EUA
European University Association

STRONG UNIVERSITIES FOR EUROPE

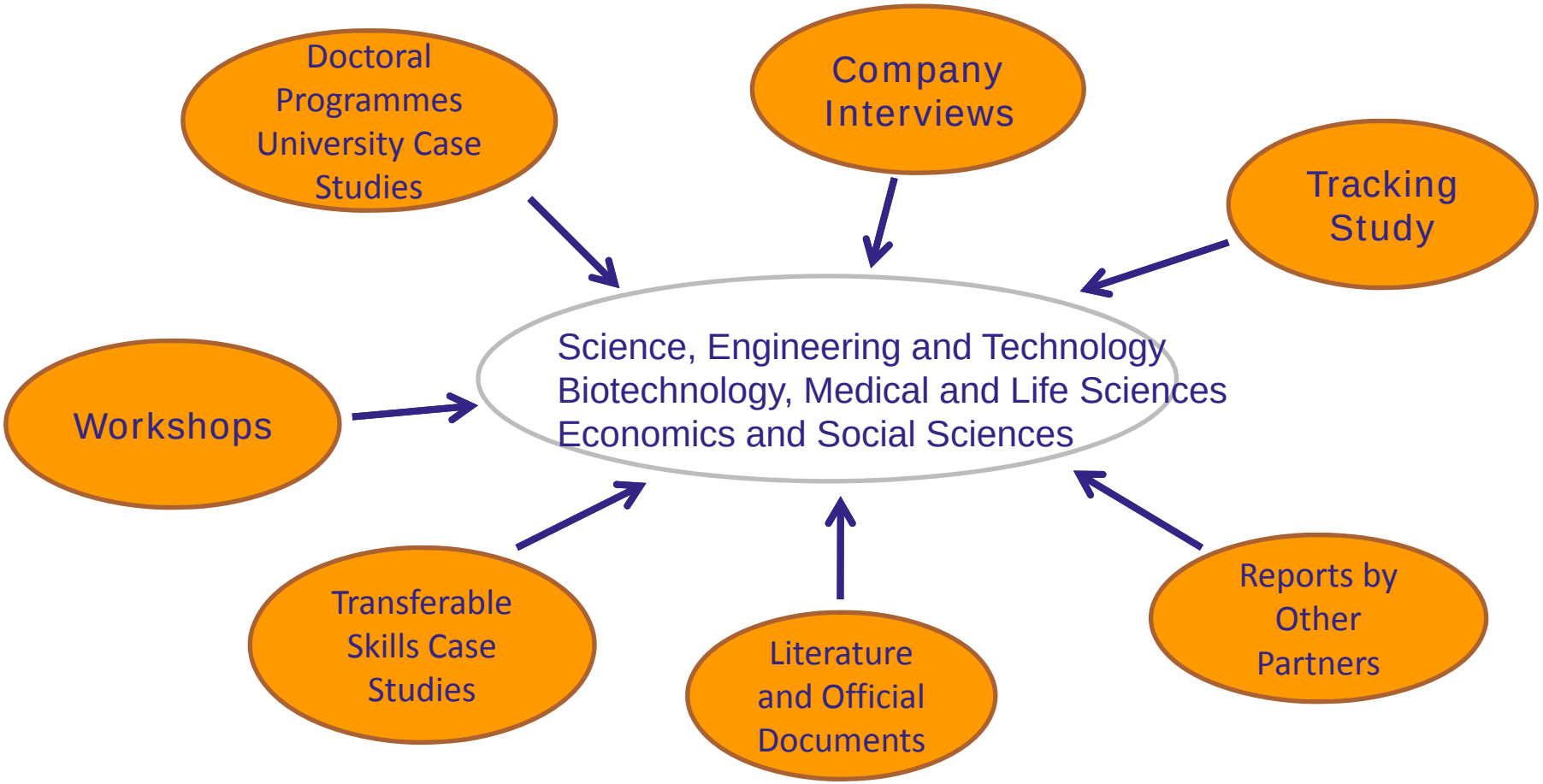
"Collaborative Doctoral Education: University-Industry Partnerships for Enhancing Knowledge Exchange"
DOC-CAREERS project

