

Assessment in TENCompetence: Sharing Assessment Process Information

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Assessment in TENCompetence: Sharing Assessment Process Information

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JISC CETIS Assessment SIG meeting
Glasgow, UK, Sep. 26, 2007



TEN Competence

Building The European Network for Lifelong Competence Development

Overview

- TENCompetence Project
- A Standard-based and Service-oriented Approach to Support Assessment Process
- Assessment Process Specification (APS)
- Assessment Process Modelling Tool
- Conclusions and Future Work

TENCompetence Project

TENCompetence is a 4-year (Dec. 2005 - Nov. 2009) EU-funded Integrated IST-TEL project and fifteen partners are involved.

Project Aims:

to build the European Network for Lifelong Competence Development

- How? By providing a technical and organizational Infrastructure
- Who for? For use by any individual, group or organization
- What for? To develop their competences

TENCompetence Project

Assessment in TENCompetence (WP6.B)

- Supporting assessment that is integrated with learning and instruction (which steps are to be carried out and by whom), e.g., formative & summative assessment
- Supporting new forms of assessment, which are process-based and are normally involved with multi-role/users, e.g., peer assessment, 360 degree feedback, and portfolio assessment

Objectives of WP6.B

Develop a formal assessment specification and supporting tools that combines new assessment types and the ones included in the IMS QTI.

A Standard-based and Service-oriented Approach to Support Assessment Process

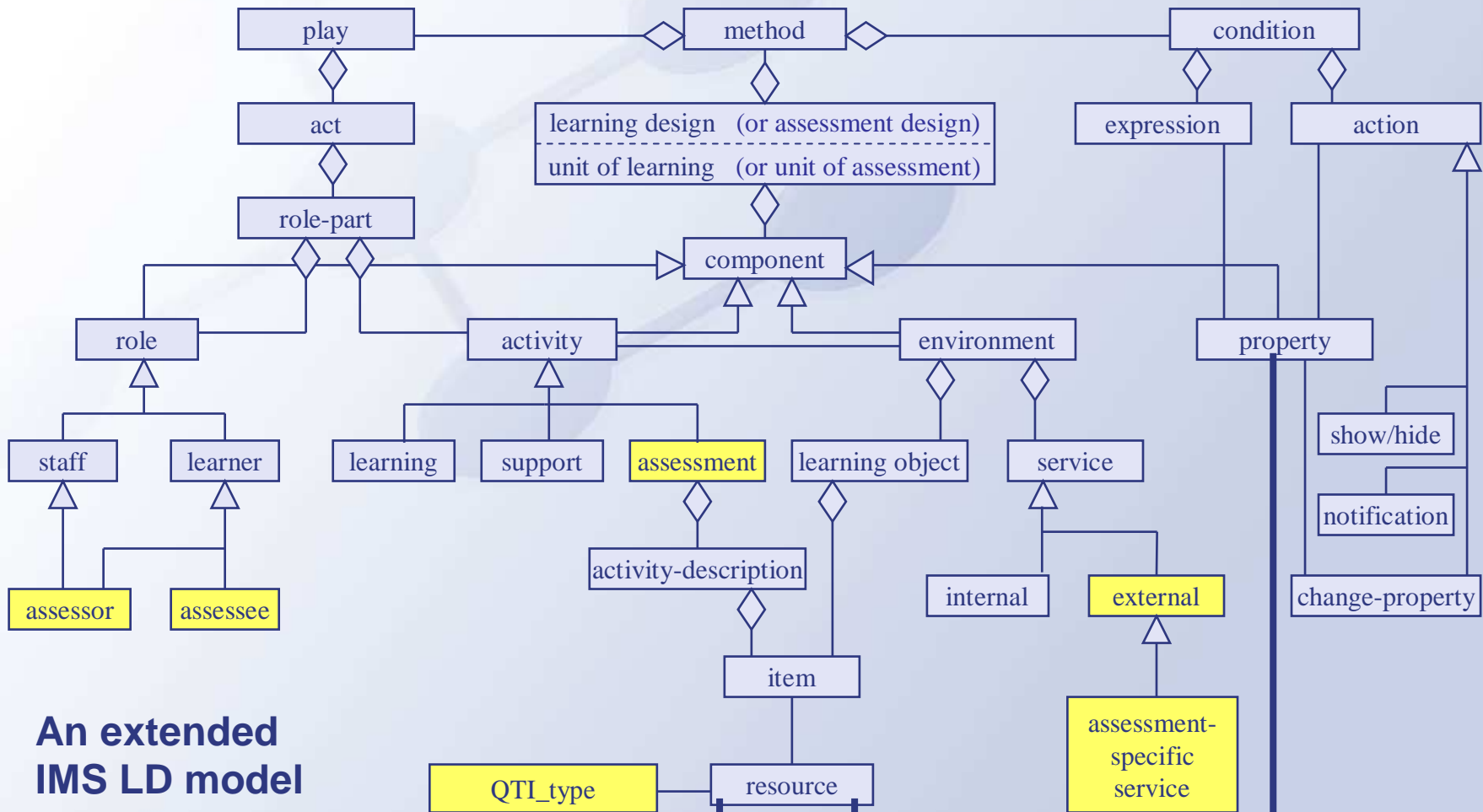
A combined use of IMS LD, IMS QTI, and assessment-specific services to model assessment processes

- Using IMS LD to model multi-role/user-involved assessment processes
- Using IMS QTI to model classical assessment tasks and using assessment-specific services to model special assessment tasks
- Using IMS LD to model a learn-flow with complicated process controls and decision rules
- Using IMS QTI, IMS LD, and assessment-specific services to model data-flow



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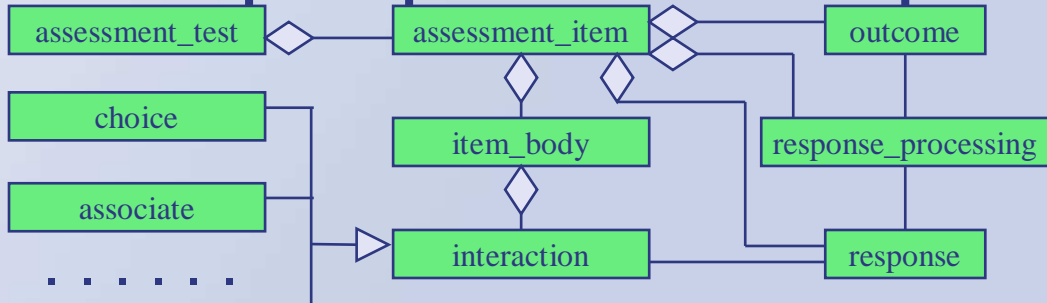


