LEARNING COMPASS

http://www.learning-compass.eu

Composing lifelong learning and learning-to-employment pathways through competence-based standards and services

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EKDDA

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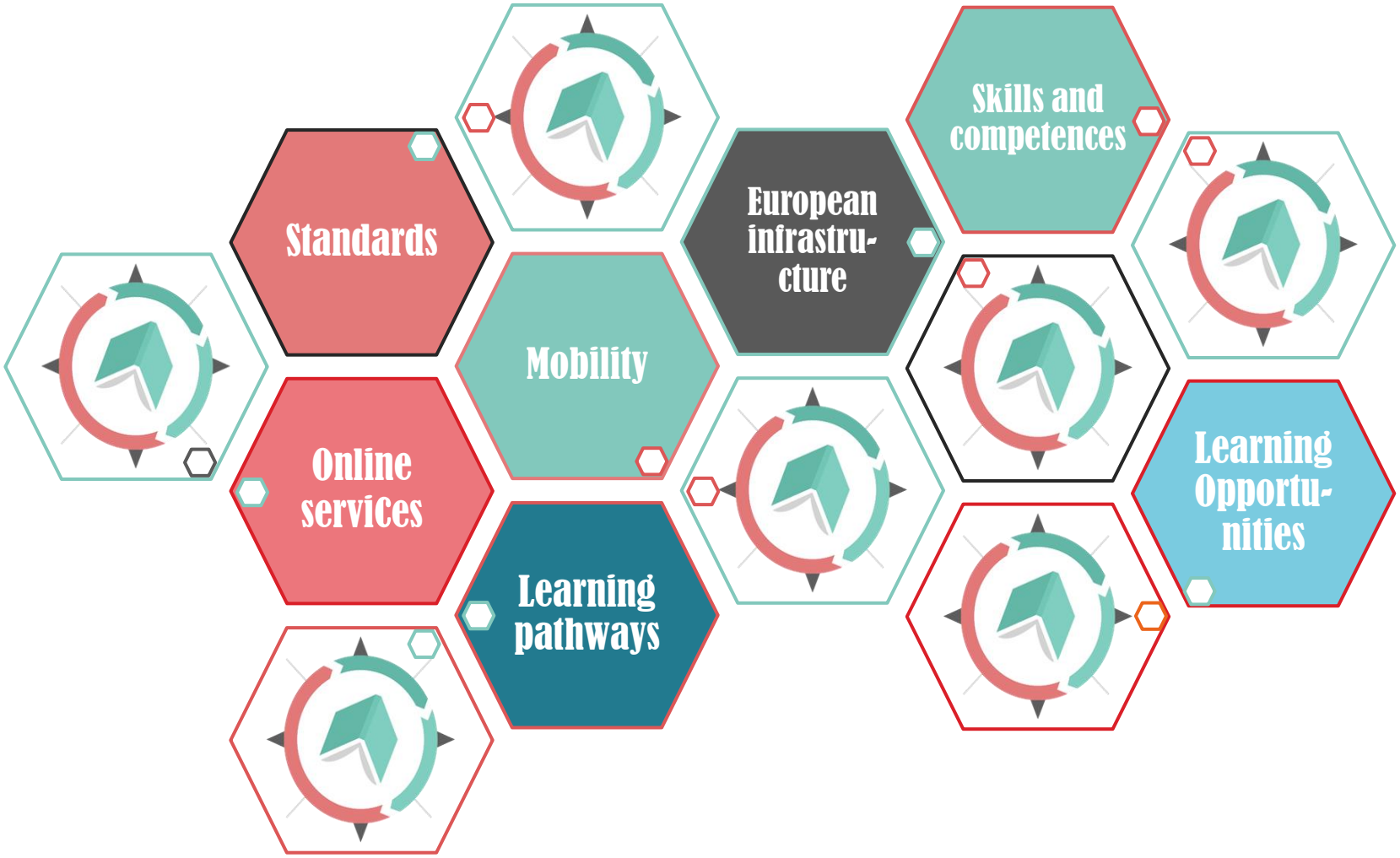
About the speaker

Cleo Sgouropoulou

- Prof., University of West Attica
- Head of Department of Informatics and Computer Engineering
- Project Leader European Learner Mobility (ELM)
- Vice-Chair of the European standardization committee CEN/TC 353 “ICT for Learning, Education, and Training”
- Convener TC48-WG3, Hellenic Mirror Committee – ICT for Learning, Education, and Training

Presenting today…



ICT for LET

- Learning, education and training in Europe relies heavily on the **growing use of information and communications technologies**.
- Application sectors involved include:
  - universities, schools and other educational establishments;
  - education and training authorities, policy makers
  - providers of professional and vocational education and training;
  - employment providers
  - software and system providers that support educational contexts;
  - publishers and broadcasters of educational content.

ICT LET Standards

- The European society, application sectors, markets, national and regional education and training systems **are mature** in the usage of ICT for Learning, Education and Training (LET)
- National and European policies and strategies for the promotion and adoption of ICT for **interoperable**, **quality** products for LET
- Requirement: **Development of European and international Standards for ICT for LET**

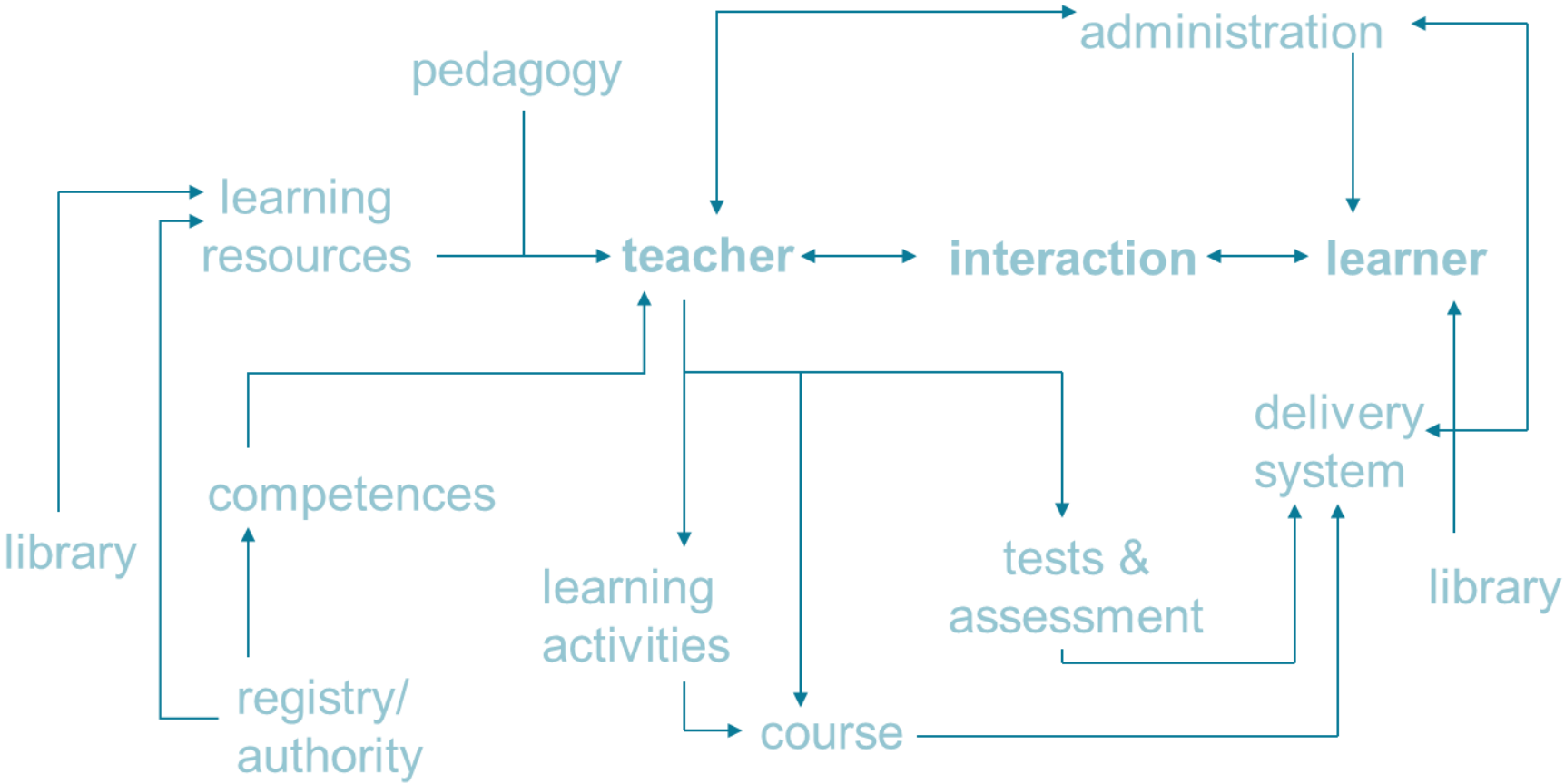
About Standards

- an agreed way of doing something
- design references for products and processes
- international consensus and instruments