DOC-CAREERS*
Objectives

- Development of transferable skills and competences in the context of employability and career perspectives in private and public sectors
- Nature and extent of university and business collaboration in doctoral programmes
- Mobility strategies for doctoral career development (cross-border, inter-institutional, inter-sectoral)
- Requirements for more systematic collection of data at the university level to provide the basis for analysis of doctoral candidate's career paths

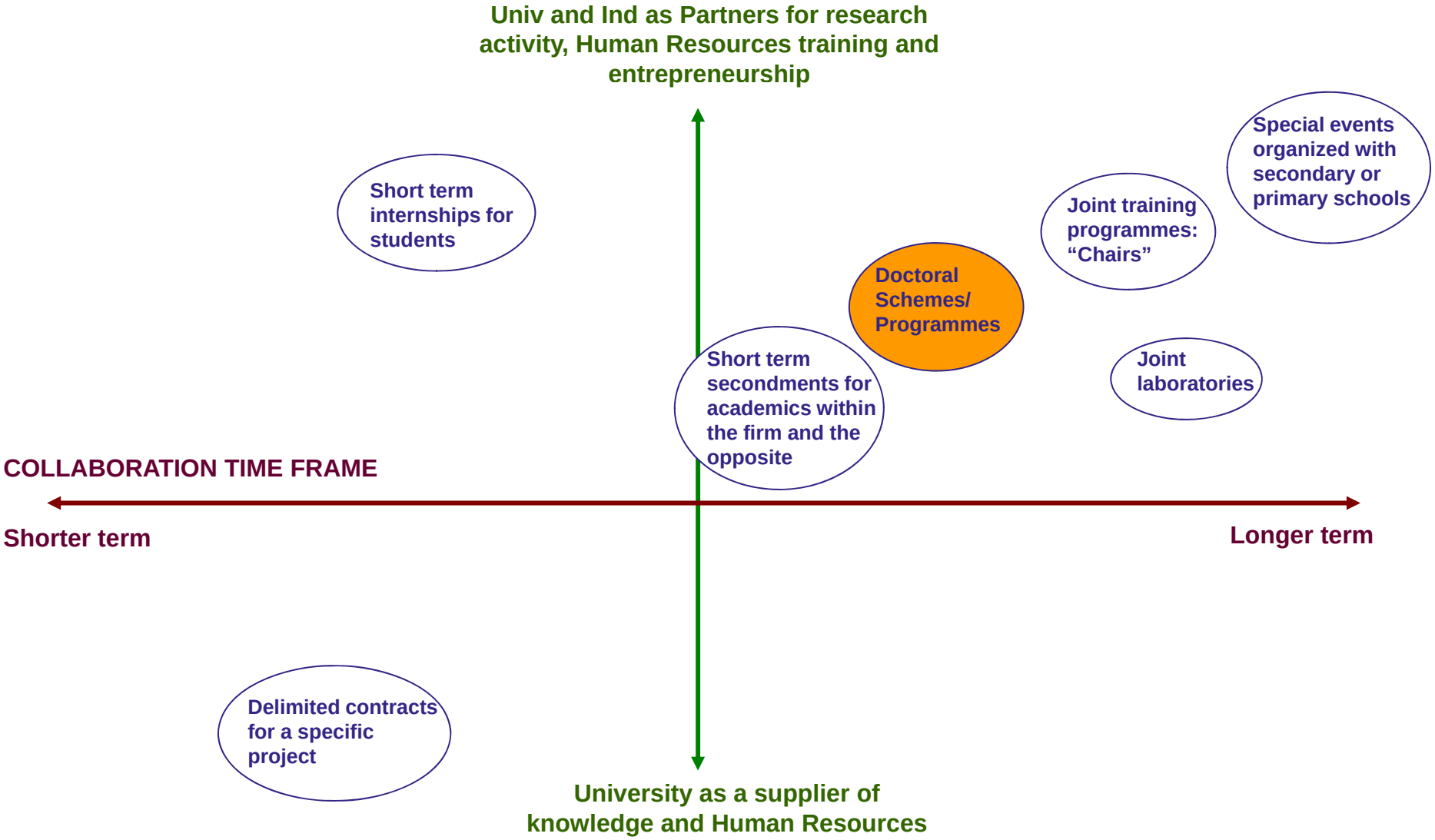
* FP6 Specific Support Action

DOC-CAREERS Methodologies and Input Sources 2007-2008



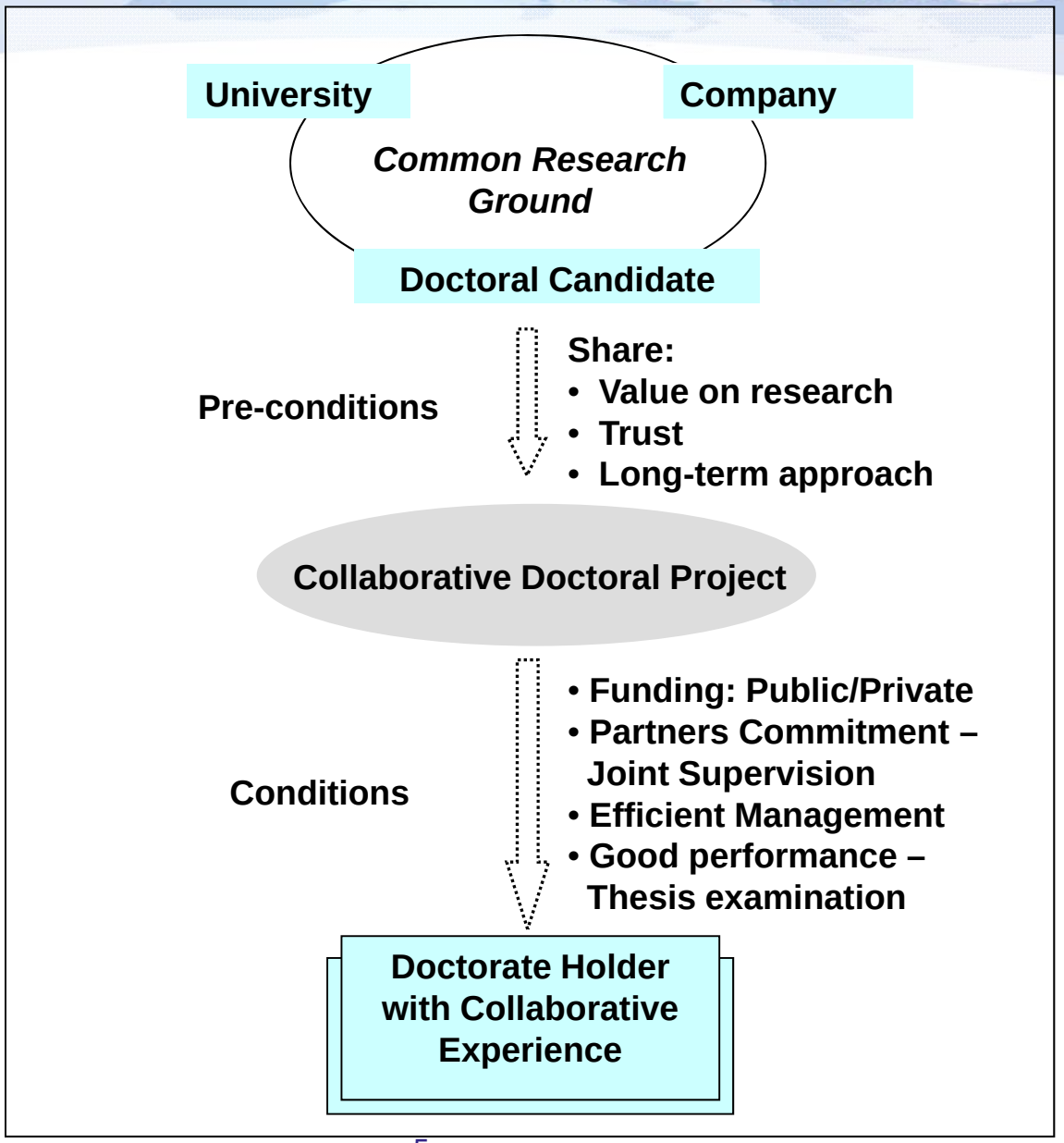
31 universities
31 companies
18 other stakeholders including EIRMA, EURODOC and UK GRAD Programme (now Vitae)