**An extended
IMS LD model**

QTI_type

assessment-specific service

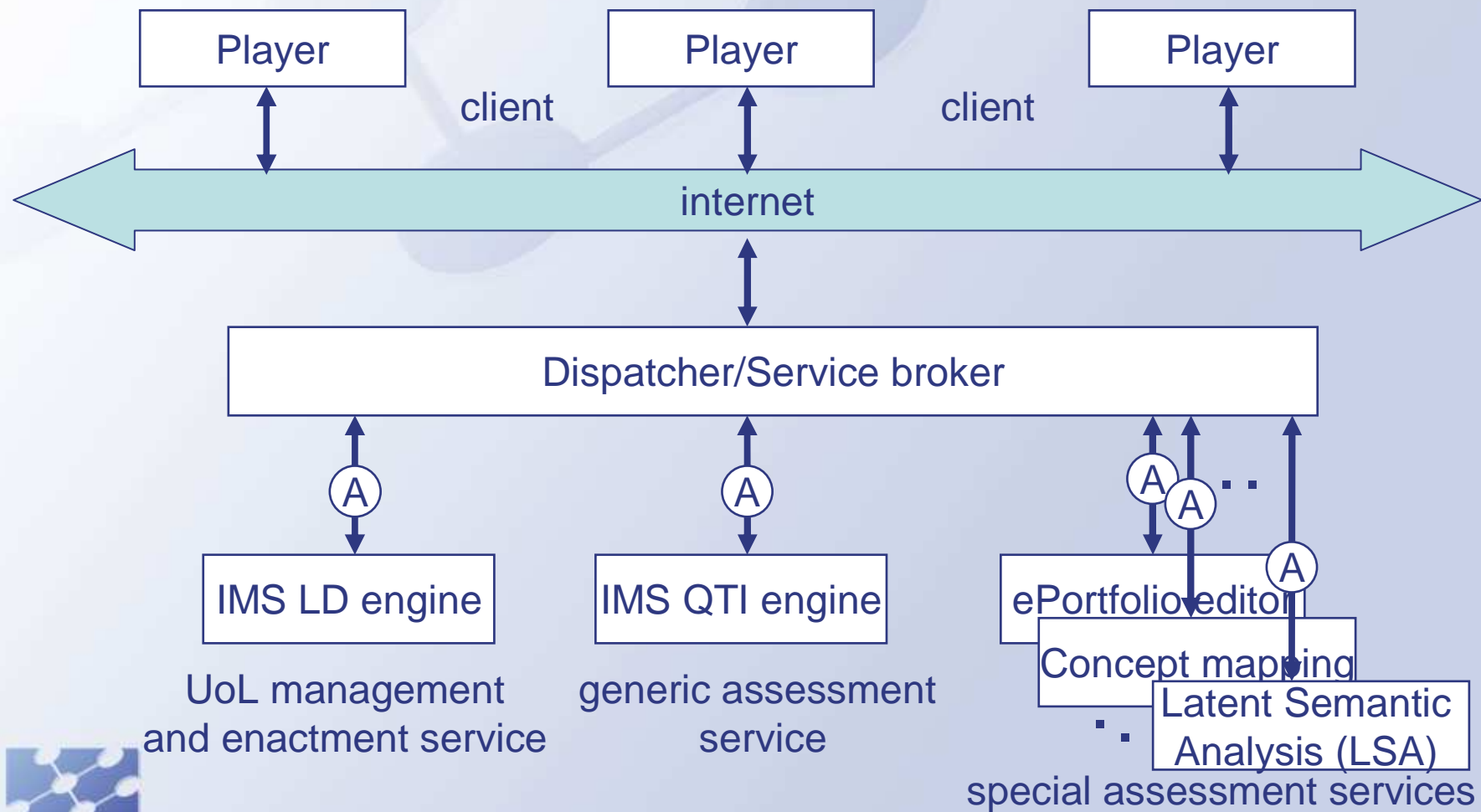
**A simplified
IMS QTI model**



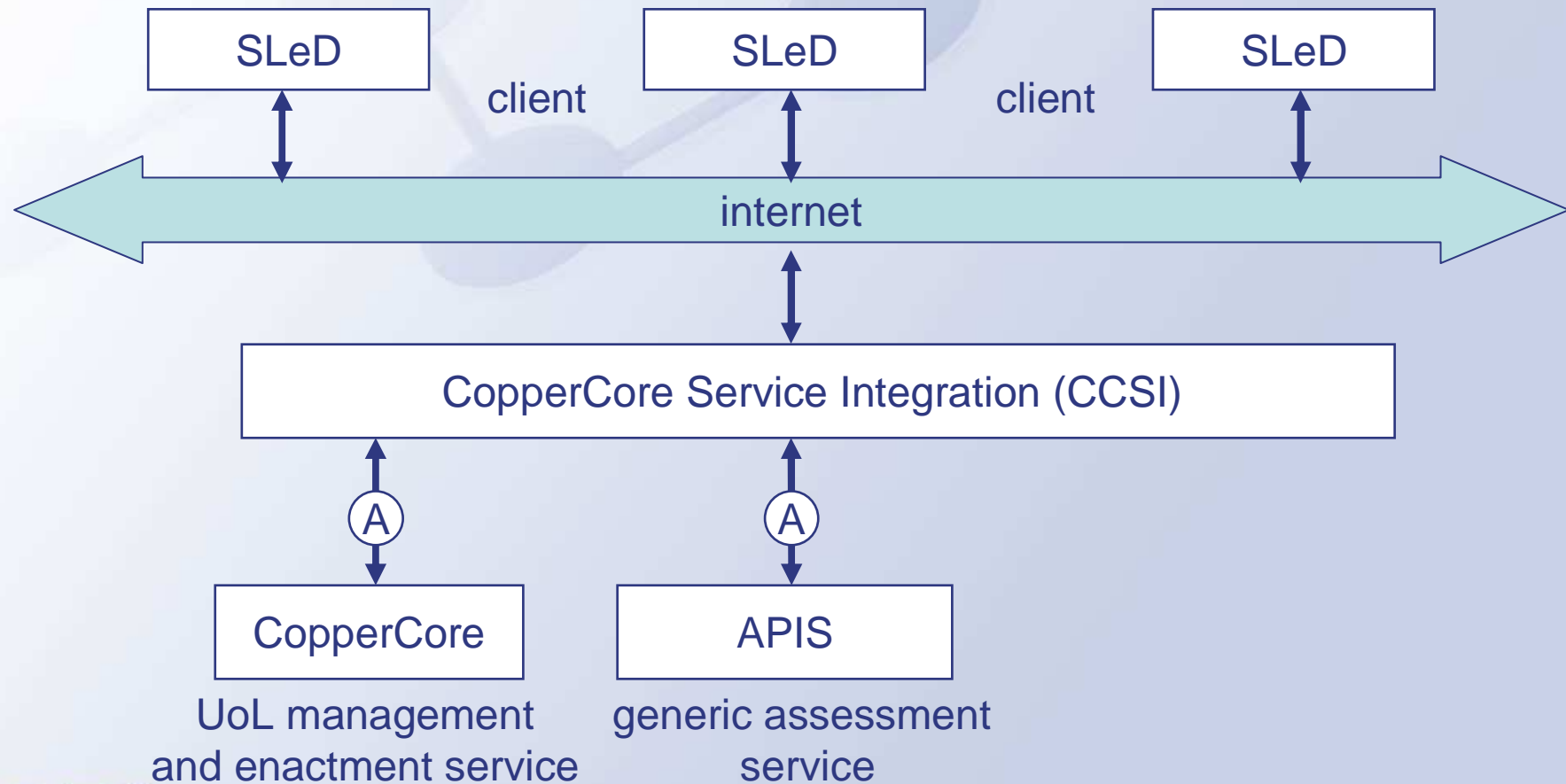
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