

TENCompetence: Building the European Network for Lifelong Competence Development

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TENCompetence Workshop

Manchester, 11-12 Jan. 2007



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In this keynote

Focus on the ambitions of the TENCompetence project:

- IST/TEL Integrated Project Dec. 2005 – Dec. 2009
- Aim: The development of an open source infrastructure for lifelong competence development
- 13 core partners and a network of associated partners
- 4 major experimental areas:
 1. Digital Cinema
 2. Health Care
 3. UNESCO-IHE Water Management (Nile Region)
 4. Lifelong Learning City (Antwerp)
- Additional pilots from associated partners



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The challenge

Individuals are permanently triggered to further develop their abilities (competences):

- Worldwide competitive economy places new demands on individual workers and organisations: new activities, new technologies, new markets, changing jobs, etc.
- Social and personal triggers to develop new competences related to personal growth, family, leisure time, etc.

Question: How can we support individuals in lifelong competence development, using new technologies?



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Some of the trends in learning

Shift towards

- more integration between living, learning and working
- lifelong learning
- Self-directed learning and self-organisation
- Production of knowledge instead of consumption
- Learning activities instead of learning objects
- Knowledge sharing in communities
- More attention for informal learning
- Assessment of prior learning and competence assessment
- More attention on personal and social factors
- ...



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Three Core Issues

1. How can I get an overview?

- When I have a need to learn something, to solve a problem or to get a degree:

How do I get a quick overview of all the relevant learning resources (persons, files, courses, etc.)?



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Issues

- Stimulating people to make their learning needs explicit and to use certain tools to help the learning
- Stimulate to share resources
- Availability and Accessibility of resources
- Search facilities filtering on learning needs
- Persons as a resource (not only files)
- Multimedia files (not only texts, not only formally published resources, but also user generated content)
- Quality, Language, Metadata...
- ...



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Continued ...

2. What is the most suitable solution?

- When you are provided with large lists of all possible options a new problem comes in:
- How do I know what is the best possible resource for me given my background knowledge, preferences and situational and financial circumstances?
- => there is a need for support!



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Issues

- How do we provide sufficient and affordable support?
Limited amount of expert time available.
- Automation: collaborative filtering, peer support, ...
- Assessment of preferences, prior knowledge, personal situation
- What algorithms provide the 'best' advice?
- Protection of personal data
- ...



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Continued ...

3. How do I know that I am able to perform a certain task, to meet some job requirements or to cope with a situation?

- Learning from many formal and informal resources leaves us with the problem that it is hard to provide some **evidence** for the different competences I have:
 - when applying for a new job
 - when you are confronted with a new challenge
(next week TENC winterschool: do you risk to go off a slope on skies?)
 - to assess whether I am suitable for a job
 - etc.



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Issues

- Assessment of informally acquired knowledge, skills, experience,... (APL)
- Availability of valid competence profiles that describe and organise the personal abilities in a uniform way
- Ownership of the data (ePortfolios)
- Matching of competences on job profiles
- ...



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To summarize the core issues

1. How do I get an overview of the learning resources connected to my learning goals?
2. How do I know which learning resources are the most appropriate for me?
3. How do I know that I am able to perform a certain task, solve a problem or cope with a challenge in advance?



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The solution we are developing...

**Personal
Competence
Manager**



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Personal

- **NOT** personal in the sense of 'alone, individual'
- **Owned** by a person (compare: Personal Computer), not by an organisation (company, school, university, etc.) to manage your personal competences during lifetime in many different institutions and informal learning events.
- Can be used **in conjunction** with organisational systems (eg the LMS of a university, HRM system of a company, knowledge management systems).
- The PCM can be downloaded and used by anyone to develop their competences. When used they can share and connect to all others using the TENCompetence infrastructure



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Competence Development

- The concept of competence can bridge the world of education, training, knowledge management, human resource management & informal learning
- Many definitions and approaches ... (and different from 'competency')
- Definition of 'competence' and 'competence development' in the project (next slides...)



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Definition of Competence

- **Competences** are bound to the different living, learning and working environments a person comes across during lifetime ('ecological niches').