provide requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose

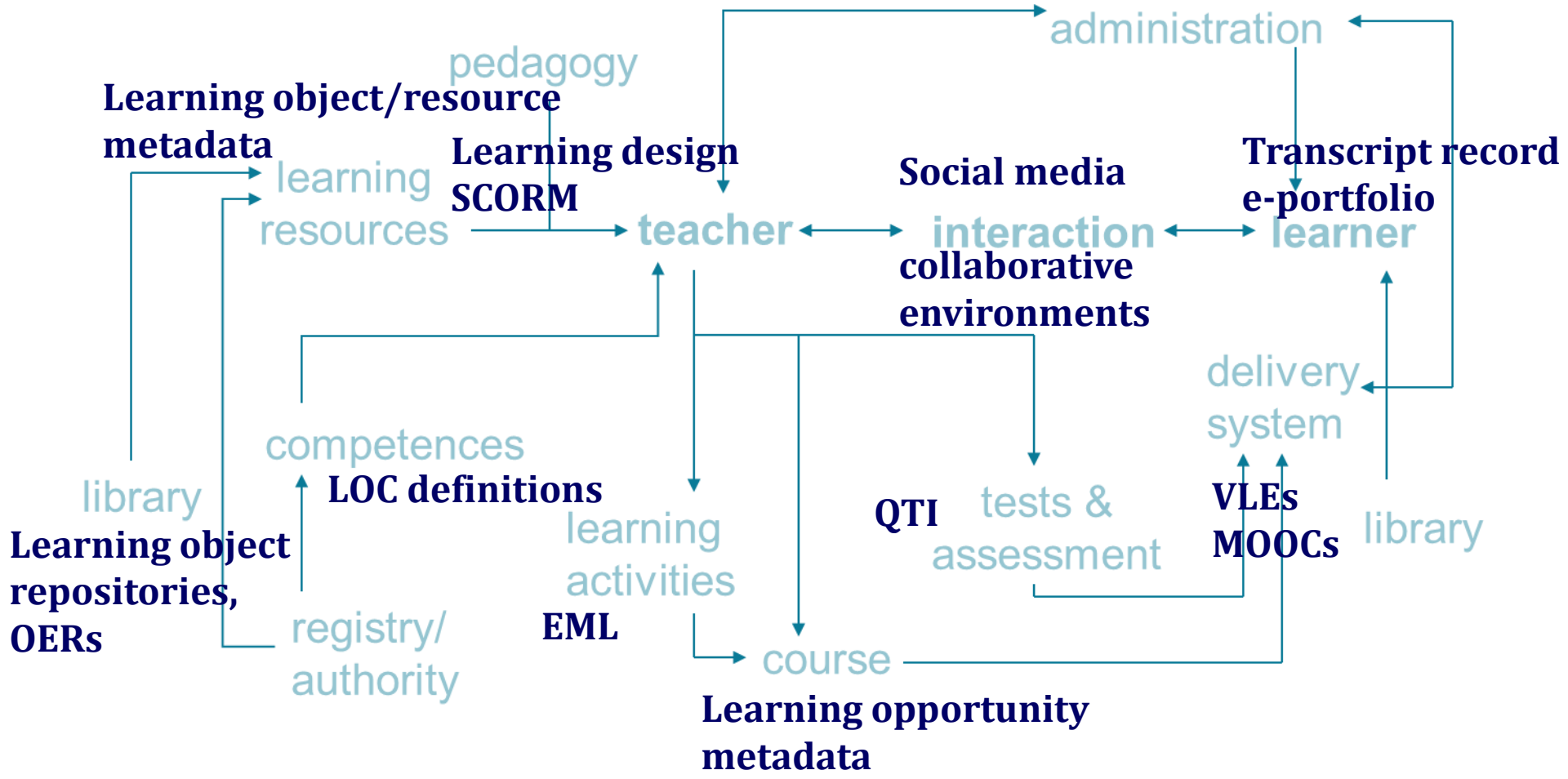
common specifications and/or procedures that respond to the needs of business and meet consumer expectations.