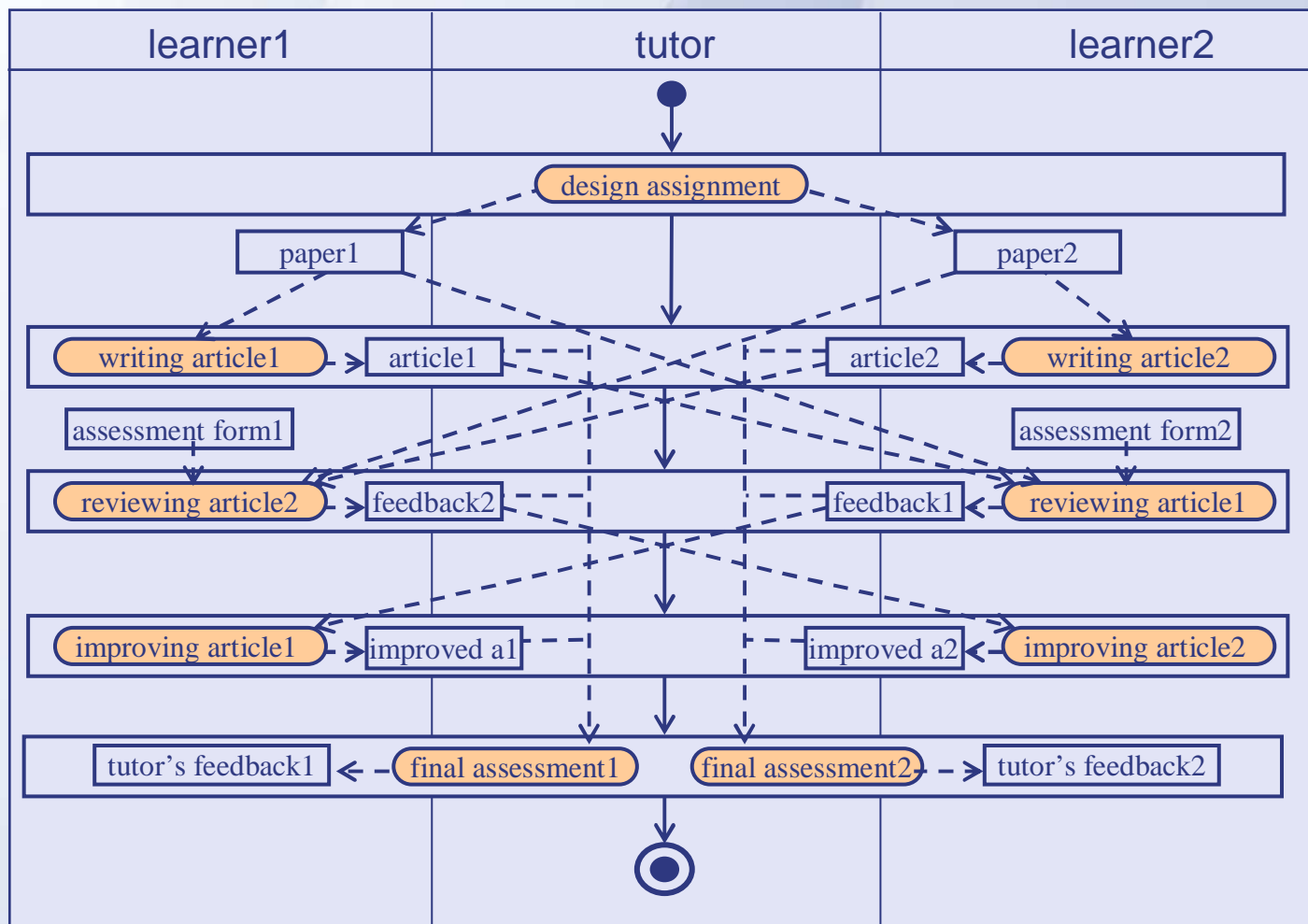
A Standard-based and Service-oriented Approach to Support Assessment Process



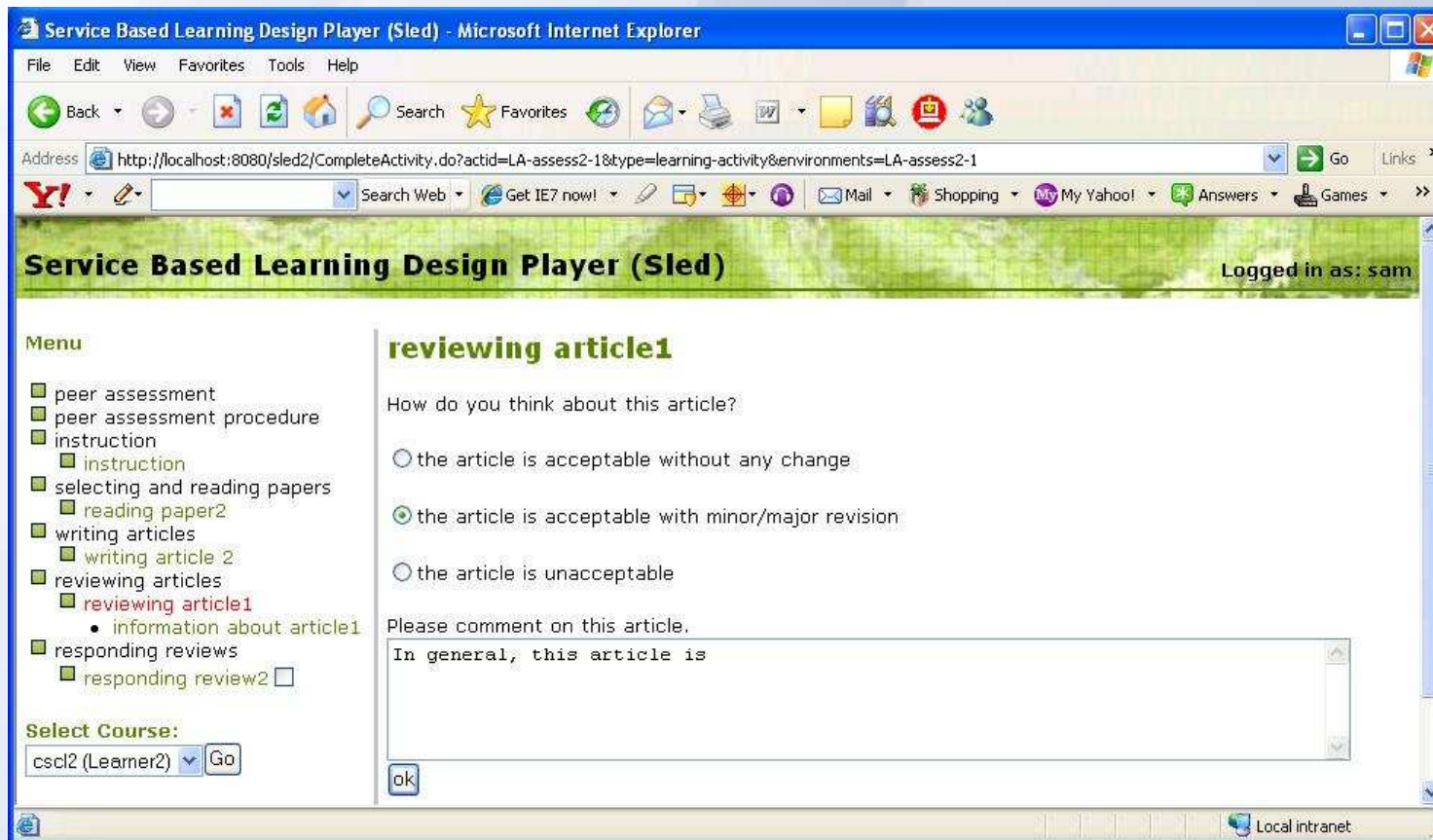
A Standard-based and Service-oriented Approach to Support Assessment Process