University-Industry Collaborations



Source: EUA DOC-CAREERS Project

Conditions for Collaborative Doctoral Projects



Source: EUA
DOC-CAREERS Project

Main types of initiatives in collaborative doctoral programmes

Initiative	Initiated by …	Framework Drivers	Primary level of engagement
Individually-driven	Faculty member, professor, company employee, bachelor/master graduate	Research Employability	Individual (with approval from partner organisations)
University-driven	A group of faculty members, a Rector, Vice Rector/s, a member of the administration, knowledge transfer body, groups of universities	Research Institutional profile – quality of doctoral education Employability of graduates Contribution to society	Organisational – relevant level (with commitment and support from individual professors, researchers, managers, etc.)
Industry-driven	CEO, Company Board, groups of companies	Access to Knowledge Access to Human Resources Business Competitiveness	
Government-driven	Local/Regional/National/EU Government Bodies and Agencies	Economic Development Social Benefit	
Jointly-driven	Any combination of the above	Synergy of drivers from partners	

Source: EUA DOC-CAREERS Project

Motivations, benefits and challenges identified through DOC-CAREERS cases (I)

Universities	Industries	Doctoral Candidates
Motivations		
• Exposure to wider research environments • Improving the quality of doctoral education and institutional reputation • Enhancing employability perspectives of doctoral holders and their social status • Responding to the growing industrial demand for access to generated new knowledge • Attracting more and more diversified funding from external organisations for research • Better integration in the ERA • Stimulating university-industry dialogue	• Access to cutting-edge research • Recruitment: access to highly qualified working force • Staff career development	• Gaining insight of the non-academic sector • Facing "real life" research problems • Enhancing employability opportunities, especially outside academia • to build up a network of contacts outside academia • Ready made ("jump in work") projects
Benefits		
• Promoting innovation, entrepreneurship and social responsibility • Incorporating industry input within university research • Gaining awareness of technical challenges facing companies • Providing highly qualified workers to the labour market • Contributing to sustainable funding for research and research infrastructure • Enhancing quality of research management	• Bringing highly qualified work force and scientific know-how • Bringing cutting-edge research, enabling exploitation of results • Developing innovative concepts at early stages • Performing work and addressing technical problems difficult to do in-house • Exploring new areas of research for exploitation in the future • Access to sophisticated instruments and large scale facilities	• Gaining insight of the non-academic sector • Facing "real life" research problems • Enhancing employability opportunities, especially outside academia • Networking in wider environments

Motivations, benefits and challenges identified through DOC-CAREERS cases (II)

Challenges in establishing the partnership

• Identifying partners who value university R&D • Finding research projects which match industry needs and academic standards • Reaching agreements (financial, confidentiality, IP Rights) • Timely decision making processes, internal management and bureaucracy • Raising awareness of the potential of university R&D to industry	• Identifying partners who value industry R&D • Finding research projects which match industry needs and academic standards • Reaching agreements (financial, confidentiality, IP Rights) • Timely decision making processes, internal management and bureaucracy	When it is possible to participate in the setting up of their doctoral project, challenges generally include those pointed out by universities and enterprises.