Constituents of Educational Practice

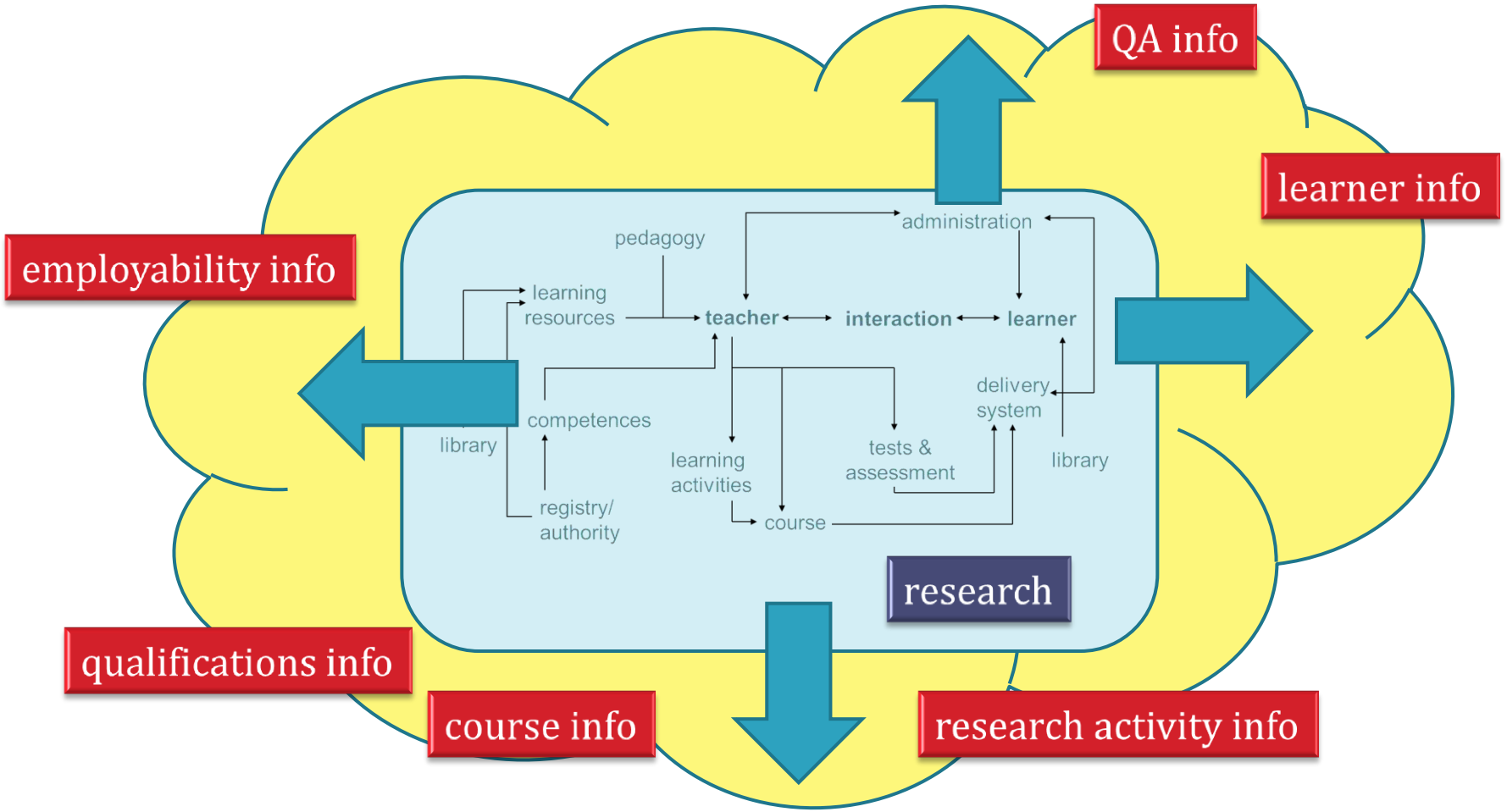


Original diagram by C. Duncan

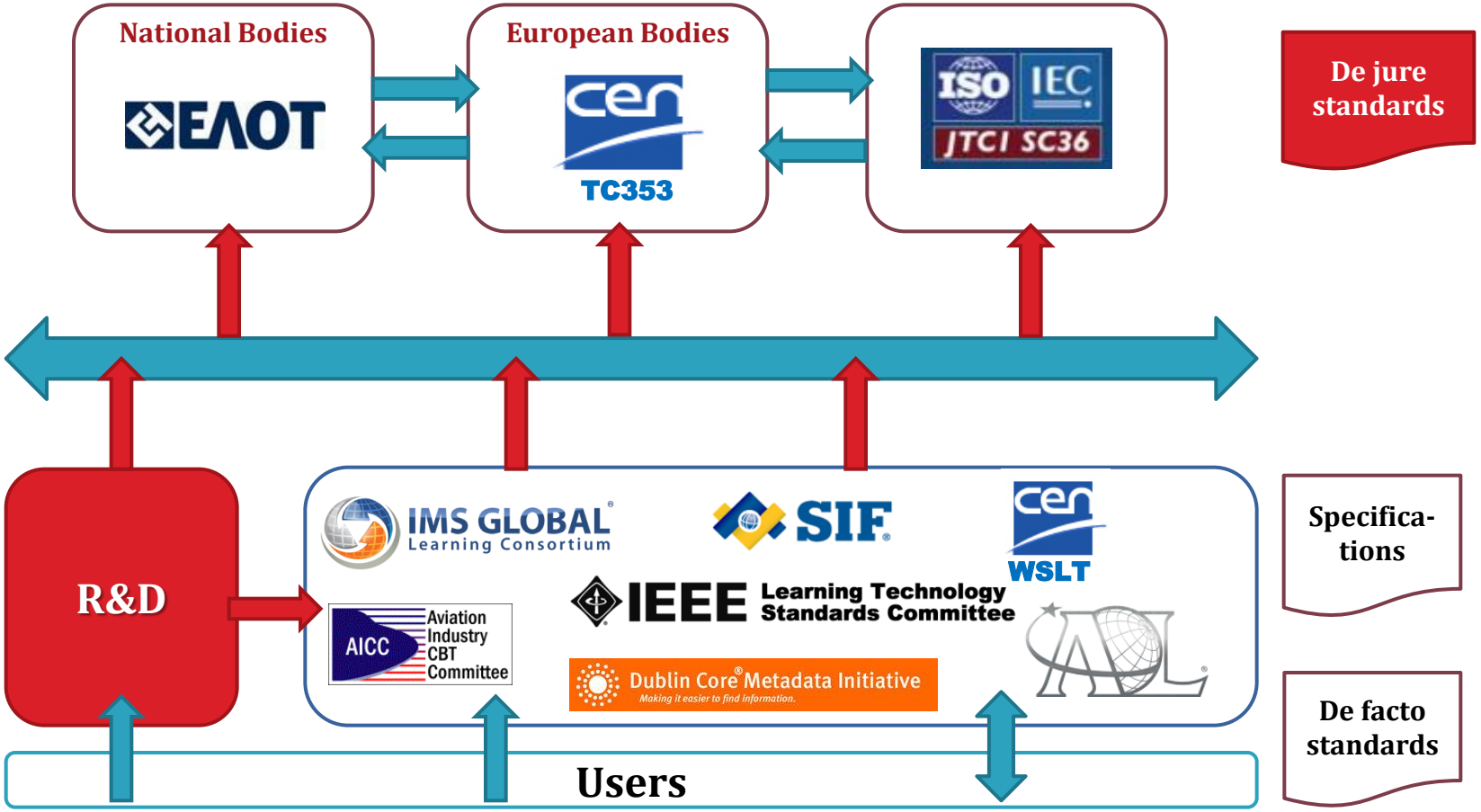
Standards in Educational Practice



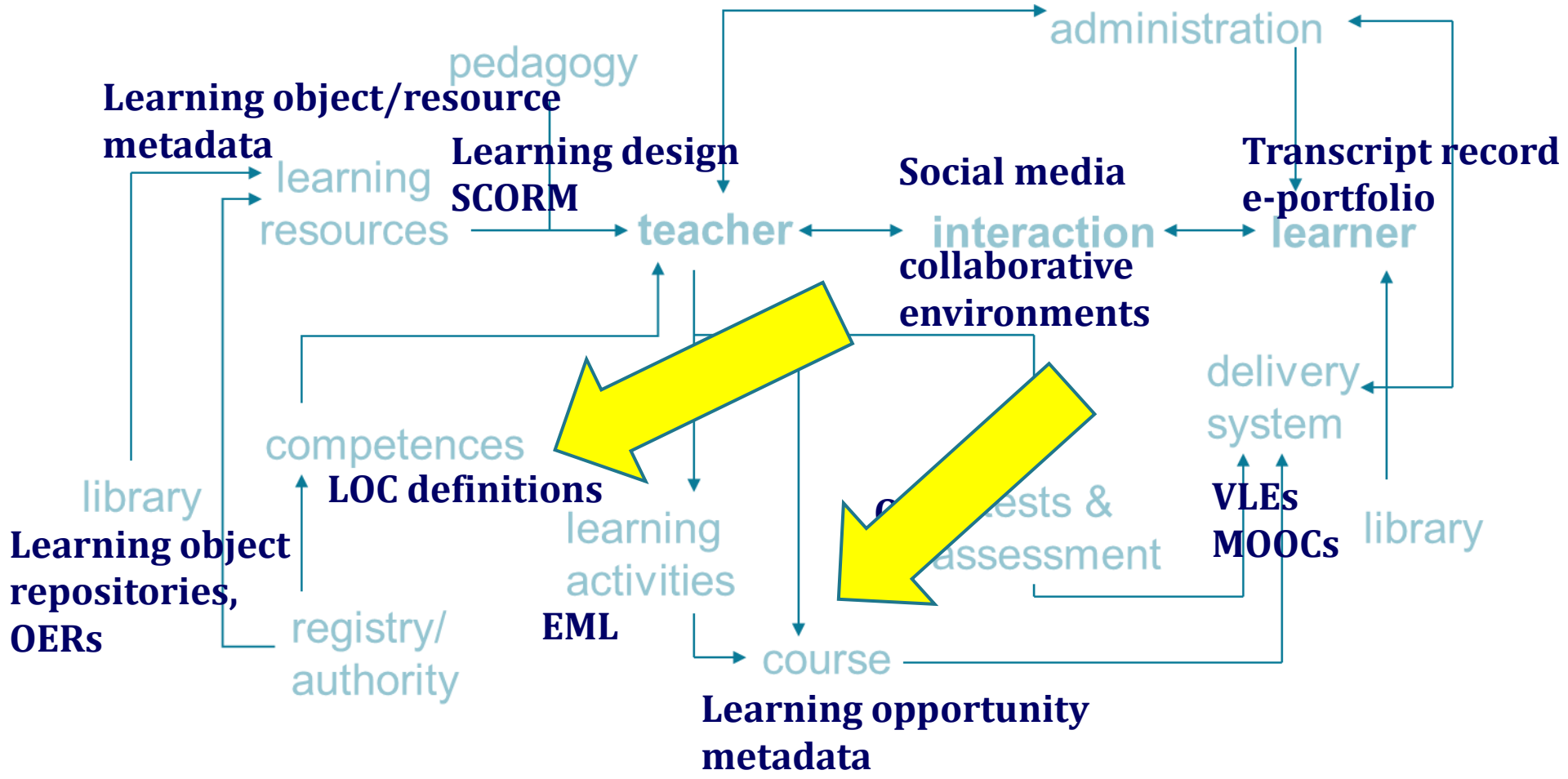
... within institutions and beyond...