A Standard-based and Service-oriented Approach to Support Assessment Process



A Standard-based and Service-oriented Approach to Support Assessment Process



Assessment Process Specification

Problem:

It is too difficult for practitioners to specify an assessment process model by using IMS LD, IMS QTI, and assessment-specific services.

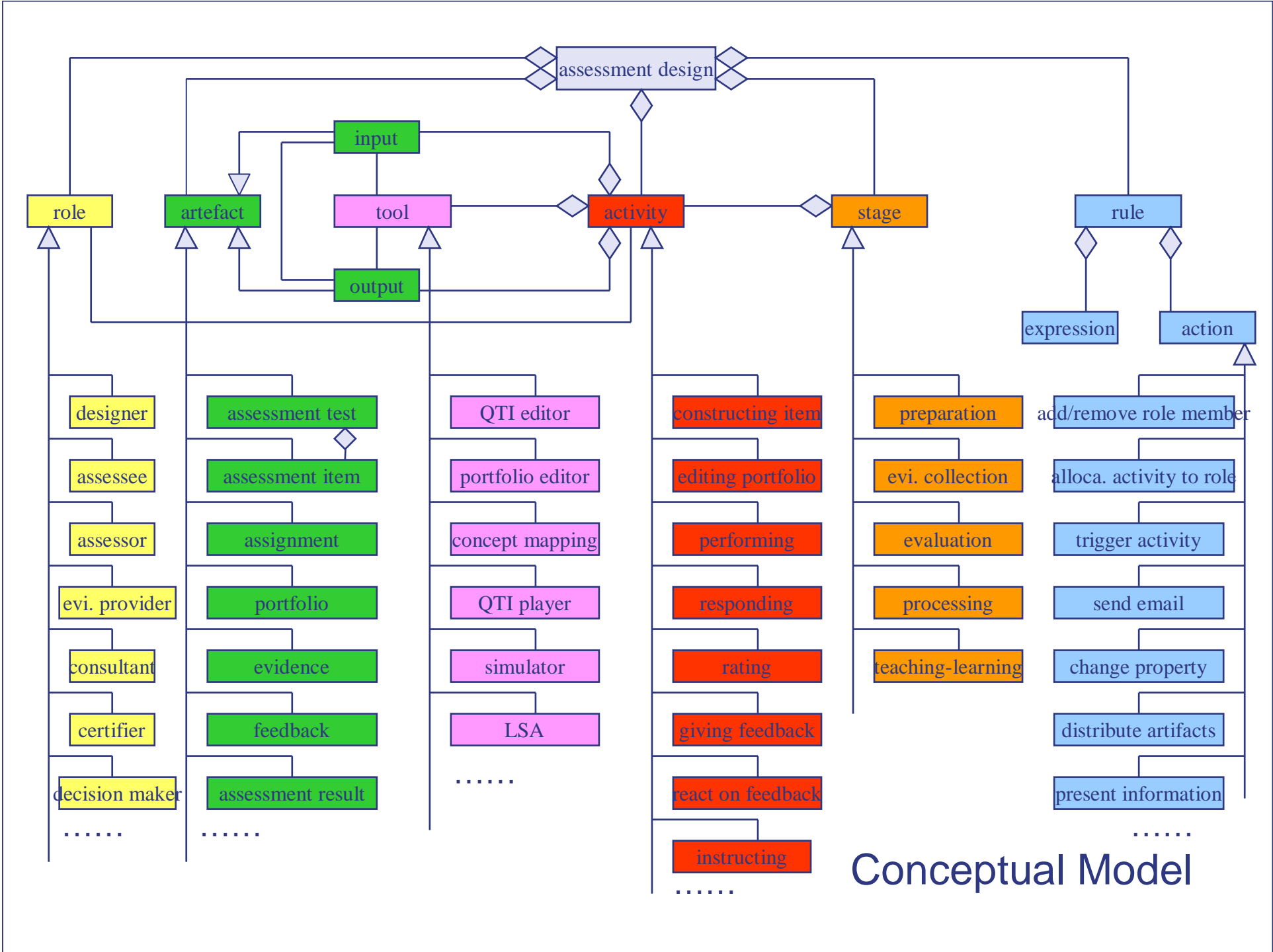
Solution:

Developing an additional layer, *assessment process specification* (APS) used to describe assessment processes in an interoperable and abstract way. By using APS, every assessment practice can be represented in a design description (an abstract assessment plan), which captures underlying design ideas and principles. Thus, practitioners can share and exchange their assessment process models (assessment designs).