Challenges in taking forward collaborative project/programme

• Attracting and retaining qualified candidates able to work simultaneously in industry and university environments • Continuously delivering new knowledge perceived as valuable to the corporate world • Facing peer pressure - “selling (cheaply) the university research” • Facing possible threats to university career development • Implementing timely decision making processes and management	• Attracting and retaining qualified candidates able to work simultaneously in industry and university environments • Balancing targeted industry research and openness to breakthrough knowledge • Implementing timely decision making processes and management	• Satisfying simultaneously the needs and expectations of university and industry, as well as the candidate’s • Dealing with different, sometimes conflicting dynamics and pressures • Dealing with different levels of interest of partners • Having to “duplicate” research outcomes reports

"Structured" collaborative doctoral programmes

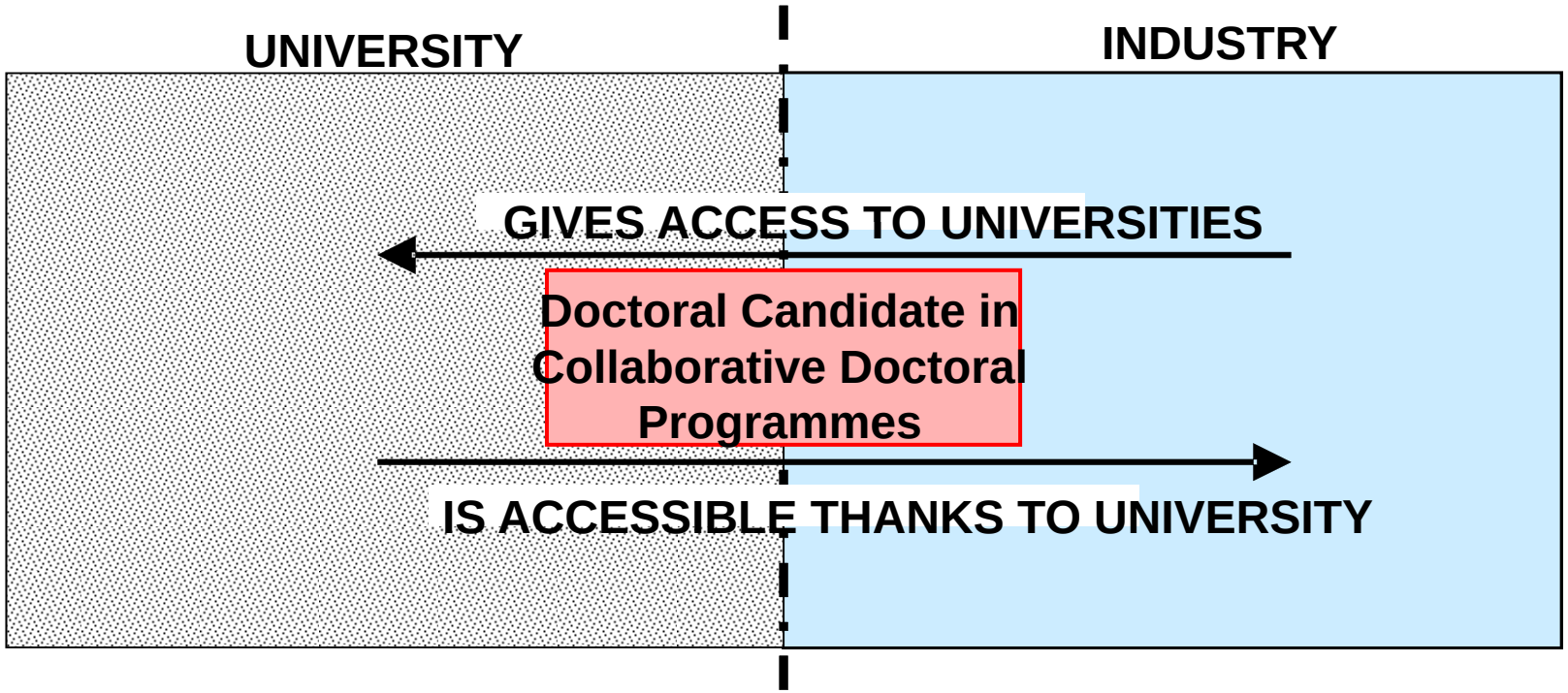
Good basis for:

- Respect of legitimate interest of all parties
- Quality of research
- Quality of management

Degree of structure depending on:

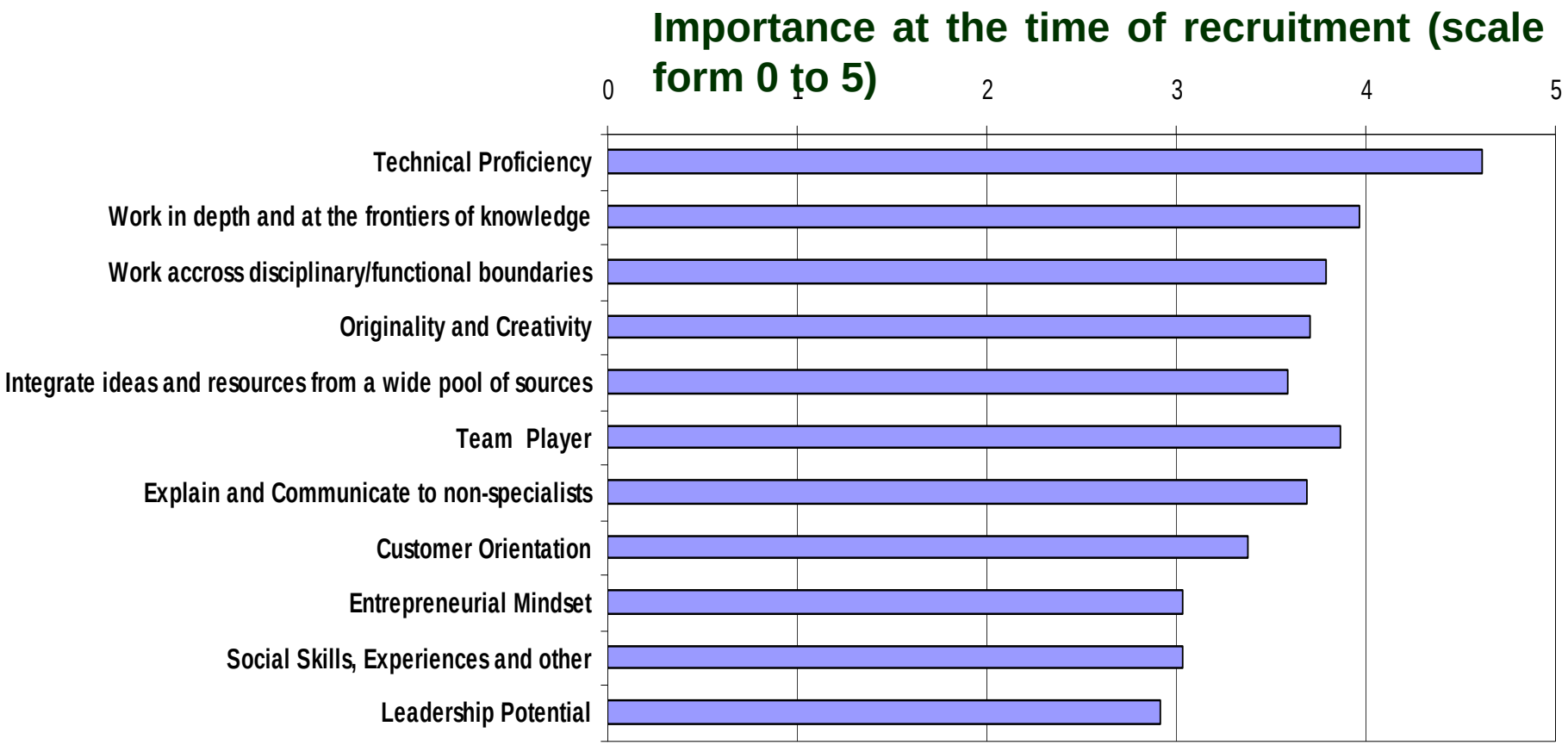
- Field of Knowledge (SET, BML usually more structured than ESS)
- Role of the company (data supplier, network, supervision, placements in firm, funding)
- Main source of funding (public, private or combination)