ICT LET Specs & Standards development



Standards in Educational Practice

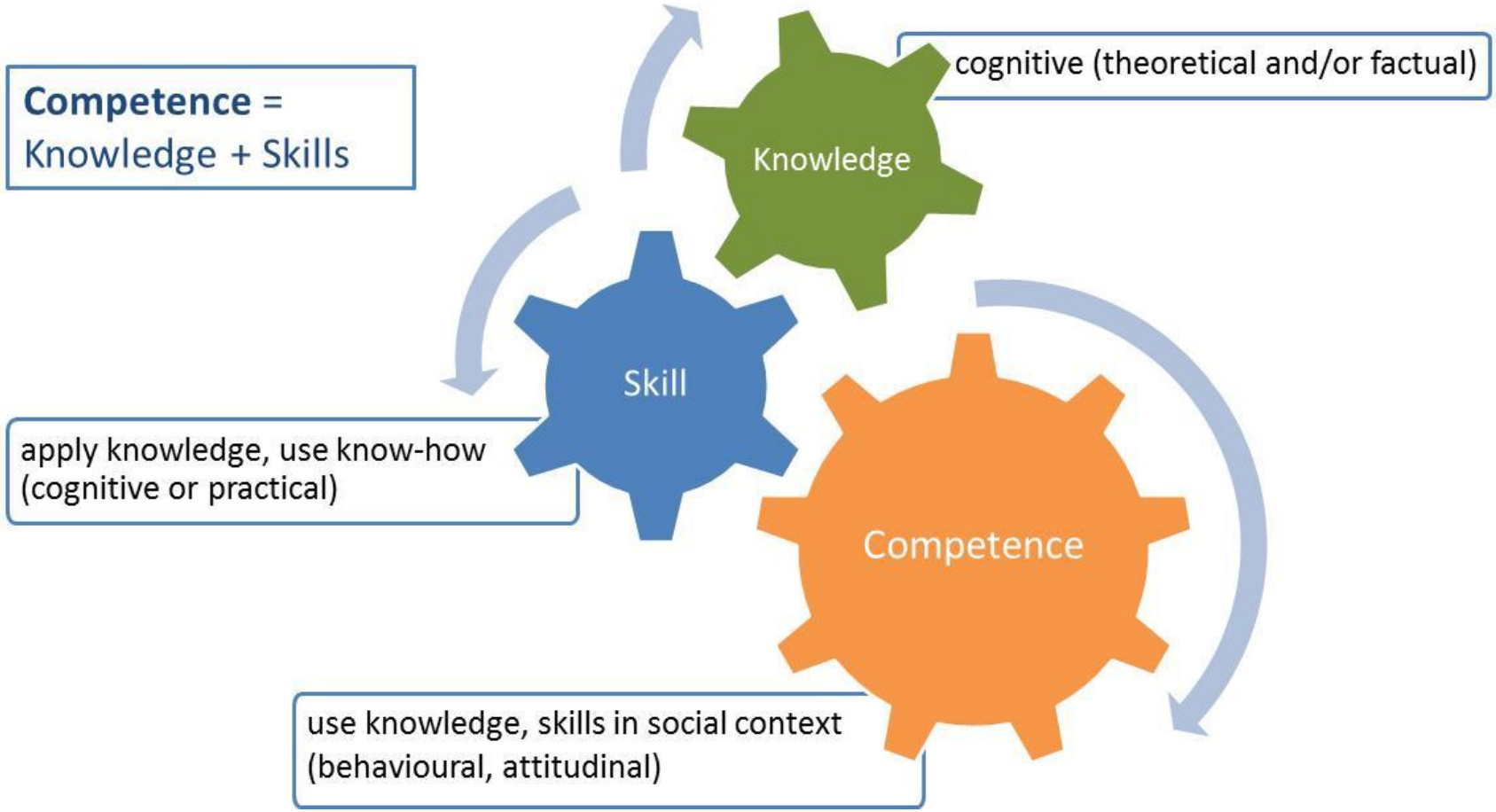


Shift to Learning Outcomes

Learning outcomes
"what a learner knows, understands or is able to do at the end of a learning process"

- Emphasis on ability to do irrespective of routes of acquisition
- Associated with a learner-centered approach
- Facilitates validation of non-formal and informal learning
- Supports better matching between education and training provisions and labour market needs
- Increases transparency of qualifications
- Promotes mobility, employability, adaptability

Typology of Learning Outcomes

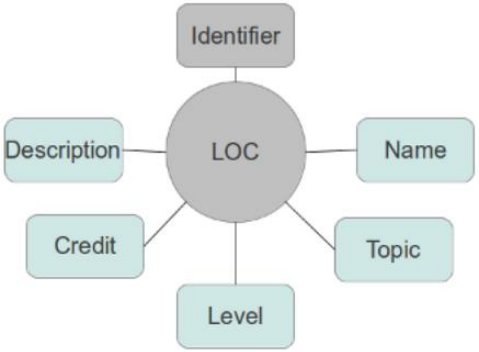


Contexts of using LOCs

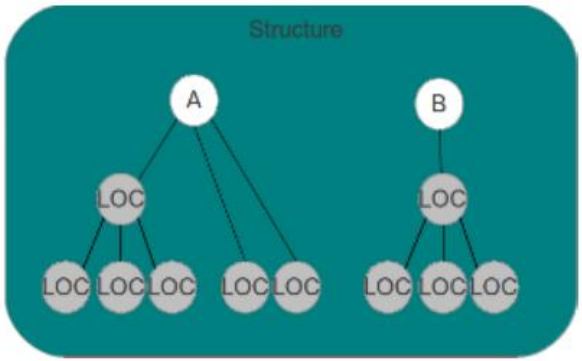
- **Educational context:** learning outcomes are expressed in curricula, modules, course descriptions, educational standards, qualifications and assessment standards.
- **Labor context:** competences are embedded in occupational standards and profiles, job profiles, job advertisements, performance measurement/appraisal systems, and recruiting systems.
- **Guidance context:** information about learning outcomes is present in educational guidance systems and competences in occupational and job information.
- **Personal context:** people communicate about learning outcomes through curriculum vitae or personal competence profiles.

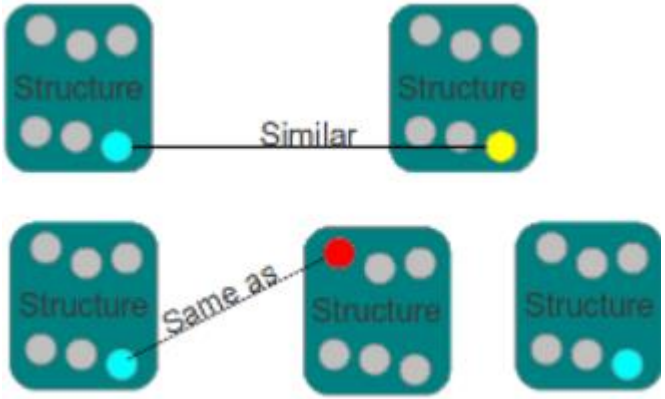
Modelling LOCs

- **LOC definition**
  a concept of a learning outcome or compete taken separately from other ones;

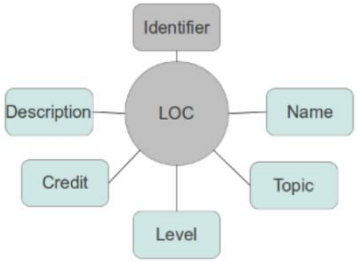


- **LOC structure**
  a structure (e.g. document) that contains several LOCs (learning outcomes and/or competences).





LOC Definition



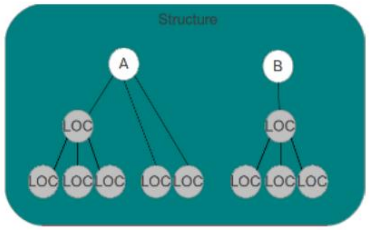
ability item short description	action verb	rest of short description
	service and maintain	domestic natural gas systems and components
KSC category	*knowledge*◯, or *skill*◯, or *competence*①	
unique id code	GC08	
author/authority	UK City & Guilds	

level attributions	level scheme	level
	UK NQF	2
	EQF	3
	WACOM	2

categorisation	classification scheme	term
	UK SOC2010 *(see the web page for further info)*	5314
	NACE *(see the web page for further info)*	F43.2.2 S95.2.2
full description	Ensure that there is sufficient information available to determine the maintenance requirements; service and maintain the stated range of appliances and systems; record the maintenance activities in the appropriate media; diagnose and rectify faults in the stated range of meters and systems; take precautionary actions to prevent use of unsafe installations.	