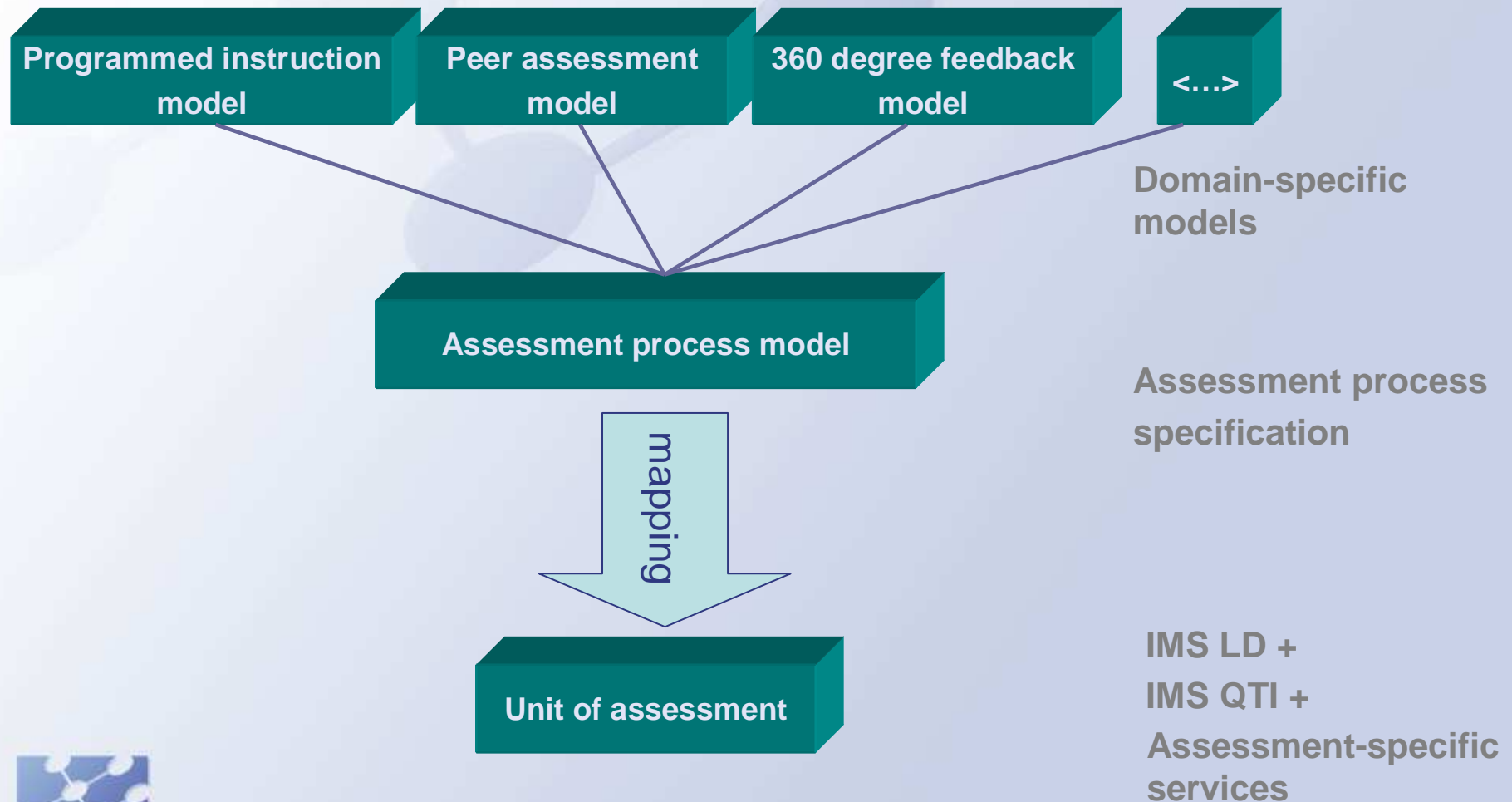


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Assessment Process Specification



Assessment Process Modeling Tool

Aims:

- Enabling skilled users to define their own assessment process models by providing basic modeling facilities
- Enabling practitioners to understand, reuse, and customize pre-defined assessment process models by providing design guidance
- Transforming assessment process models into executable models represented in IMS LD + IMS QTI + assessment-specific services

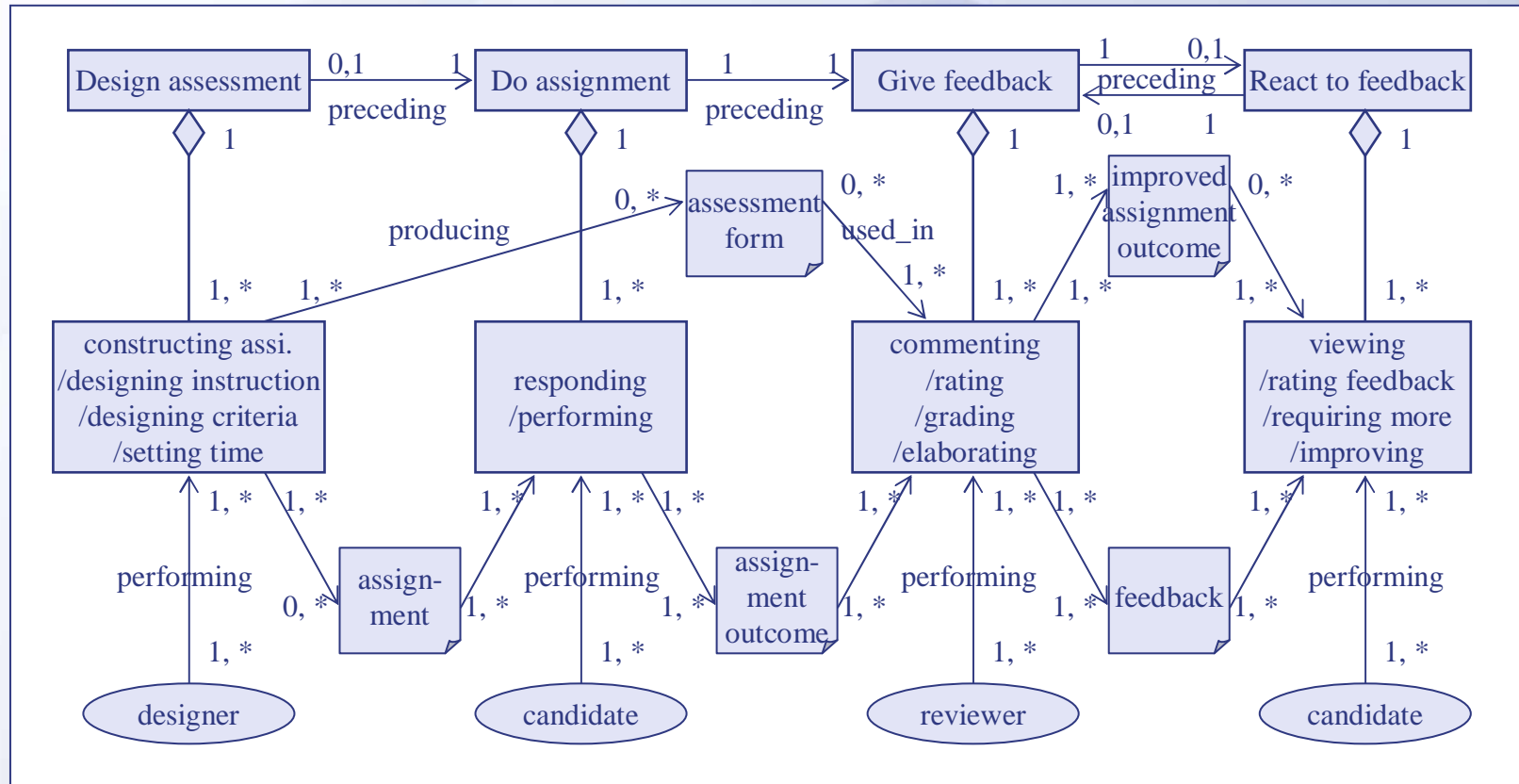
The tool is still in design and will be implemented in the next year. The design and use of the tool will be explained by using a mock-up of the UI