We see a *competence* as the **estimated ability** of an actor to deal with some classes of **critical events, problems or tasks** that can occur in a certain situation/ecological niche

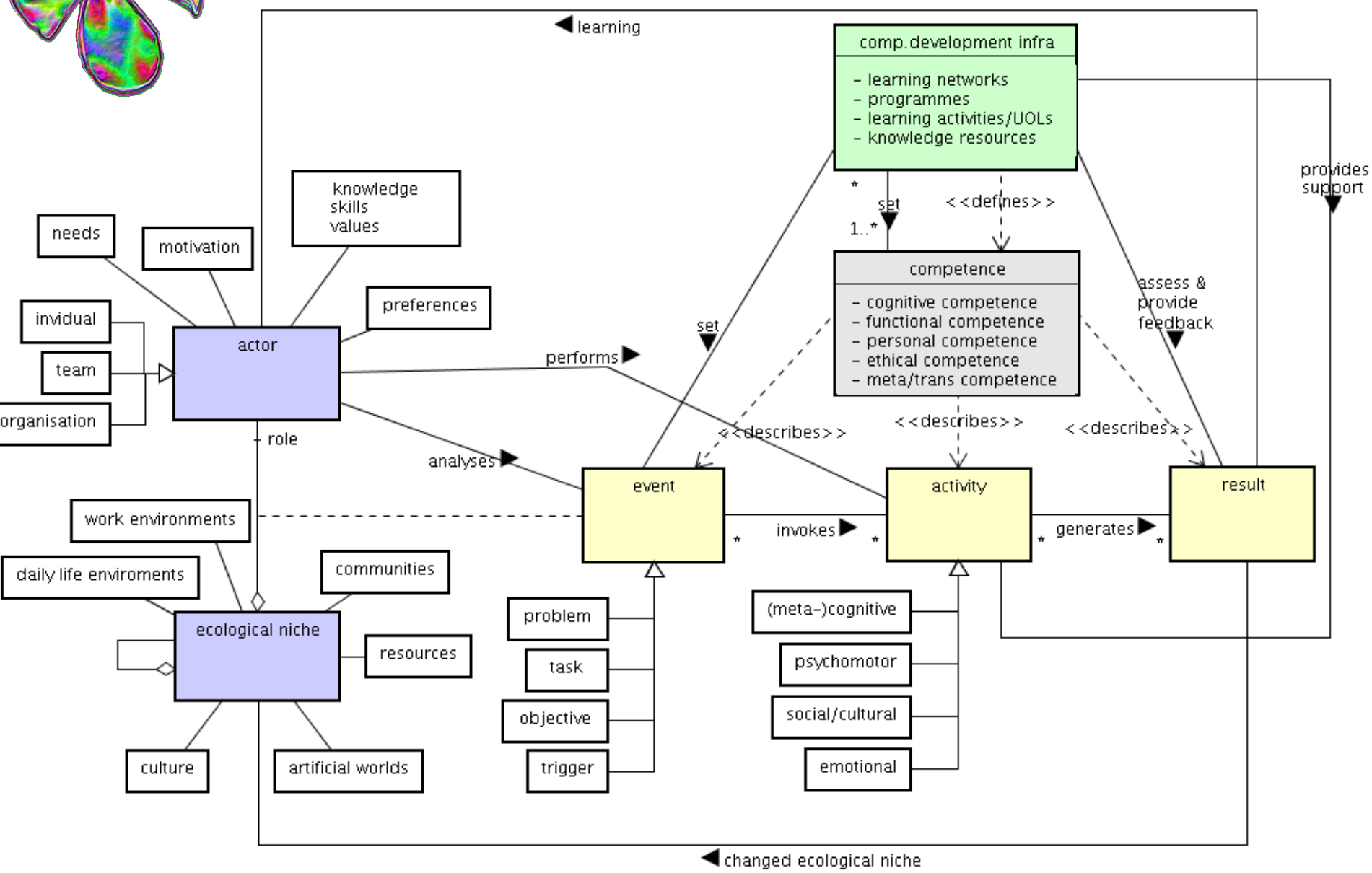
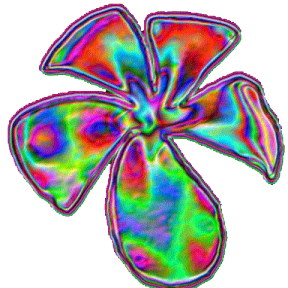
This estimation can be based on:

- self assessment
- informal assessments by others
- formal assessments by others



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Essential aspects of the definition

