



PROFESSIONAL SKILLS FOR RESEARCHERS

Bellaterra 2016

ANNEX 1. Professional Skills for Researchers¹

First Stage Researcher (R1)

Necessary competences:

- Carry out research under supervision
- Have the ambition to develop knowledge of research methodologies and discipline
- Have demonstrated a good understanding of a field of study
- Have demonstrated the ability to produce data under supervision
- Be capable of critical analysis, evaluation and synthesis of new and complex ideas
- Be able to explain the outcome of research and value thereof to research colleagues

Desirable competences:

- Develops integrated language, communication and environment skills, especially in an international context.

Recognised Researcher (R2)

Necessary competences:

- All competences of 'First Stage Researcher'
- Has demonstrated a systematic understanding of a field of study and mastery of research associated with that field
- Has demonstrated the ability to conceive, design, implement and adapt a substantial programme of research with integrity
- Has made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, innovation or application. This could merit national or international refereed publication or patent.
- Demonstrates critical analysis, evaluation and synthesis of new and complex ideas
- Can communicate with their peers - be able to explain the outcome of their research and value thereof to the research community
- Takes ownership for and manages own career progression, sets realistic and achievable career goals, identifies and develops ways to improve employability.
- Co-authors papers at workshop and conferences

¹ *Towards a European Framework for Research Careers*, European Comission. Brusel·les, 21st July 2011
http://ec.europa.eu/euraxess/pdf/research_policies/Towards_a_European_Framework_for_Research_Careers_final.pdf

Desirable competences:

- Understands the agenda of industry and other related employment sectors
- Understands the value of their research work in the context of products and services from industry and other related employment sectors
- Can communicate with the wider community, and with society generally, about their areas of expertise
- Can be expected to promote, within professional contexts, technological, social or cultural advancement in a knowledge based society
- Can mentor First Stage Researchers, helping them to be more effective and successful in their R&D trajectory.

Established Researcher (R3)

Necessary competences:

- All necessary and most desirable competences of 'Recognised Researcher'
- Has an established reputation based on research excellence in their field
- Makes a positive contribution to the development of knowledge, research and development through co-operations and collaborations
- Identifies research problems and opportunities within their area of expertise
- Identifies appropriate research methodologies and approaches
- Conducts research independently which advances a research agenda
- Can take the lead in executing collaborative research projects in cooperation with colleagues and project partners
- Publishes papers as lead author, organises workshop or conference sessions

Desirable competences

- Establishes collaborative relationships with relevant industry research or development groups
- Communicates their research effectively to the research community and wider society
- Is innovative in their approach to research
- Can form research consortia and secure research funding / budgets / resources from research councils or industry
- Is committed to professional development of their own career and acts as mentor for others.

Leading Researcher (R4)

Necessary competences

- All necessary and most desirable competences of 'Established Researcher'
- Has an international reputation based on research excellence in their field

- Demonstrates critical judgment in the identification and execution of research activities
- Makes a substantial contribution (breakthroughs) to their research field or spanning multiple areas
- Develops a strategic vision on the future of the research field
- Recognises the broader implications and applications of their research
- Publishes and presents influential papers and books, serves on workshop and conference organising committees and delivers invited talks

Desirable competences

- Is an expert at managing and leading research projects
- Is skilled at managing and developing others
- Has a proven record in securing significant research funding / budgets / resources
- Beyond team building and collaboration, focusing on long-term team planning (e.g. career paths for the researchers and securing funding for the team positions)
- Is an excellent communicator and networker within and outside the research community [creating networks]
- Is able to create an innovative and creative environment for research
- Acts as a professional development role model for others.