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Assessment Process Modeling Tool



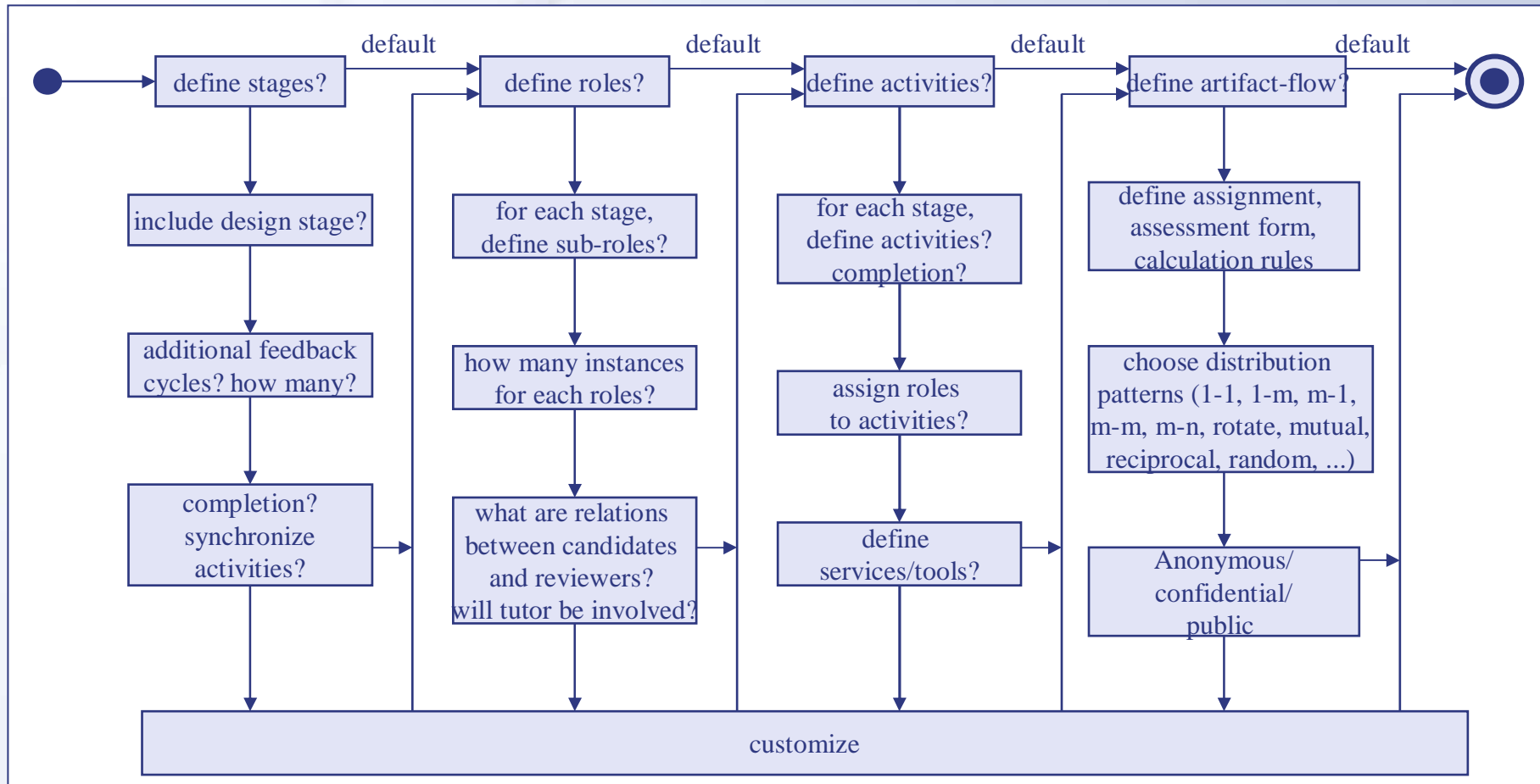
- Four kinds of stages in a peer assessment process
- In each stage, people with a certain role perform activities
- In each activity, there may be input and output artefacts



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Assessment Process Modeling Tool



- Guide to make design decisions by showing guidance and consequence
- Make design decisions by selecting default or pre-defined options
- Customize a process model (for skilled users)



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Peer assessment

File Edit View Tool Template Help



Here shows the guidance to make design decisions

user's decisions

role artifact service

stage lane

Specify role structure,
artifacts, and services

Show and edit peer assessment model

State bar

Peer assessment

File Edit View Tool Template Help



How many stages in the peer assessment process?

role artifact service stage lane

Default (three stages)
With design assessment stage
With additional feedback stage
More complicated setting

Please make a decision

Peer assessment

File Edit View Tool Template Help



How many roles will be involved?

Default (two persons)
With the involvement of tutor
More complicated setting

role	artifact	service	stage	lane					
			design assessment		do assignment		give feedback	react to feedback	give feedback 2

Five stages have been defined

Peer assessment

File Edit View Tool Template Help



Would you like to define role structure?

role	artifact	service	stage	lane
R designer			design assessment	do assignment
R tutor				give feedback
R candidate				react to feedback
R learner1				give feedback 2
R learner2				
R reviewer				
R learner1				
R learner2				
R tutor				

Default role setting and with the involvement of a tutor

Peer assessment

File Edit View Tool Template Help



Would you like to define a typical activity for each stage?

Default setting

More complicated setting

role	artifact	service	stage	lane	
<input type="checkbox"/> R designer			design assessment	do assignment	give feedback
<input type="checkbox"/> R tutor					react to feedback
<input type="checkbox"/> R candidate					give feedback 2
<input type="checkbox"/> R learner1					
<input type="checkbox"/> R learner2					
<input type="checkbox"/> R reviewer					
<input type="checkbox"/> R learner1					
<input type="checkbox"/> R learner2					
<input type="checkbox"/> R tutor					

Please make a decision

Peer assessment

File Edit View Tool Template Help



Would you like to define a typical activity for each stage?

role	artifact	service	stage	lane
			design assessment	
R	designer			
R	tutor			
R	candidate			
R	learner1			
R	learner2			
R	reviewer			
R	learner1			
R	learner2			
R	tutor			
			do assignment	
				learner1
				learner 2
			give feedback	
				learner1
				learner 2
			react to feedback	
				learner1
				learner 2
			give feedback 2	
				learner1
				learner 2

Nine activities are defined and roles are assigned

Peer assessment

File Edit View Tool Template Help



Which stages will the tutor be involved?