Role of doctoral candidate as a link between university and industry



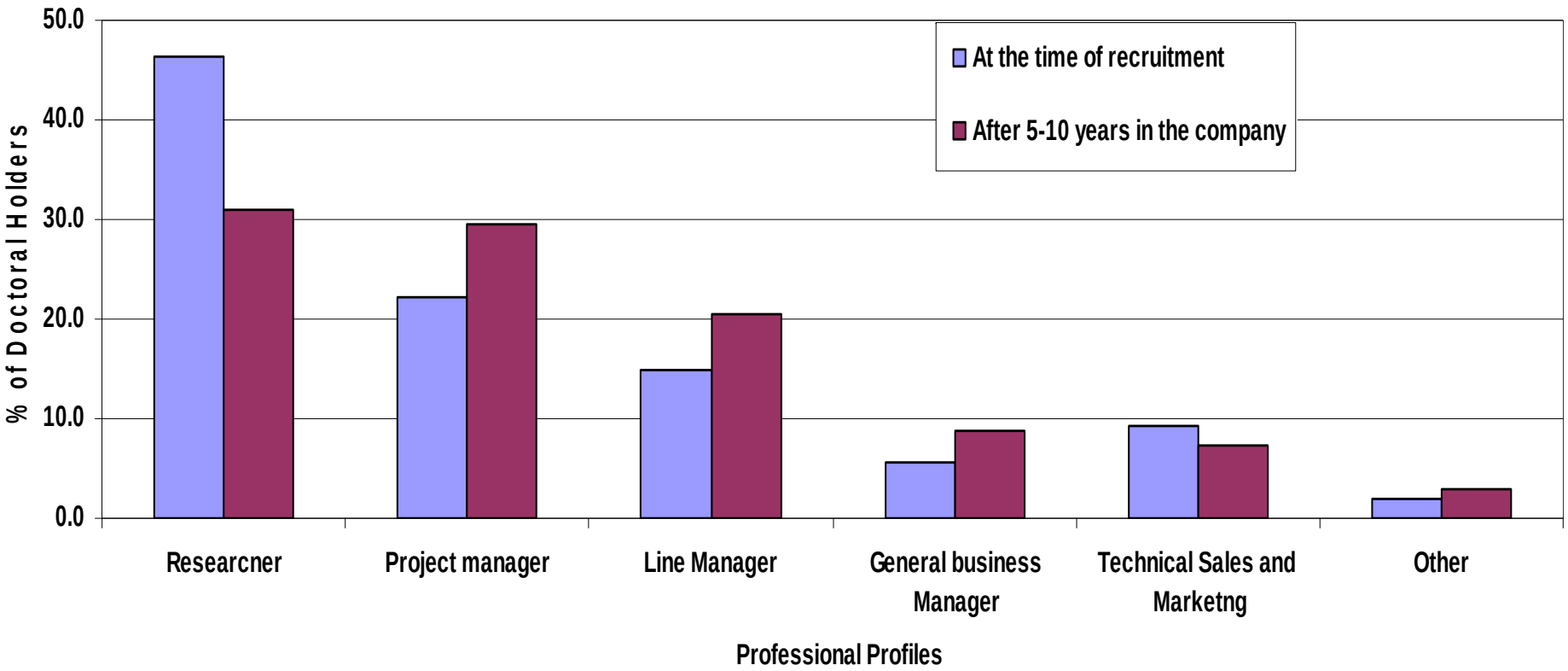
Source: E. Chassagneux, EIRMA

Doctorate Holders in Enterprises: What Skills Make them Employable?



Source: EUA DOC-CAREERS Project

Example of Career Paths of Doctorate Holders: SET Enterprises - Positions over Time



Source: EUA DOC-CAREERS Project