



# ARDENT

February 2012 – January 2016



Advanced Radiation Dosimetry European Network Training initiative

Marie Curie Initial Training Network under EU FP7 – 4 M€  
7 Full Partners and 5 Associate Partners

Coordinator: CERN, Scientist-in-Charge: Dr. M. Silari

CERN (coordinator), Switzerland  
AIT Vienna, Austria  
CTU- IAEA Prague, Czech Republic  
IBA Dosimetry, Schwarzenbruck, Germany  
Jablotron, Prague, Czech Republic  
MI.AM, Milano, Italy  
Politecnico, of Milano, Italy

ST Microelectronics, Italy  
University of Erlangen, Germany  
University of Houston, USA  
University of Ontario, Canada  
University of Wollongong, Australia



## Three main technologies

- gas detectors [e.g., gas electron multipliers (GEM), tissue equivalent proportional counters (TEPC)]
- solid state detectors [e.g., Medipix, silicon micro-dosimeters]
- track detector techniques [e.g., CR-39, nano-dosimeters]

- **Main objectives**

- Radiation dosimetry
- Micro- and nano-dosimetry
- Photon and neutron spectrometry

- **Applications**

- Characterization of radiation fields at particle accelerators (research, industry, medical)
- Characterization of radiation fields on-board aircrafts and in space
- Assessment of secondary dose to RT patient
- Measurement of properties of clinical hadron beams



# Researcher Recruitment

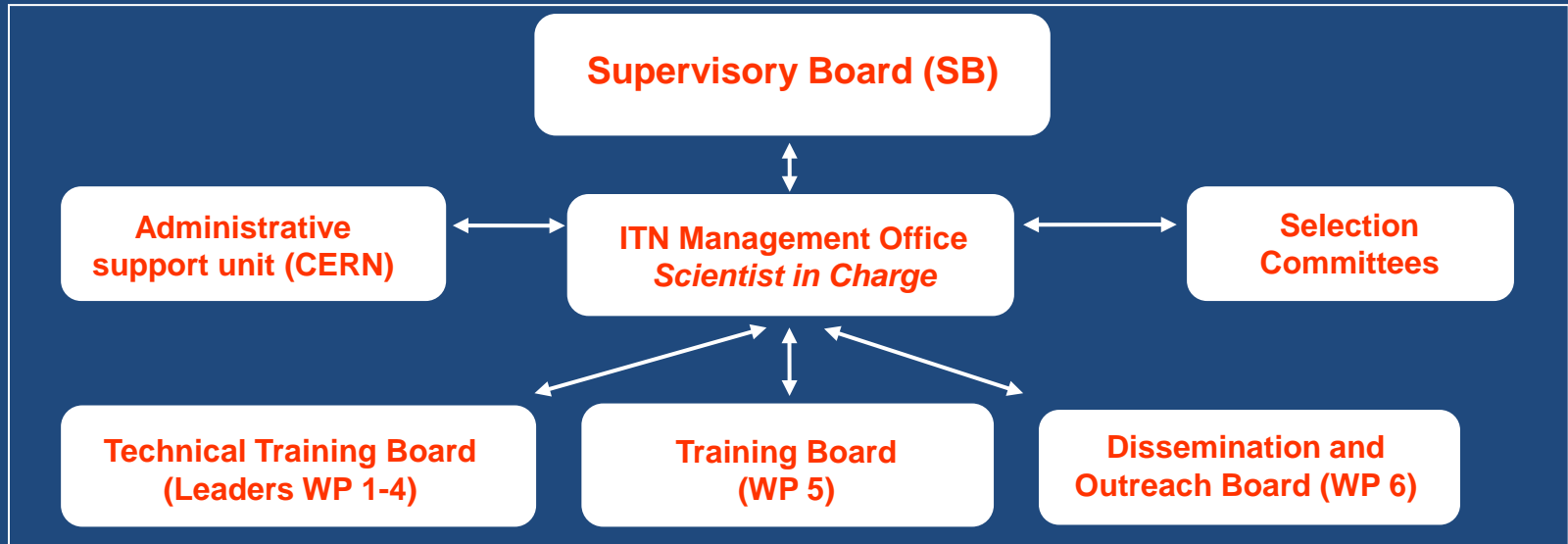
- **15 Early Stage Researchers (ESR) to be recruited**
  - 4 at CERN, Geneva
  - 2 at AIT, Vienna
  - 3 at CTU, Prague
  - 2 at IBA Dosimetry, Schwarzenbruck
  - 1 at Jablotron, Prague
  - 1 at MI.AM, Milano
  - 2 at the Politecnico, Milano
- Up to 1/3 of time can be spent on secondments
- Work performed within the project to be used for PhD
- Generous training allowance for researchers



- **Seven Work Packages**
  - WP1: gas detectors
  - WP2: solid state detectors
  - WP3: track detectors
  - WP4: instrument inter-comparison
  - WP5: training
    - ❖ Individual training programs
    - ❖ Network-wide training
  - WP6: dissemination and outreach
  - WP7: ITN management



# ARDENT Structure



<http://cern.ch/ardent>

# Advertisement of Positions

- All ESR positions are advertised and applications are handled via the CERN ERT tool:  
[https://ert.cern.ch/browse\\_www/wd\\_portal.list?p\\_web\\_site\\_id=1&p\\_class\\_type=Programme&p\\_class\\_value=Fellowships&p\\_title=Fellowships](https://ert.cern.ch/browse_www/wd_portal.list?p_web_site_id=1&p_class_type=Programme&p_class_value=Fellowships&p_title=Fellowships)
- The positions are advertised network-wide
- Applications are not limited to the EU countries – mobility criteria apply!
- Selection of candidates will be done by the respective institutes
  - Researchers must be recruited under employment contract

