



CERN

European Organization for Nuclear Research

Organisation Européenne pour la Recherche Nucléaire

Opportunities for the IT Department under the FP7 2011 Work Programmes

- **e-Infrastructure programme** (draft RI WP 2011*)
- **ICT programme** (ICT WP 2011-2012 Orientations)
- **Marie Curie programme** (draft People WP 2011)

** Info day organised by DG INFSO on 11 June*

INFRA-2011-1.2.1: e-Science environments (27 M€, CSA-CP)

- **Integrated service provision** through unified access to and seamless integration of the underlying networking, computing and data infrastructures and services. **Cloud or grid (or hybrid cloud-grid)** implementations are encouraged where appropriate.
- Design, development and deployment of **user-friendly interfaces which abstract service provision** (e.g. user-centred interaction design and advanced software tools and techniques including advanced Web technologies).
- **Environments for virtual access to (remote) instruments** as well as the user-driven "composition" of virtual facilities and test-beds.
- **Deployment of e-Science support centres and training activities** (from the set-up and operation of e-Science environments to adding new applications and user access)

INFRA-2011-1.2.2: Data infrastructures for e-Science (43 M€, CSA-CP)

- Deployment of **generic services for persistent data storage, access and management** that assure data provenance, authenticity and integrity and respond to the needs of advanced user communities.
- The development of an **open access, participatory infrastructure for scientific information** linking peer-reviewed literature and associated data sets and collections which can be open to non-scientists and to providers of value-added services.
- **Scientific community-driven policy development and service deployment** for data generation, provenance, quality assessment, certification, curation, annotation, navigation and management for promotion of data sharing.
- **Development and deployment of tools and techniques for the provision of advanced data services** notably for data discovery, mining, visualisation and simulation.

INFRA-2011-3.4: Coordination actions, conferences and studies supporting policy development, including international cooperation, for e-Infrastructures (4M€, CSA)

- actions involving teachers and pupils in e-Science through the use of e-Infrastructures in order to attract the young to scientific careers;
- the development of skills and curricula for information and data scientists;
- International cooperation in Research and Education Networking addressing (a) the extension of the European infrastructure to China and (b) the feasibility of direct transatlantic connectivity between Europe and Latin America.

Content of the ICT Work Programme

- Challenge 1 - Pervasive and Trusted Network and Service Infrastructures
- Challenge 2 - Cognitive Systems and Robotics
- Challenge 3 - Alternative Paths to Components and Systems
- Challenge 4 - Technologies for Digital Content and Languages
- Challenge 5 - ICT for Health, Ageing Well, Inclusion and Governance
- Challenge 6 - ICT for a Low-Carbon Economy
- Challenge 7 - ICT for the Enterprise and Manufacturing – Factories of the Future
- Challenge 8 - ICT for learning and access to cultural resources
- FET – Future and Emerging Technologies

Challenge 1 - Pervasive and Trusted Network and Service Infrastructures

- A new **Public-Private Partnership (PPP) on Future Internet** will be introduced in this challenge in WP11-12 (**170 M€**). It will strengthen the support to this field, with a medium term approach (~5 years horizon) and will complement the advanced work on **network, software and security technologies**.
- The longer term perspective of the **Future Internet** is addressed through a set of complementary objectives:
 - objective 1.1 (**160 M€**) - network architectures and mgt, mobile and wireless broadband systems, all-optical networks
 - objective 1.2 (**70 M€**) - software, services and cloud computing technologies
 - objective 1.4 (**80 M€**) - security in networked service and computing environments

Challenge 4 - Technologies for Digital Content and Languages

- Objective 4.3 **Digital Preservation (30M€)** to develop novel concepts, techniques and tools for ensuring the availability and use of digital resources over time.

Challenge 5 - ICT for Health, Ageing Well, Inclusion and Governance

- **Health infostructure for patient empowerment, safety and enhanced research (33 M€)**. The focus will be on the secure retrieval and integration of patient health information regardless of location and diversity of format, terminology, structure, etc.

Challenge 8 - ICT for learning and access to cultural resources

- Objective 8.2 **ICT for access to cultural resources (40 M€)** addresses new forms of content access, seamlessly across formats and languages, as well as use of ICTs to support innovative and sustainable access to Europe's cultural heritage in digital form.

International Cooperation measures

- **Support to Partnership building, notably with Africa (6 M€).**
The plan is to launch a set of research activities and coordination actions addressing at the same time **technology and business model issues**. Specific technological targets could include for instance low-cost technologies, intuitive user interfaces and local content provisioning.

Initial Training Networks (ITN)

Main goal

To train researchers in the first five years of their career by participating in research projects and by providing complementary training in skills such as project management, communication, IPR, etc.

Mutli-site or mono-site networks

Should have a joint research training programme (active collaborations through research projects and common training activities), comprising for example:

- training through research under supervision
- joint training modules (e.g. tutoring, lectures, specialised courses)
- network-wide activities (summer schools, workshops, electronic networking)
- exchange visits and secondments

Industry involvement

Essential for this action. In principle possible at two levels – full and associate partner. Full industry participation is in practice **mandatory** for any high-tech field.

Initial Training Networks (ITN)

Eligible researchers (fellows)

- *Early-stage researchers* (less than 4 years of experience; no Ph.D) may be recruited for periods of 3 to 36 months
- *Experienced researchers* (first post-docs, < 5y experience, including the PhD) may be recruited for periods of 3 to 24 months

EU funding

- All personnel expenses for the recruited researchers (basic salary, mobility allowance, travel allowance) at fixed rates * country coefficients
- Contribution to the organisation of the research & training programme of the participating organisations and for training of the researchers (1,800€ per fellow-month)
- Management activities (up to 10% of the EC contribution)
- Overheads (10% of the direct costs)

Industry Academia Partnerships and Pathways (IAPP)

Main goal

To develop partnerships between non-commercial and commercial organisations active in research (including universities, large and small enterprises, manufacturing industries), based on a common research project and aiming to increase skills and knowledge exchange between the two sectors.

The programme is implemented via secondments (normally two-way) and (optionally) via recruitment of experienced researchers (max. 50% of the total man-months).

Consortium size

Minimum configuration is one academic partner (e.g. CERN) and one industrial partner from different countries (CERN counts as a separate country).

Industry involvement

Mandatory for this action. SME participation is strongly encouraged.

Industry Academia Partnerships and Pathways (IAPP)

Eligible participants

- *Researchers, managerial and technical staff* with various levels of experience may be involved in the secondments (duration 2 months – 2 years, splits possible)
- *Experienced researchers* (> 4y experience or a PhD) may be recruited for periods of 12 to 24 months to contribute to transfer of knowledge and/or training of researchers in the host organisations.

EU funding

- All personnel expenses for the seconded and recruited researchers (basic salary, mobility allowance, travel allowance) at fixed rates * country coefficients
- Contribution to the organisation of the research & transfer of knowledge programme of the participating organisations (1,200€ per person-month)
- Management activities (up to 10% of the EC contribution)
- Overheads (10% of the direct costs)