Give feedback 1
Give feedback 2
More complicated setting

role	artifact	service	stage	lane
R	designer		design assessment	
R	tutor		design assessment	
R	candidate			
R	learner1		do assignment	
R	learner2		do assignment	
R	reviewer			
R	learner1		give feedback	
R	learner2		give feedback	
R	tutor		give feedback	

Please make a decision

Peer assessment

File Edit View Tool Template Help



Which stages will the tutor be involved?

role	artifact	service	stage	lane
R designer			design assessment	
R tutor			design assessment	
R candidate				
R learner1			do assignment	learner1
R learner2			do assignment	learner2
R reviewer				
R learner1				
R learner2				
R tutor			give feedback 2	tutor

The tutor is assigned to work in the stage of "give feedback 2"

Peer assessment

File Edit View Tool Template Help



Would you like to create artifacts ?

Default setting
More complicated setting

role	artifact	service	stage	lane
<input type="checkbox"/> R designer			design assessment	
<input type="checkbox"/> R tutor				
<input type="checkbox"/> R candidate				
<input type="checkbox"/> R learner1				
<input type="checkbox"/> R learner2				
<input type="checkbox"/> R reviewer				
<input type="checkbox"/> R learner1				
<input type="checkbox"/> R learner2				
<input type="checkbox"/> R tutor				

stage	lane
design assessment	do assignment
	give feedback
	react to feedback
	give feedback 2

Please make a decision

Peer assessment

File Edit View Tool Template Help



Would you like to create typical artifacts ?

role	artifact	service	stage	lane			
			design assessment	do assignment	give feedback	react to feedback	give feedback 2
A	assignment1						
A	assignment2						
A	outcome1						
A	outcome2						
A	feedback1.1						
A	feedback1.2						
A	improved outcome1						
A	improved outcome2						
A	feedback2.1						
A	feedback2.2						

artifacts are created

Peer assessment

File Edit View Tool Template Help



Would you like to change the titles of artifacts?

finished

role	artifact	service	stage	lane			
			design assessment	do assignment	give feedback	react to feedback	give feedback 2
A	assignment1						
A	assignment2						
A	outcome1						
A	outcome2						
A	feedback1.1						
A	feedback1.2						
A	improved outcome1						
A	improved outcome2						
A	feedback2.1						
A	feedback2.2						

artifacts are created

Peer assessment

File Edit View Tool Template Help



Would you like to change the titles of artifacts?

finished

role	artifact	service	stage	lane			
			design assessment	do assignment	give feedback	react to feedback	give feedback 2
A	paper1						
A	paper2						
A	article1						
A	article2						
A	feedback1						
A	feedback2						
A	improved article1						
A	improved article2						
A	tutor's feedback1						
A	tutor's feedback2						

The title of an artifact has been changed

Peer assessment

File Edit View Tool Template Help



Would you like to define artifacts?

finished

role	artifact	service	stage	lane			
			design assessment	do assignment	give feedback	react to feedback	give feedback 2
A	paper1						
A	paper2						
A	article1						
A	article2						
A	feedback1						
A	feedback2						
A	improved article1						
A	improved article2						
A	tutor's feedback1						
A	tutor's feedback2						
A	assessment form (QTI item)						

QTI assessment editor

assessment form

Review Form

How do you think about this article?

accept without modification

accept with minor/major modification

reject

Comments:

An artifact has been created

Peer assessment

File Edit View Tool Template Help



Would you like to define artifacts?

finished

role	artifact	service	stage	lane			
			design assessment	do assignment	give feedback	react to feedback	give feedback 2
A	paper1						
A	paper2						
A	article1						
A	article2						
A	feedback1						
A	feedback2						
A	improved article1						
A	improved article2						
A	tutor's feedback1						
A	tutor's feedback2						
A	assessment form						

The table displays a process flow across five stages: 'design assessment', 'do assignment', 'give feedback', 'react to feedback', and 'give feedback 2'. Each stage contains icons for different roles: 'tutor' and 'learner1' (or 'learner 2'). The 'assessment form' artifact is highlighted in orange in the left-hand list.

An artifact has been defined

Peer assessment

File Edit View Tool Template Help



How will the artifacts be distributed?

role	artifact	service	stage	lane	
			design assessment	do assignment	give feedback
A	paper1				
A	paper2				
A	article1				
A	article2				
A	feedback1				
A	feedback2				
A	improved article1				
A	improved article2				
A	tutor's feedback1				
A	tutor's feedback2				
A	assessment form				

