



Professional training and apprenticeship

Conveners:

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T5.1 Professional training and apprenticeship

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Training and apprenticeships in TIs, where professional technicians and young engineers from relevant industrial partners would be trained by **hands-on** fabrication, assembly or test of accelerator and magnet equipment and by exercising key techniques. **CEA, DESY**

- **Training and apprenticeships in industry** through secondment of researchers and technical personnel within the companies themselves. Obtaining a more direct and a deeper understanding of the problem being worked, including initially overlooked requirements, constraints and potentialities and conversely may acquire knowledge and be trained employing new techniques, equipment and methodologies. **INFN**

What it is expected (final deliverable): Reports on required conditions for apprenticeship programs in both TL and industry (Proposing a model)

Working areas: Studies of existing cases, Use of EU opportunities, Understand the interest of the industry (relation with WP1) , Intellectual properties (WP4),



Presentation of the two points of view

- **Industry perspective:**

Work in collaboration leads to new know-how and thus new business

Training and apprenticeship in Tis allows to maintain access to high level qualifications whatever the business fluctuations

- **Institute perspective:**

Design products which can be realistically produced by industry



Past experiences

- **Alsyom**

- Assembly of the XFEL cryomodules in CEA (contract)
- Design and manufacturing of the ELI-NP Gamma Beam Source Recirculator (with CNRS)
- SOL-GEL Optical coating (with CEA)

- INFN or CNRS giving some professional training

Let share your experiences



Keep in mind

- How to deal with Intellectual Property
- Call for tender unfair competition



How Europ can support the development of professional training

- Erasmus : not in our scope
- Marie Curie : of course
- New framework ?



Innovation & entrepreneurship

- **European Institute of Innovation and Technology (EIT)**

The [EIT's](#) remit is to enable Europe's top higher education institutions, research centres and businesses to cooperate on major social challenges.

- **Research – Marie Skłodowska-Curie programme**

The [Marie Skłodowska-Curie](#) scheme supports career development and training for **researchers** in all scientific disciplines, especially by helping them study and work in different countries and sectors.



EIT Community at a glance

Data: September 2016

800+
leading partners

213
innovative
start-ups

212
NEW
products
& services

1217
business
IDEAS

723
knowledge
transfers
& adoptions

776
graduates
for the first time
completing EIT
degree programmes

EIT Climate-KIC

EIT Digital

EIT Health

EIT Food

EIT Raw Materials

EIT InnoEnergy

- Why not : “EIT Accelerators and Magnet” as a **Knowledge and Innovation Community (KIC)**

The EIT does not address education, research and innovation independently but instead simultaneously, as constitutive elements of a single innovation chain, to deliver incremental and disruptive innovation.



Marie Skłodowska-Curie actions

There are four main types of MSCA:

- [Research networks \(ITN\)](#) : support for Innovative Training Networks that develop new researchers
- [Individual fellowships \(IF\)](#) : support for experienced researchers undertaking mobility between countries, with the option to work outside academia
- [Research and Innovation Staff Exchanges \(RISE\)](#) for international and inter-sectoral cooperation
- [Co-funding](#) of regional, national and international programmes that finance research training or fellowships involving mobility to or from another country



Analysing policy

RELATED PROJECTS:

Financing training
Mobility Scoreboard
Reporting on European training policy
The changing nature and role of VET in Europe
VET in Europe

RELATED NETWORKS:

ReferNet



Developing lifelong learning

RELATED PROJECTS:

Adult learning
Apprenticeships in work-based learning
Early leaving from education and training
Learning cultures in organisations
Lifelong Guidance
Opinion survey on vocational education and training in Europe
Teachers and trainers' professional development
Validation of non-formal and informal learning



Identifying skills needs

RELATED PROJECTS:

Assisting EU countries in skills matching
European Company Survey
European skills and jobs (ESJ) survey
Forecasting skill demand and supply
Skills Panorama

RELATED NETWORKS:

Skillsnet



Understanding qualifications

RELATED PROJECTS:

Europass
European credit system for vocational education and training (ECVET)
European qualifications framework (EQF)
Learning outcomes
National qualifications framework (NQF)
Quality assurance



The European Credit system for Vocational Education and Training (ECVET)

- http://ec.europa.eu/education/policy/vocational-policy/ecvet_en
- make it easier for people to get validation and recognition of work-related skills and knowledge acquired in different systems and countries – so that they can count towards vocational qualifications
- make it more attractive to move between different countries and learning environments
- increase the compatibility between the different vocational education and training (VET) systems in place across Europe, and the qualifications they offer
- increase the employability of VET graduates and the confidence of employers that each VET qualification requires specific skills and knowledge.

Necessary conditions:

<http://www.cedefop.europa.eu/EN/publications/19848.aspx>