LOC Definition

LOC Structure



ability item short description	service and maintain domestic natural gas systems and components		
unique id code	GC08		
author/authority	UK City & Guilds		
narrower concepts	**the narrower concept**	**unique id code**	**Necessary / Optional**
	ensure that there is sufficient information available to determine the maintenance requirements	GC08-S01	N
	service and maintain the stated range of appliances and systems	GC08-S02	N
	record the maintenance activities in the appropriate media	GC08-S03	N
	diagnose and rectify faults in the stated range of meters and systems	GC08-S04	N
	take precautionary actions to prevent use of unsafe installations	GC08-S05	N

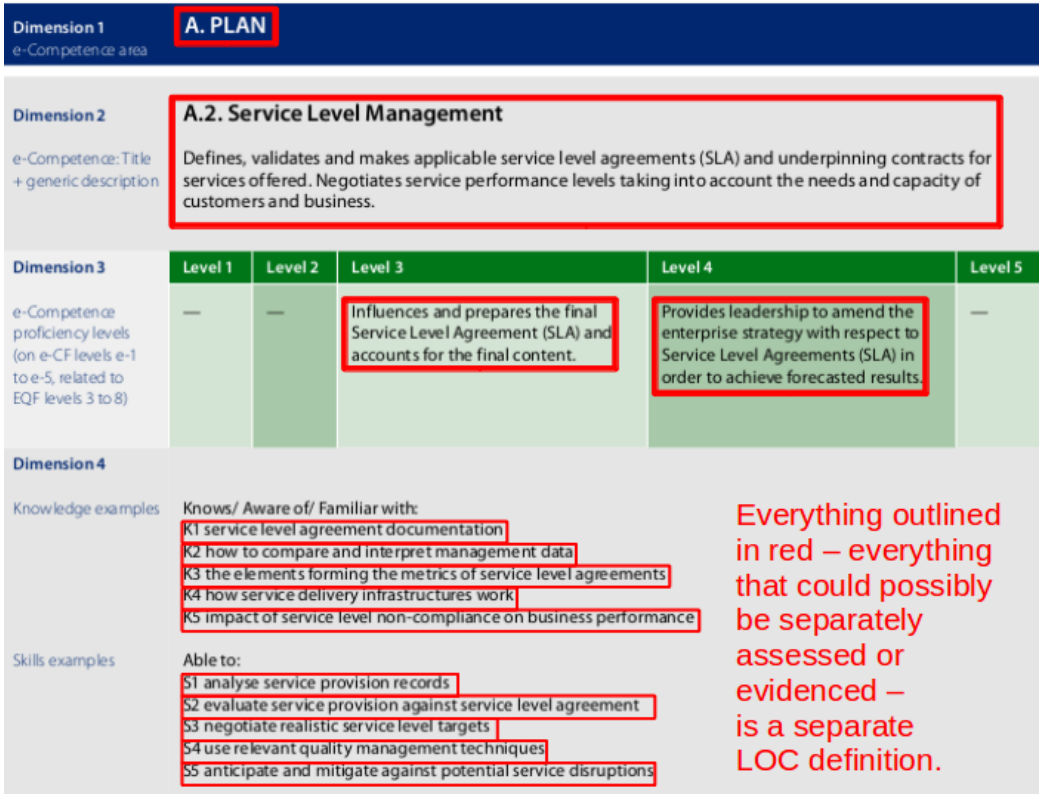
LOC Structure

e-CF Example

European e-Competence Framework 2.0

A common European framework for ICT Professionals in all industry sectors

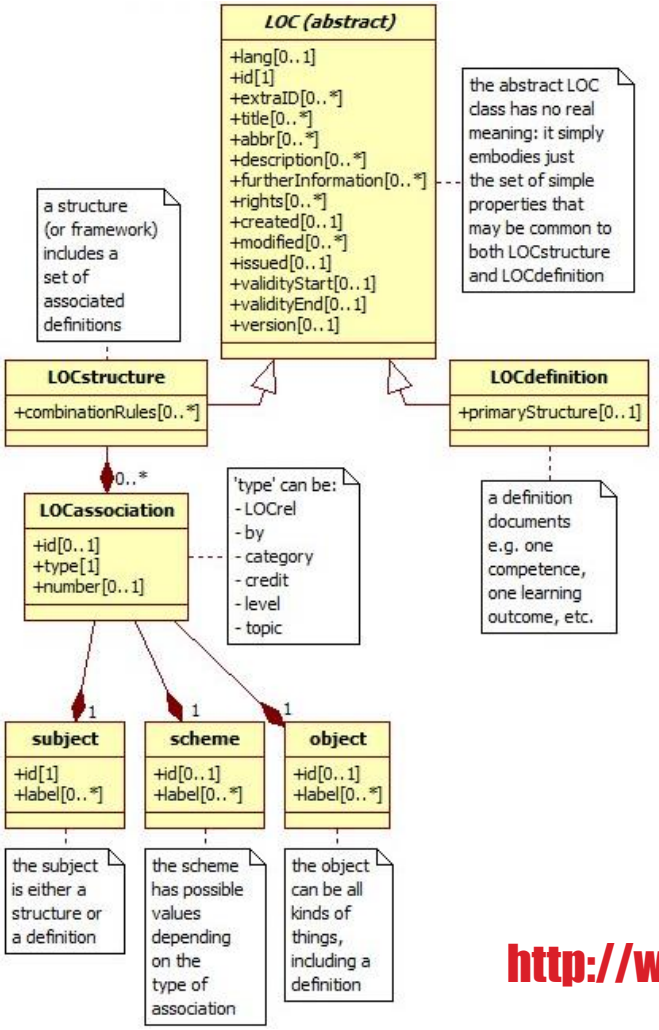
This title refers to the overall LOC structure



Dimension 1 e-Competence area	A. PLAN				
Dimension 2 e-Competence: Title + generic description	A.2. Service Level Management Defines, validates and makes applicable service level agreements (SLA) and underpinning contracts for services offered. Negotiates service performance levels taking into account the needs and capacity of customers and business.				
Dimension 3 e-Competence proficiency levels (on e-CF levels e-1 to e-5, related to EQF levels 3 to 8)	Level 1 —	Level 2 —	Level 3 Influences and prepares the final Service Level Agreement (SLA) and accounts for the final content.	Level 4 Provides leadership to amend the enterprise strategy with respect to Service Level Agreements (SLA) in order to achieve forecasted results.	Level 5 —
Dimension 4					
Knowledge examples	Knows/ Aware of/ Familiar with: K1 service level agreement documentation K2 how to compare and interpret management data K3 the elements forming the metrics of service level agreements K4 how service delivery infrastructures work K5 impact of service level non-compliance on business performance				
Skills examples	Able to: S1 analyse service provision records S2 evaluate service provision against service level agreement S3 negotiate realistic service level targets S4 use relevant quality management techniques S5 anticipate and mitigate against potential service disruptions				