- Competences are *estimated abilities* of an actor, they are not observable
- Competences are *abstractions* of effective and efficient actions that describe <situation - events – actions – results>
- A competence has a *predictive value* only for comparable situations with similar types of events
- The abstraction process to create competence descriptions is similar to any *modelling process*:
 - same details can be abstracted differently
 - same competences can be grouped and named differently
- Situations, events and results criteria change, so do the competence descriptions



Personal Competence Manager

- Use it to support the development of your competences by managing personal action plans
- The personal action plans can use learning facilities from multiple sources: informal and formal learning activities, courses, study programmes, workshops, meetings, communities, working groups, ...
- Persons can share the action plans and underlying resources with others
- It integrates various systems for knowledge management, learning design, learner support, assessment, ...



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What it supports...

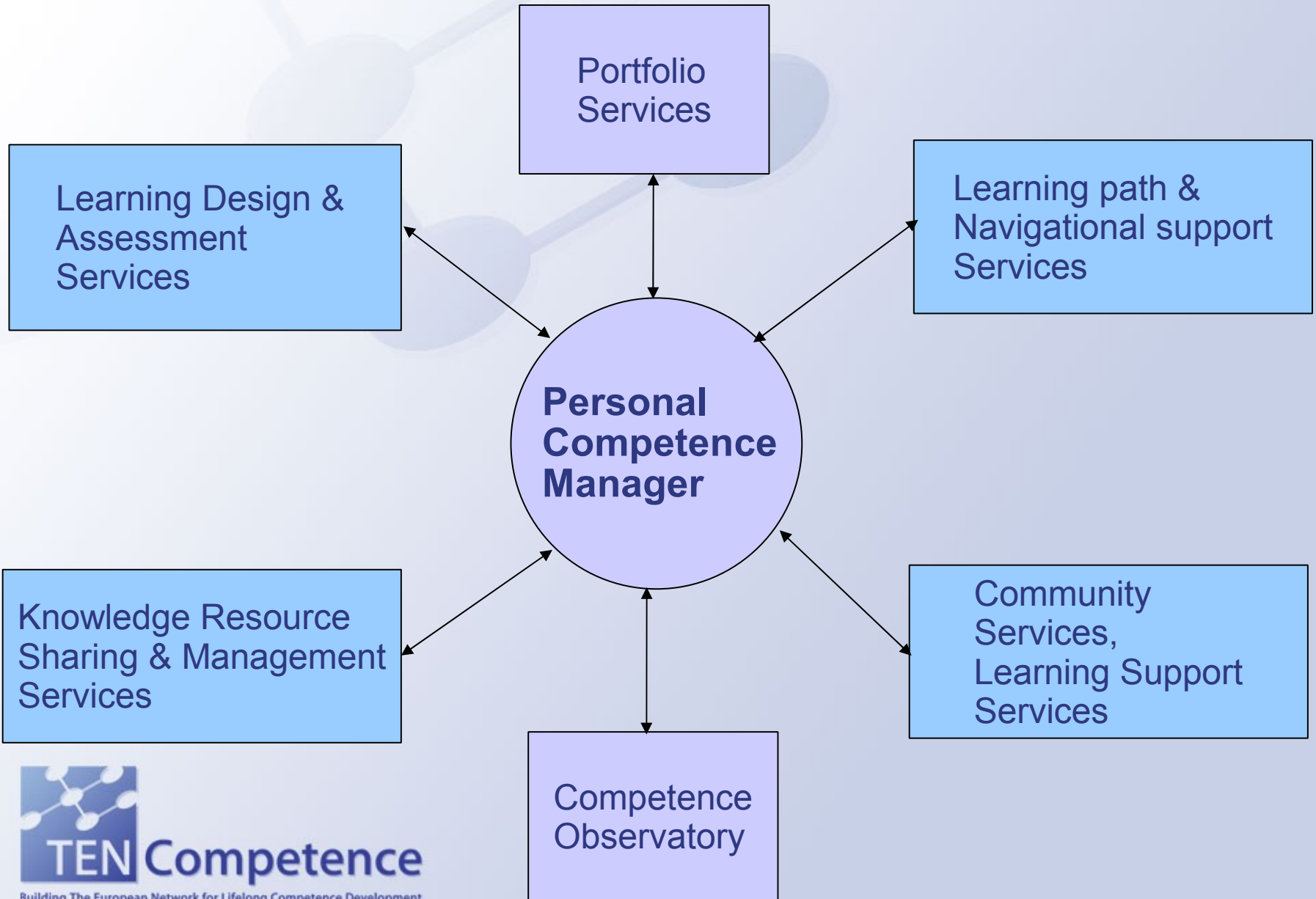
- You can create, share, select and manage various **competence profiles** to support the formulation of your learning goals
- You can **assess your personal competences**, compare it with others and reflect on it
- You can create, share, select and manage **personal action plans** to attain the learning goals
- You can create, share and select learning activities, courses, study programmes, learning services and knowledge resources in your action plan
- You can ask for **advice** in any situation (from peers, agents, etc.)



