



Competence maintenance, education and training

IGD-TP Exchange Forum

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Boundary conditions

- IGD-TP vision: “by 2025, the first geological disposal facilities for spent fuel, high-level waste, and other long-lived radioactive waste will be operating safely in Europe”
- “driven by 11 waste management organisations” (WMOs)

- WMOs ...
 - have to develop and run a geologic disposal programme spanning over decades
(2025 being by no means the endpoint, not even for the front-runners)
 - have to deal “with a future skills shortage owing to an aging workforce” and a community being “fairly small” (SRA doc)

Boundary conditions (2)

- Knowledge, skills and competences in many cases based on ...
 - “solid basic education in one of the related technical or natural science disciplines”
 - “geological disposal specifics ... generally learned on-the-job”

(SRA doc)

- This is often true, but note that there are approaches aiming for directly integrating disposal-related skills into academic education, e.g. by ...
 - Specialised courses as part of academic education
 - Dedicated work topics for MSc theses
 - Dedicated MSc courses (e.g. TUC’s “Radioactive and Hazardous Waste Management” or PETRUS II European Master, cf. presentation by F.J. Elorza)

- **More importantly: Note that learning on the job requires an established framework which is presently missing → next slide**

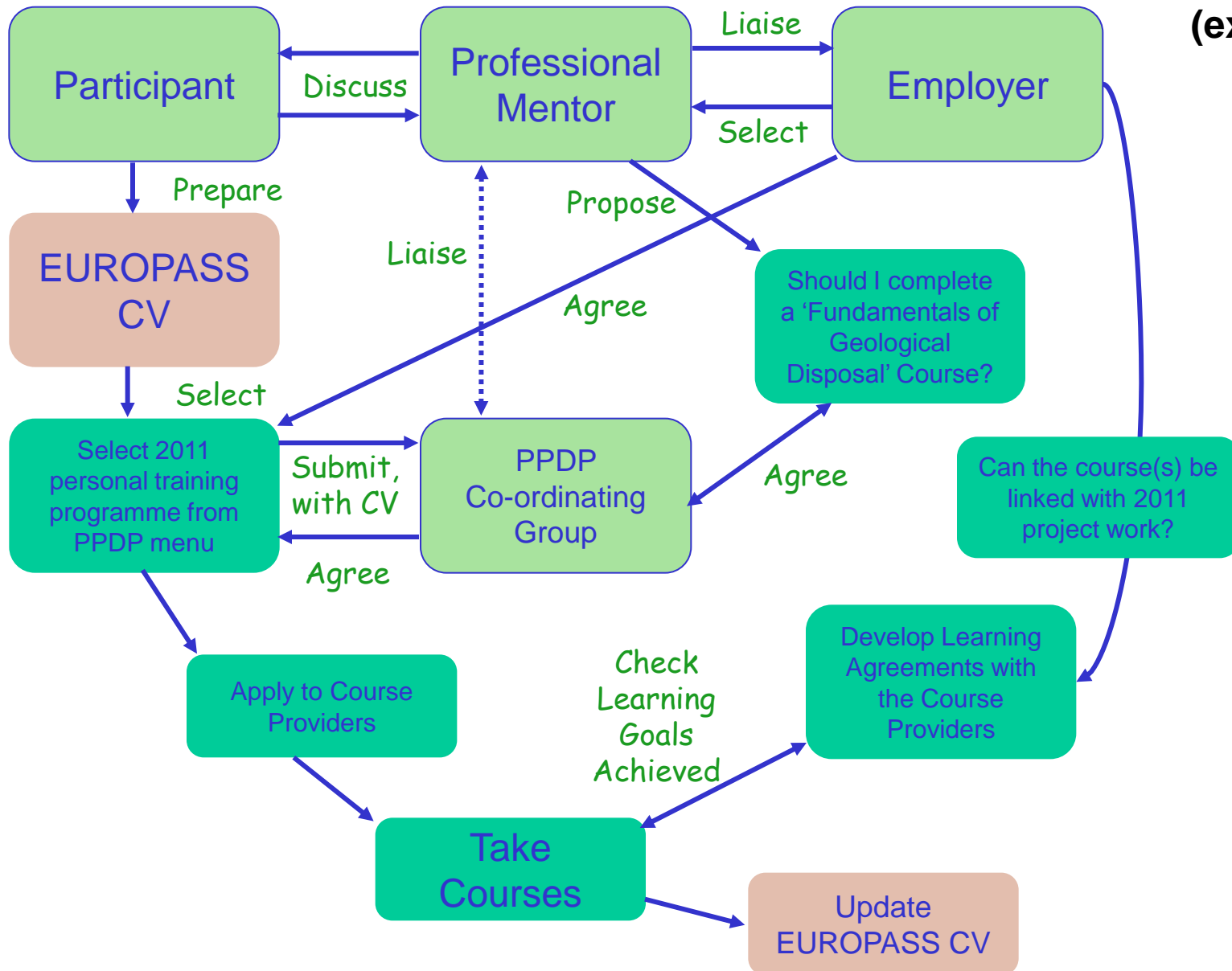
Observations of the SRA document

- “lack of mechanisms“
- “lack of formalization and mutual recognition ... training courses and other competence development activities”
- “few formalised strategies for transmitting knowledge and insights from senior workers to those with less experienced and knowledge in geological disposal”
- “IGD-TP can here play a supporting role”

Ongoing activities (examples)

- Training organised by individual WMOs (e.g. ANDRA, NDA)
- ITC course framework
- ENSTTI courses (TSO-related)
- IAEA courses
 - Audience partially overlapping with staff from WMOs represented in IGD-TP
 - Ongoing courses and curriculum development (co-operation with TUC)
- PETRUS II:
 - FP 7 project dealing with identifying needs and resources, developing education and training (cf. presentation by F.J. Elorza)
 - In particular aiming at formalisation and mutual recognition (cf. next slide)

PETRUS II: towards more formalisation and mutual recognition of professional development (example)



However ...

- EU FP projects have limited duration
- PETRUS II does not cover all important ongoing activities (cf. slide 5)
- PETRUS II does not involve all important providers (cf. slide 5)
- There is a need for mechanisms which are durable and sustainable beyond PETRUS II

IGD-TP potential (from SRA doc)

- “Cooperating in assuring development of the up-to-date and sustainable education and training programs in Europe through mutual recognition and accreditation of programs, which meet the quality level required by the IGD-TP;
- Defining the requirements related to the development of a framework for the mutual recognition and accreditation of the training programs;
- Further contributing to the identification of needs, the inventory of available resources including research infrastructures and the conception of the training programs by taking into account both training providers and end-users point of view; and
- Supporting existing and future European Fission Training schemes and other education and training initiatives to development the delivery of courses integrated to these schemes and enhance the participation of their personnel in these schemes”

Therefore:

- As a training provider, TUC ...
 - would be interested in any input from WMOs, regulators and TSOs represented in IGD-TP concerning needs and requirements,
 - would like to make the TP aware of the need for a sustainable and durable framework as well as of the unique potential of IGD-TP (representing major WMOs) to support the development of such a framework, and
 - would like to encourage IGD-TP to prepare itself for taking responsibilities in this area (going beyond a just “supporting role”)