Reciprocally
Mutually
Randomly
Default setting

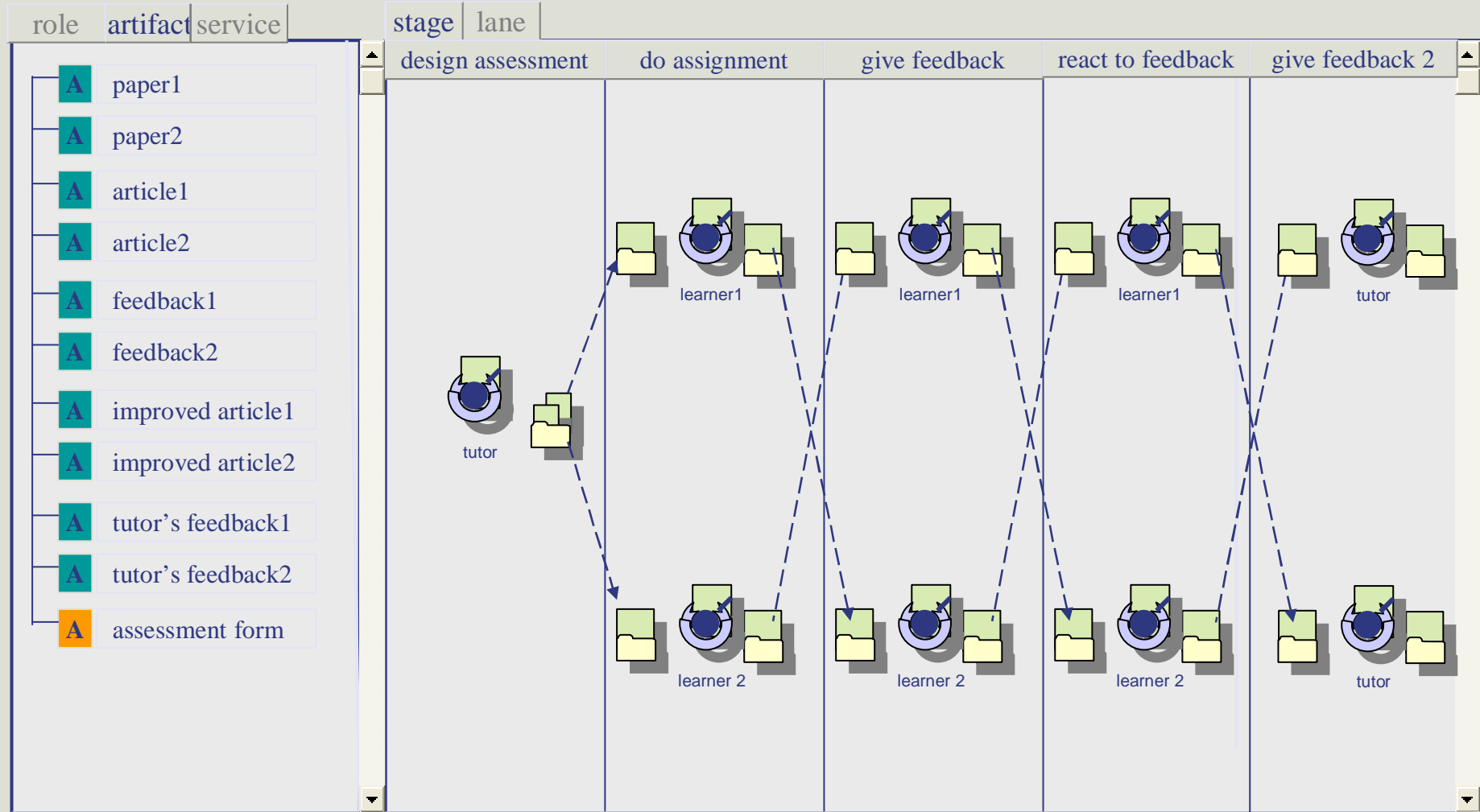
Please make a decision

Peer assessment

File Edit View Tool Template Help



How will the artifacts be distributed?



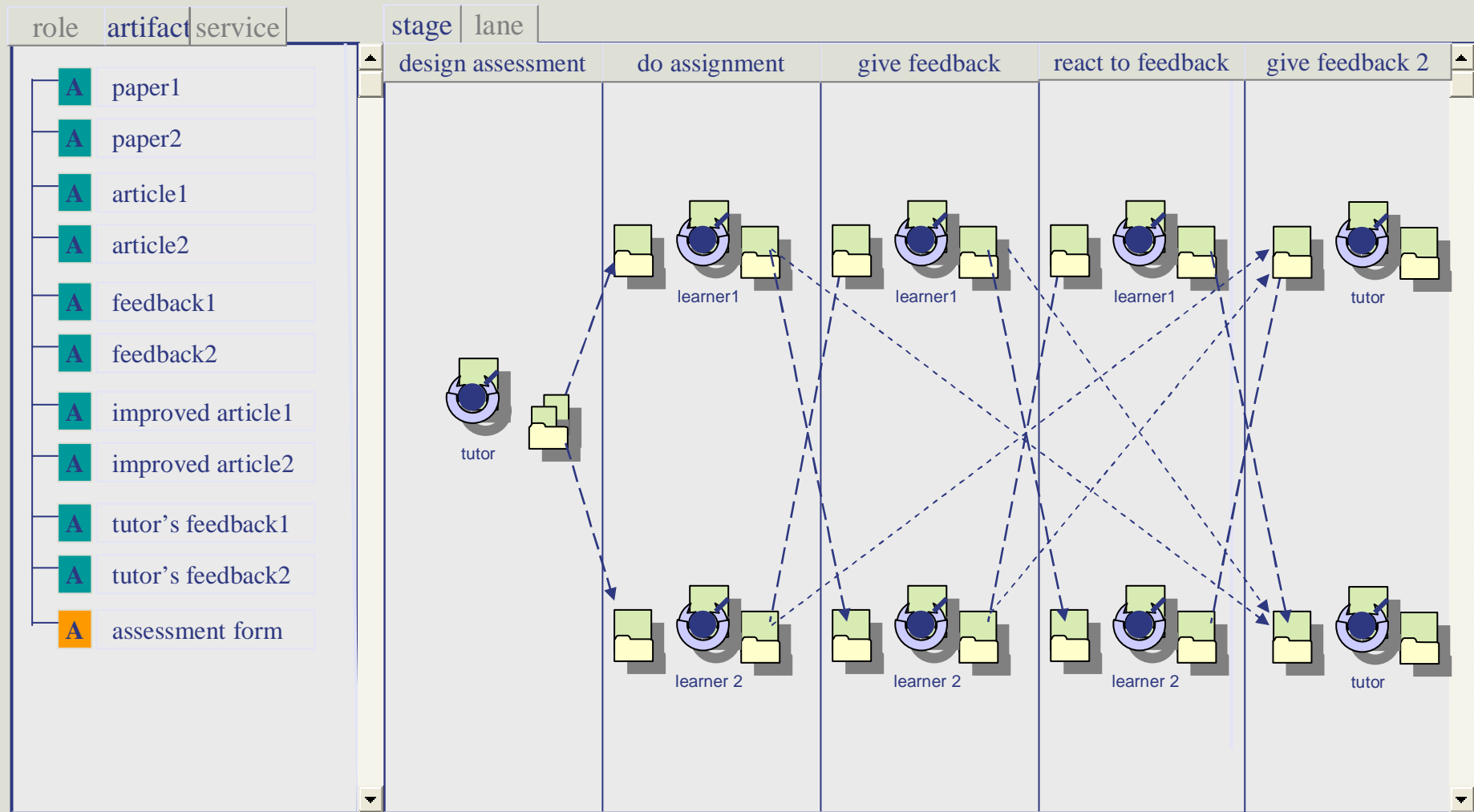
An artifacts flow has been defined

Peer assessment

File Edit View Tool Template Help



How will the artifacts be distributed?



An artifact flow has been defined

Conclusions and Future Work

Conclusions:

- IMS LD, IMS QTI, and assessment-specific services can be used complementarily to support various assessment processes
- A higher level assessment process specification and corresponding supporting tools are expected to enable practitioners to share and exchange assessment process information

Future work:

- Developing the assessment process modeling tool
- **Integrating QTI editor and other assessment services**
- Developing mapping algorithm to transform APS to IMS LD + IMS QTI + assessment-specific services.

Thanks for your attention!

Questions?

Contact information:

- Project website: www.tencompetence.org
- For details of associate partnerships:
<http://www.tencompetence.org/node/16>
- Contact c.kew@bolton.ac.uk for all other enquiries



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