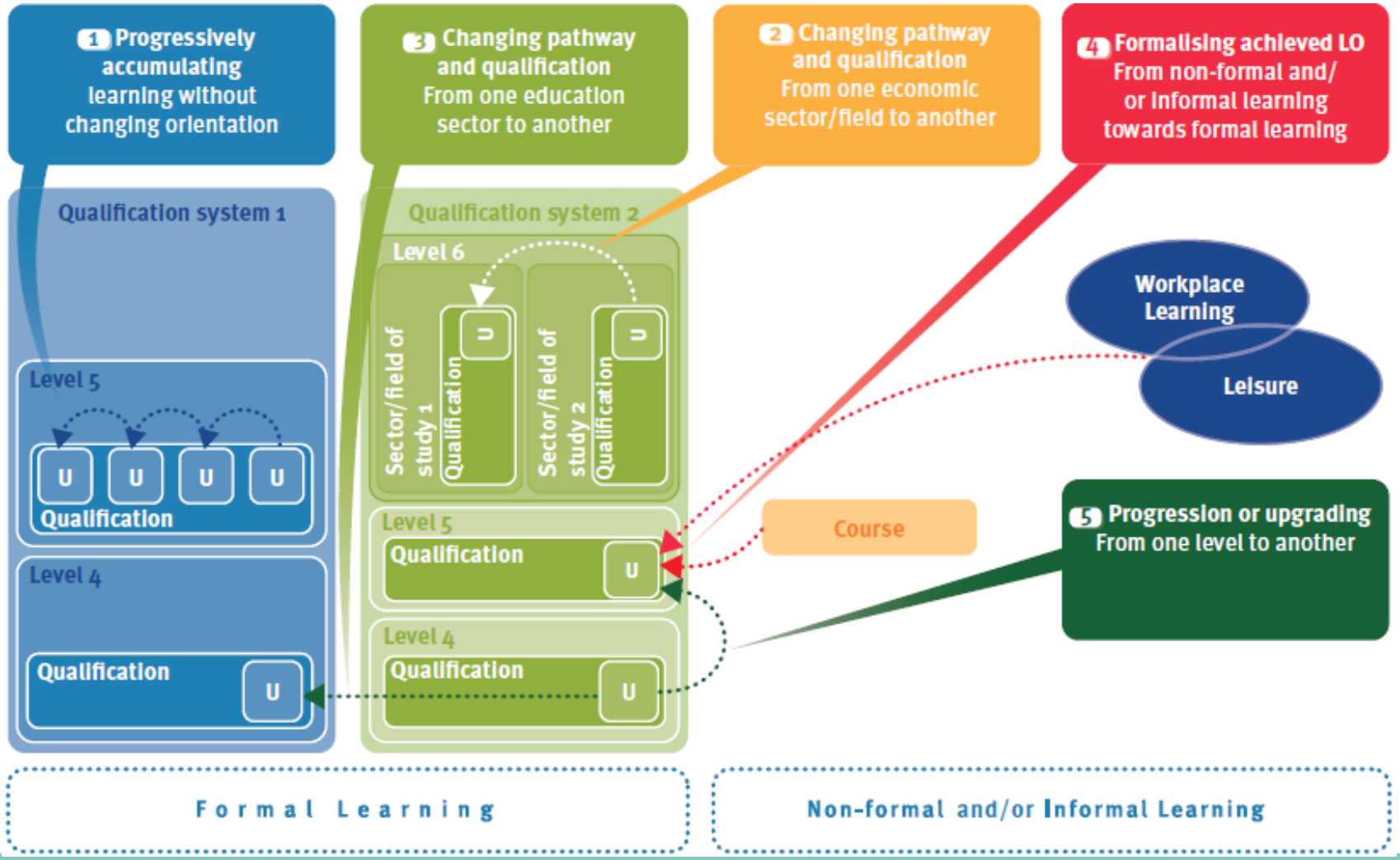
Everything outlined in red – everything that could possibly be separately assessed or evidenced – is a separate LOC definition.

InLOC Information Model

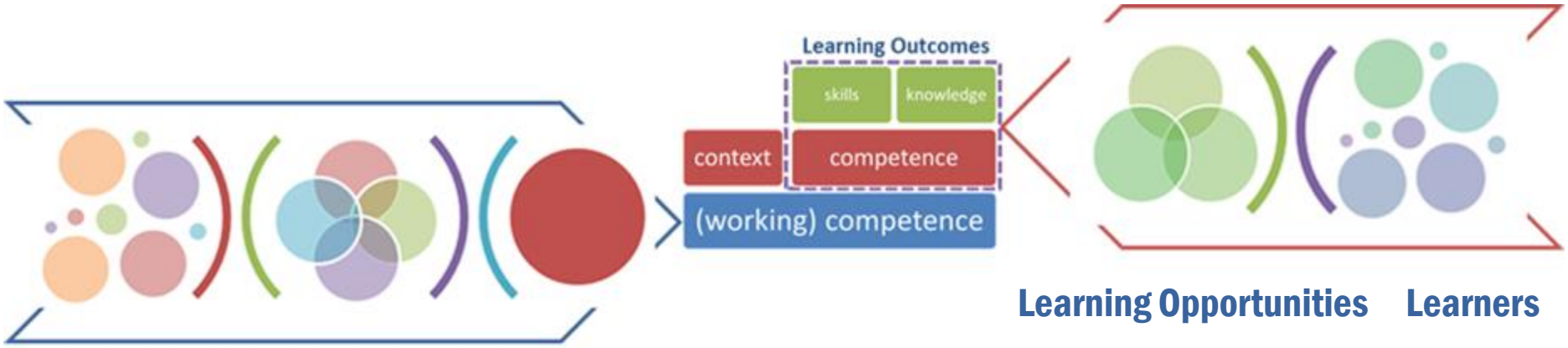


http://www.cetis.org.uk/inloc/Home

Learning Opportunity Pathways



Learning-Employment Pathways



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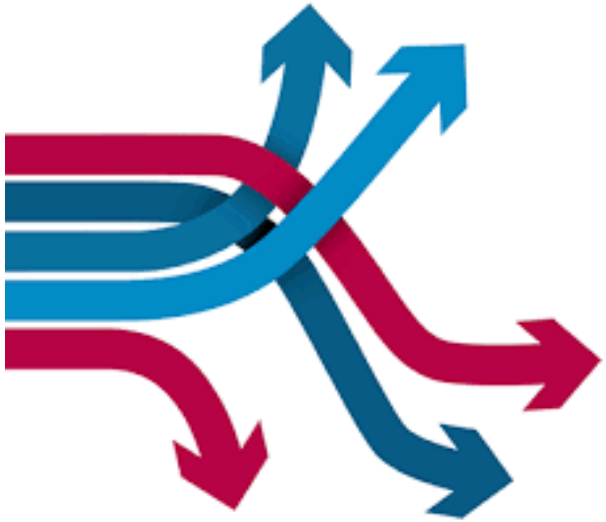
Composing Lifelong Learning Opportunity Pathways through Standards-based Services



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Models

- builds around the modelling of well-structured representations of Learning Opportunities with explicit integration of learning outcome and competence related information

Tools and services

- develops standards-based technical tools to engage HEI learning opportunity providers in producing well-structured, competence-based Learning Opportunity descriptions

Strategies

- Supports the creation of flexible learning pathways to improve the quality and relevance of higher education to current and emerging labor market needs

COMPASS addresses

- the improvement of quality and relevance of offered learning opportunities to current and emerging labour market needs
- the enhancement of mobility, making learning opportunities more visible and understandable for students that want to gain additional skills
- the strengthening of cross-border cooperation of HEIs in the definition of quality flexible learning pathways for their learners,
- the increase of social responsibility of HEIs through the transparent descriptions of their offerings
- the implementation of sustainable infrastructure for all European HEIs and for the EU to leverage in the enhancement of existing or the creation of new related services

COMPASS main questions

How can standardized learning opportunity descriptions serve the various user groups?

What policy suggestions would encourage the implementation of flexible learning pathways by higher education institutions?

How can online services support the dissemination and the utilization of LO and promote the use of flexible lifelong learning pathways within HEI providers and learners?

How can standard information models enable Learning Opportunity providers to engage in the well-structured description of their offers?

COMPASS approach

- Use of standardized information models for learning opportunity description and learning outcomes and competences
- Creation of personas and user scenarios of COMPASS outputs
- Development of standards-based online services

Personas and user scenarios

- **Marko** - Head of SP, TTU
- **Kadrin** - Administrative staff at Office of International Relations, TTU
- **Daniel** - PhD student
- **Marta** - Engineer at NXP
- **Sonia** - Computer Engineer IMEC, BE
- **Giorgio** - QA unit, Rome University
- **Homer** – Prof. of C. Eng., TEI-A
- **Juliet** - International Relations, University of Montpellier
- **Hans** - Student, finished High School
- **Anna** - Finished High School (ES)
- **Apo** - Vocational Standard Office (EE)
- **Jane** – Int. Relations Coordinator (FR)
- **Nicolas** - 17 yo student (FR)
- **Michele** - Nicolas father (FR)
- **Peter** - (same as Homer and Marko)
- **Monique** - Greek MoE, responsible for Ploigos system
- **Laura** – Prof. of CS, Turin
- **Francesca** - 18 yo (IT)
- **Albert** - MoE Policy Maker, responsible for funding

Meet Martha

Martha is a second year PhD student at TU Delft in the Netherlands.

Before COMPASS

- She is interested to know which qualifications are needed to be a **test engineer** at the industry.
- She will use this information on choosing some elective courses during her remaining years of PhD studies at the university.
- She regularly looks into job advertising websites, job descriptions in companies and checks for needed skills of a test engineer.

After COMPASS

- Martha has already created a personal profile in the COMPASS platform.
- She enters her skills in the platform and she is able to compare her profile with an the «test engineer» job profile.
- She can understand her **lacking qualifications**.
- In search for these qualifications, she can look into available relevant learning opportunities.

Meet Fransesca

Francesca is an Italian girl (18 yr old) who has just acquired a Diploma from a Scientific High School in Rome, Italy.