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High level overview of connected services



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Where are we in this agenda?

- Different parties developed a series of **grounding models, standards and tools** (knowledge sharing, learning design, social interaction, navigation, assessment).
- Identified some major **Use Cases**
- Developed an **Integrated Domain Model** of the Infrastructure that has to serve some critical Use Cases.
- Created some very **initial prototypes** to explore parts of the technology and are currently developing the first version of the personal competence manager



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First version

- Core Use Cases
- Domain Model (base for the data model in the system)
- Demonstration User Interface (in construction)



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Core Use Cases

1. Want to keep up-to-date in current job (or function)
2. Want to improve a specific competence
3. Want to study for a new job (or function)

Supporting Use Cases

- Want to explore the learning resources, courses, people, etc. in a new field
- Want to assess my competences for a certain job/function
- Want to reflect on my competences



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- Playing Pop Songs on the G
 - Basic Guitar Skills
 - Basic Chords
 - Chord schemas for blues & pc

Plan for Basic Guitar Skills

[Mark competence as attained](#)

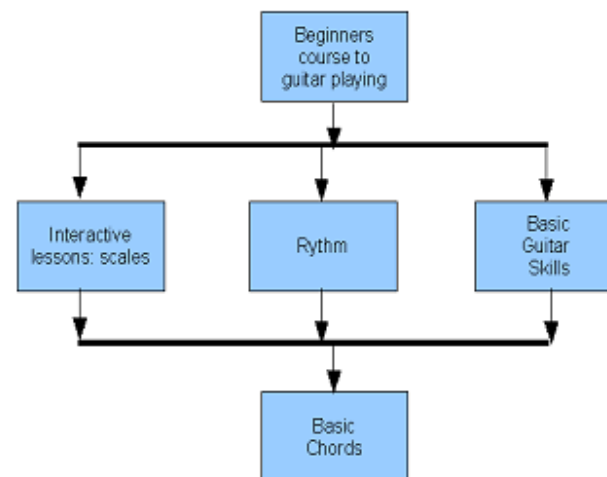
Description

I have used these actions to learn basic guitar skills. I started with the interactive lessons. Maybe you can also start with the small self test I have made in basic guitar skills to see where you are.

Options

- [Create new plan](#)
- [Select plan](#)
- [Edit description](#)
- [Break synchronization](#)
- [View rights](#)

Route

[Show plan](#)
[Show me what to do next](#)


continue when minimal 1 is completed

Synchronised Plan (Bas may change)

Agent



What to do now?

[Create an action](#)

New competence "basic ..." added

[User "Colin" requests access to "Guitars" community](#)

Rating Support General forum

Community


[Add your own comment](#)

Rating	Name	Comment
☆☆☆☆☆	Scott	I don't think this action plan was very u...
★★★☆☆	Phil	I don't agree with Scott. Although prob...
★★★★★	Gizmo	For me it was very usefull. I am new an...
☆☆☆☆☆	Ruud	I do not like to play the guitar anymore ...

People

Friends

Name	Available
Peter	<input type="radio"/>
Alex	<input checked="" type="radio"/>
Condol...	<input type="radio"/>
Ayman	<input checked="" type="radio"/>

Planning

- In the second year of the process....
- When you are interested to **participate** in development or in pilots, please contact any of the partners
- The **first release** is planned before summer this year (Meeting in Barcelona, June 2006)
- The **final release** is planned for December 2009, also the experiments and pilots in the other sectors will be finalized by then.

Next event: Winterschool January 2006; Innsbruck (in two weeks).



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Thanks!

References:

www.tencompetence.org



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