Deployment	☐ Descriptive Models of Collaboration
☐ Design	☐ Design Guidance	☐ Design Principles
☐ Development	☐ Dimensions of change management	☐ Distributed
☐ Distributed Design	☐ Distributed Workspaces	☐ Engineering
☐ Enterprises	☐ Evaluation	☐ Fieldwork

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Adaptable Training Programme Service

In the following it is presented a set of training modules that assemble the training programme adapted to the topics/keywords chosen by you:

Challenges / Collaboration / Collaborative technologies

Module 1 : This module presents a basic comprehension on collaboration, CW and CWE, by providing a clear and straightforward understanding of its principal concepts.

Click here to follow the module.

Module 2 : This training module presents a basic comprehension in Collaborative Workspaces: typified as Co-located, Mobile and Distributed Workspaces.

Click here to follow the module.

Module 3 : This module provides insight views on collaboration set around the three reference industries for CoSpaces: Construction; Automotive and Aerospace.

Click here to follow the module.

Module 4 : The training module explores into the key element that make collaboration a success. It stresses the need to focus on a human-centred approach to collaboration as the way for fruitful and all-inclusive collaboration processes. Then it addresses collaborative technologies as the underpinning technological support for collaboration and collaborative processes.

Click here to follow the module.

Module 5 : Introduces concepts about design guidance, and its role in the design of new technologies and systems. Presents general design principles, guidelines and heuristics in guidance for collaboration. The challenge is to root design guidance in the fundamental properties of collaboration that need be supported by CWEs. In this respect, since collaborative systems are still in their infancy, flexible and adaptable guidance within CoSpaces is presented, focusing on the user experience of engaging and collaborating via the CoSpaces software framework.

Click here to follow the module.

Module 6 : Provide a review of methods which could be used to evaluate collaborative workspaces. Some good methodologies exist for human factors evaluation in relevant domains such as human computer interaction, team working, and research areas such as computer supported cooperative work and virtual reality/virtual environments. Evaluation methods to cover physical (e.g. office, devices), cognitive (decision making support, visualisation), emotional (e.g. motivation, resistance), and organisational (e.g. collaboration, team working) interactions will be discussed. Methods for use in the laboratory and field settings will be discussed. Evaluation will be discussed in relation to determining how effective interfaces and interactions are, in terms of giving functionality and utility; the effects of use of collaborative systems in improved designs or design processes; and the effects within the organisation in terms of integration with other technologies, activities, and social impacts. Discussion of the specific difficulties and challenges when evaluating CWEs due to their distributed nature, large number of users, lack of clear metrics for assessing collaboration, and so on.

Click here to follow the module.

Module 7 : This module seeks to impart the rationale behind change management, why it is important to manage change within an organisation, what the cost of failure is, what the differing dimensions of change management are, with particular focus on organisational change.

Click here to follow the module.

Thank you!