Before COMPASS

- Francesca joins social networks, esp. a group of students and ask feedback
- Francesca starts by googling "Electronics Engineer in France" to find about: how it is recognized, employed, how studies are organized, how exams are graded, how courses are taught ...
- She needs to repeat the same analysis for Belgium and Switzerland
- Finally she goes in some universities websites in search of information such as courses list, ECTS, exams grading
- She compares all info "by hand"!

After COMPASS

- Surely Francesca will save time and energy by easily compare Electronics Engineering courses through platform's filtering process.
- Would she receive generic information about how it is different to study in Italy and France of Belgium or Switzerland?

Meet Kadri

Kadri is manager at the Mobility Centre of Office of Academic Affairs at Tallinn Univ. of Technology. She coordinates student exchange.

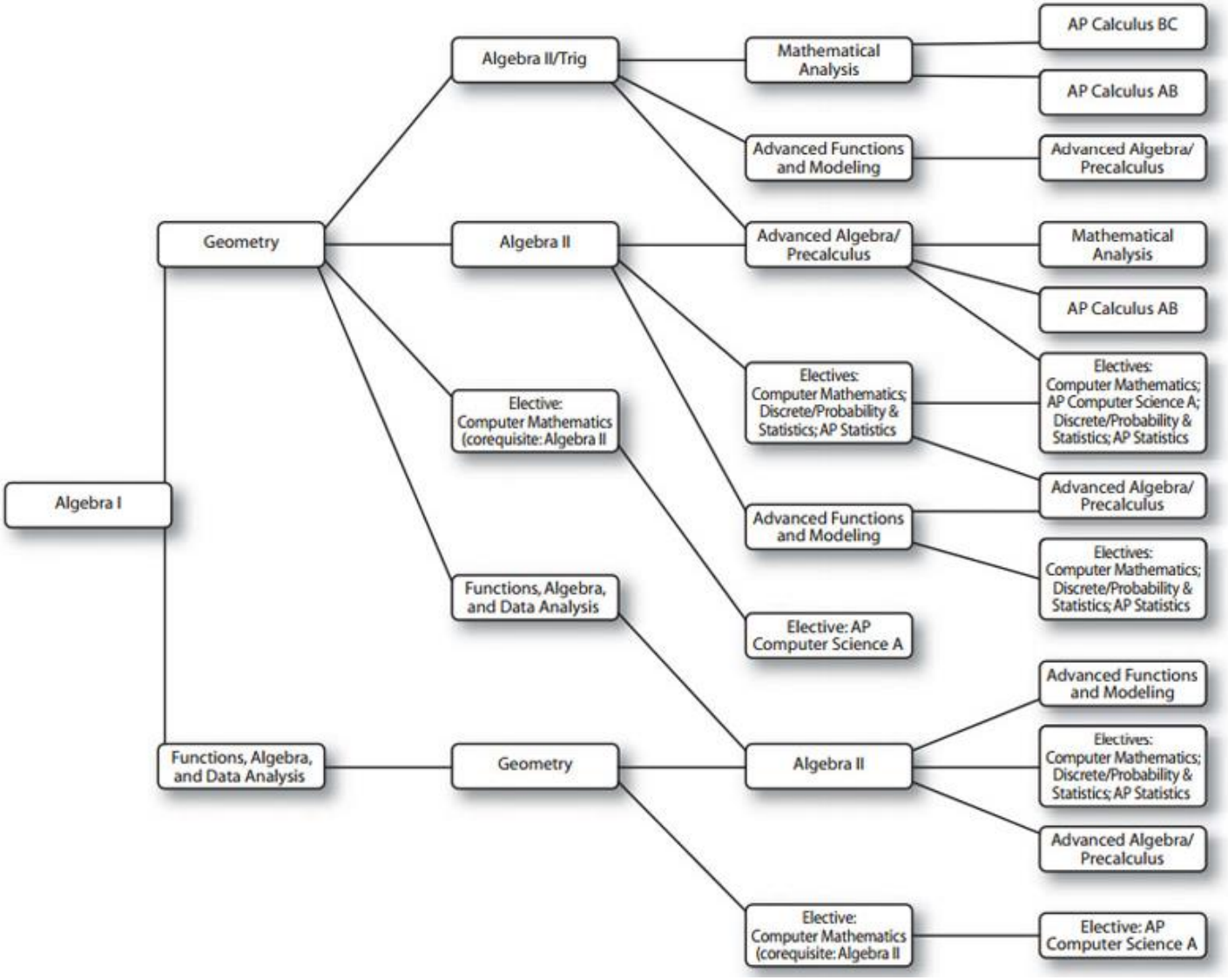
Before COMPASS

- As the coordinator of the student exchange, Kadri advises students to look for suitable universities and to contact study advisors when needed.

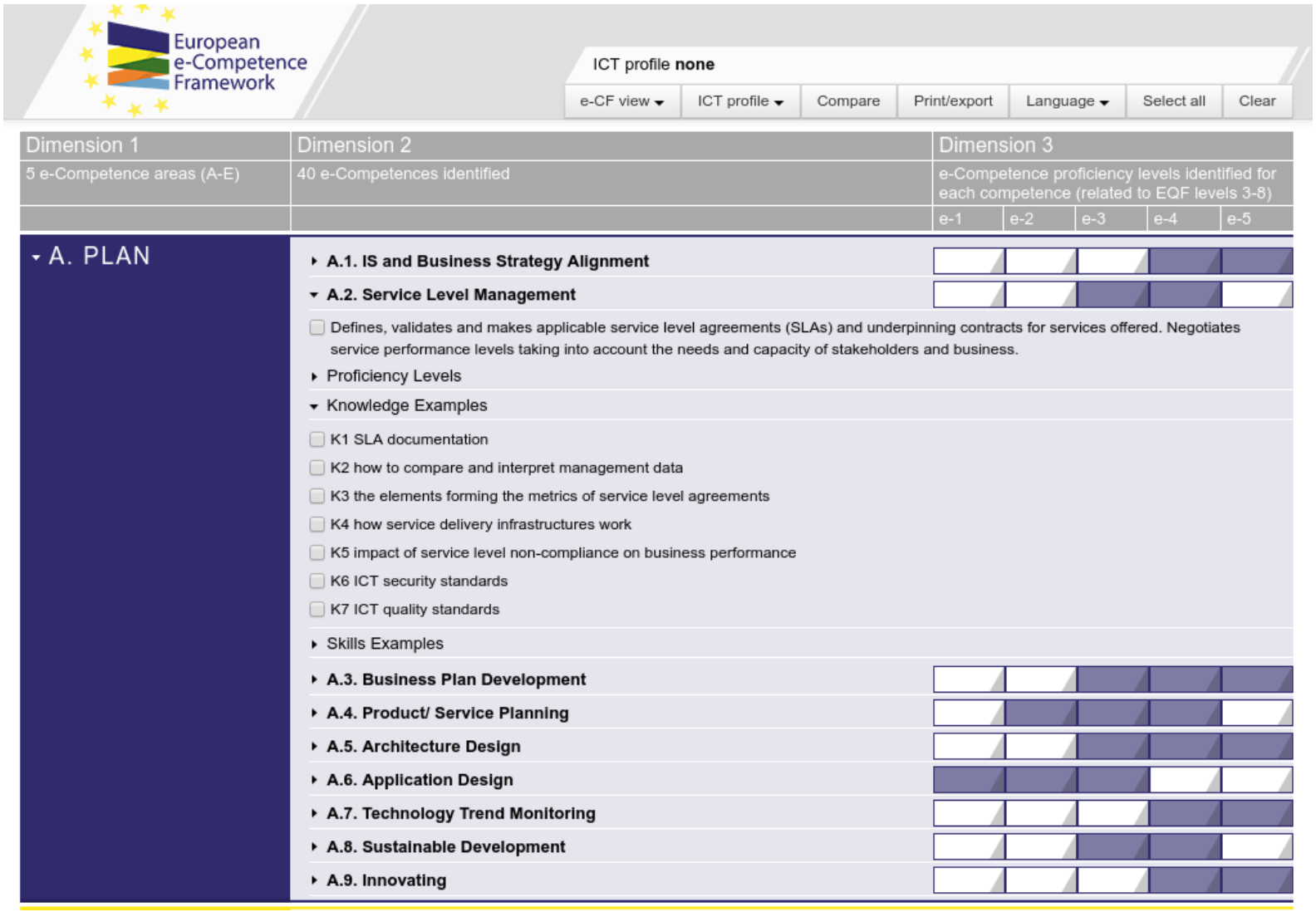
After COMPASS

- With the Compass services it's simpler to guide students directly to the possibility to search and compare courses, instead of finding contacts at one or another university.
- She can now coordinate more students!
- There is less need to contact Marko to ask for details regarding the suitability of one or another course in the first phases of setting up the study exchange plan.

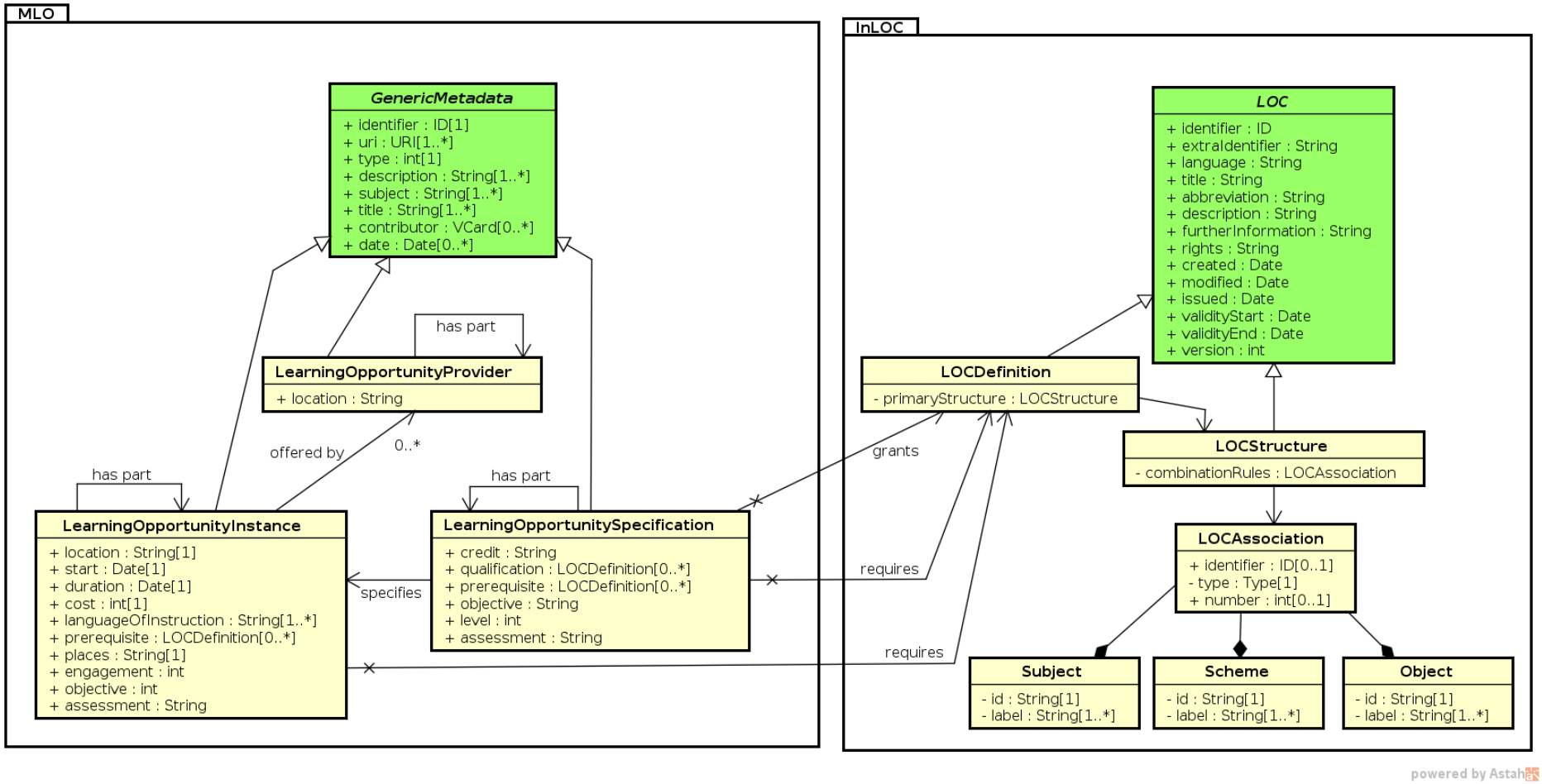
Pathways with equivalent courses



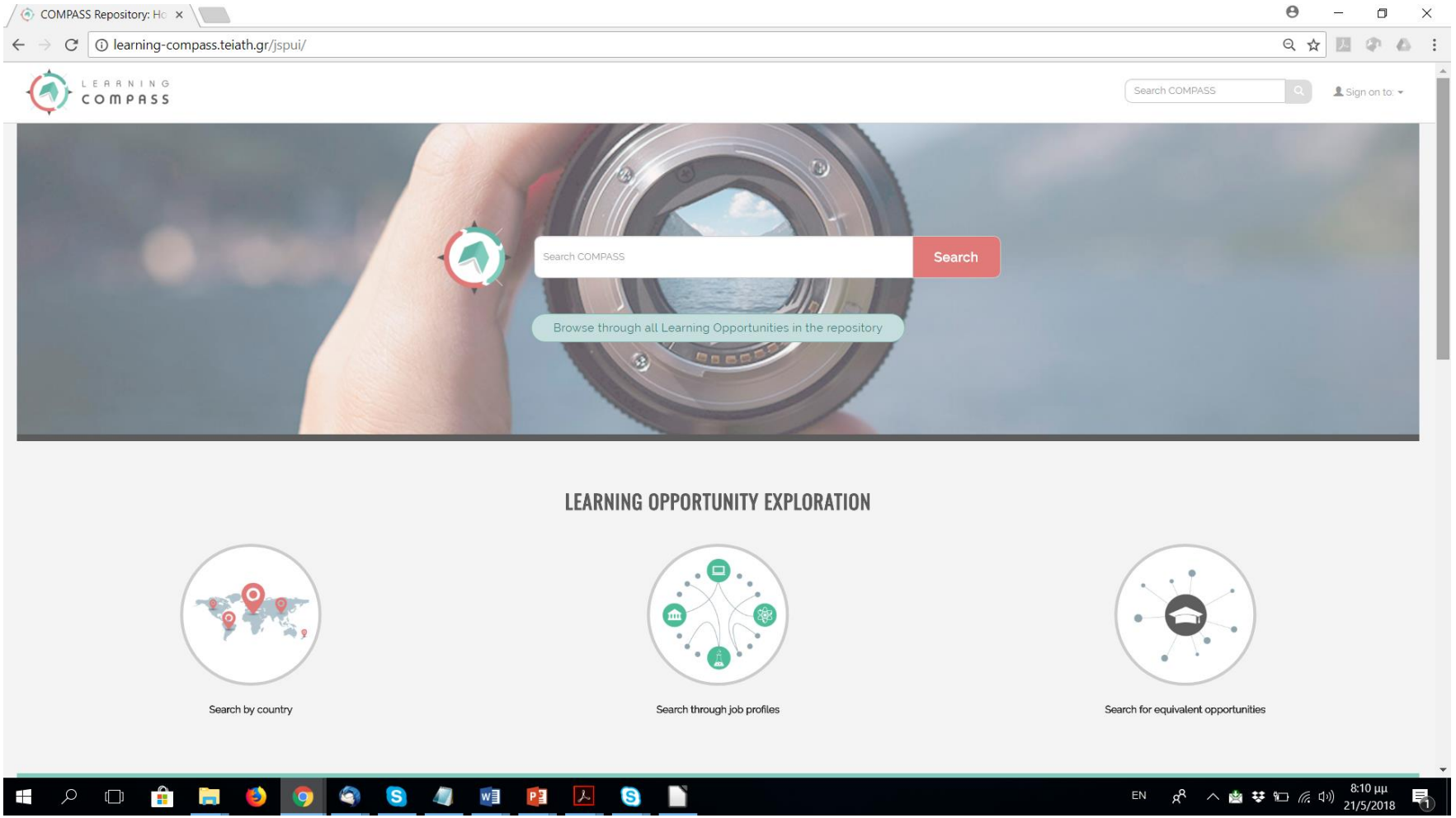
Pathways from Job Profiles



The information model



The Online Services



Addressing the challenges

Innovate on educational services

Build learning opportunities on the basis of **learning outcomes and competences** for strengthening **learning to employment** pathways

Raise **quality** of education and training on an institutional, professional and individual level

Thank you!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