The professional profile of PhD-holders

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Core business

PHASE 1 **Skill development**

Fulfilling the PhD project's objectives will requires extensive learning and training of several new skills, which brings valuable input from supervisors and co-workers that helps develop my competences.

Sets his professional goals to be ambitious yet realistic.
Identifies and develops means to enhance his employability throughout his career; manages his professional development.
Broadens and upgrades his skillset, personal qualities and achievements.
Uses his networks to expand his scope of competence.
Knows how to transfer his expertise to other fields of activity.
Realizes the necessarily international dimension of his career path.
Accepts input from a mentor or coach to benefit his professional development.

PHASE 2 **Evaluation**

As a PhD student I am required to search for information in scientific literature from several sources. Therefore, selecting the most valuable information is a required skill. Additionally, the results of my work must be analyzed by myself and presented to the supervisors, who share their ideas regarding the quality of the work.

Knows how to regularly evaluate the progress, impact and outcomes of his staff's activities.
Takes part in evaluating both internal and external projects.
Is able to evaluate hypotheses and concepts lying beyond his field of expertise.
Encourages his staff to take ownership of the evaluation process.

PHASE 2 **Information management**

The development of the PhD project required an extensive study of the state of the art of the scientific topic. The information was obtained from several resources, and from this research a large amount of data had to be managed and evaluated to select the most useful.

Conducts advanced searches using a range of software solutions, resources and techniques, recognizing the advantages and limitations of each.
Masters the creation, organization, validation, sharing, storing and archiving of information and/or raw data and addresses the associated risks.
Understands the legal, ethical and security requirements of information management.
Is familiar with the value of, and uses, metadata.
Advises and assists his staff using information-gathering and management methods, critiquing sources and evaluating information and data.
Makes his staff aware of information security and legal and ethical requirements.

PHASE 2

Expertise and methods

The state of the art research of my PhD topic has helped me obtain the knowledge of the key concepts of the topic, as well as the most recent developments and the main challenges to overcome.

Is familiar with recent progress in fields related to his own.
Is able to engage in dialogue and collaboration with experts in other disciplines or fields of activity.
Takes ownership of new research methods and techniques.
Is able to document and evaluate his activities using statistical methods where applicable.
Can formulate complex problems that correspond to new challenges.
Is able to develop arguments in support of new projects.
Knows how to adapt his arguments to his audience.
Advises and assists his staff in making appropriate use of investigative methods, improving their performance and enhancing their skills.

Personal and relational qualities

PHASE 2

Communication

The work of a PhD student involves presenting the progress of the research to the supervisors periodically. Sharing my results, hypotheses and expectations has helped me develop better communication skills.

Adapts his register to communicate with experts in other fields at both the national and international levels.
Masters communication techniques for various contexts and media.
Communicates effectively when addressing a diverse and lay audience.
Knows how to address a community of professionals.
Educates and trains his staff in the use of digital communication technologies.
Is able to work and lead a group in at least English and one other world language.

PHASE 1

Collaboration

The development of the work related to the PhD involves professionals froms various institutions. The collaboration between different groups is of major importance to achieve the objectives.

Develops and maintains cooperative networks.
Knows how to build a professional network for his own and the company's benefit.
Is considered an authority in his field of expertise.
Is able to envisage his work in a partnership framework; evaluates the benefits and limitations of a partnership and identifies shared and conflicting interests.

PHASE 1

Analysis, synthesis and critical thinking

The large amounts of information found during bibliographical research has forced me to make an effort to analyze, synthesize and select the most critical information.

Analyzes his own findings and those of his peers.
Is able to synthesize; expresses key ideas clearly.
Can sort and rank information according to the goal.
Pursues his reasoning and hypotheses free of dogmatism or ideological bias.
Has the objectivity to consider various schools of thought; is able to modify his point of view.
Demonstrates intellectual rigor.

PHASE 1

Open-mindedness and creativity

My PhD project has brought me to a relatively new field with which I had little experience. This has brought me to learn new facts and techniques and to adapt and apply my previous experience to the project.

Demonstrates an ability to acquire knowledge; shows flexibility and open-mindedness. Engages in interdisciplinary activities.
Possesses a constructive style of questioning and scientific doubt.
Develops, takes ownership of and tests new ideas; is clever; seizes opportunities.
Interacts with and seeks the collaboration of professionals of different cultures; knows how to accommodate cultural differences.

PHASE 1 Commitment

A PhD project, which has a duration of several years, teaches the student to be committed and motivated, even when the circumstances are not the expected.

Recognizes and can clearly identify his sources of motivation.
Is able to sustain his commitment and motivation in the face of setbacks and adversity.
Deals efficiently with the routine aspects of his job.
Strives for excellence; shows determination.
Learns from his mistakes and bounces back from failures.
Relies on the support and assistance of his peers.

PHASE 1 Integrity

The University of Strasbourg gives great importance to research integrity and offers its students extensive training in that regard, of which I have greatly benefited.

Respects the standards and practices of his entity.
Demonstrates integrity in the processing and dissemination of data.
Demonstrates integrity with respect to his partners' or competitors' contributions in accordance with intellectual property rules.
Upholds the confidentiality and anonymity of subjects taking part in studies and research.
Honors his commitments and ensures the congruence between actions and words.
Declares any conflict of interest.

PHASE 1 Balance

In several occasions I have found myself in the need of using a technique for which I did not have the training or experience. In those situations, I have had to seek the help of my colleagues, which has helped me to knowledge my own limitations and learn from my co-workers. On the other hand, I have been able to share my experience in other aspects with my colleagues when they have found themselves in the same situation.

Is aware of his aptitudes, knows how to take advantage of them and demonstrate them.
Expresses himself relevantly, confidently and didactically.
Recognizes the limits of his knowledge, skills and expertise, and knows where to find support when needed.
Is able to consider his practices and experience as part of the bigger picture.
Develops his strengths and knows how to correct his weaknesses by seeking the opinion of others.
Is aware of the need to reconcile career and personal life.
Develops mechanisms to cope with pressure and seeks support when needed.

PHASE 2 Listening and empathy

Knows how to engage in active listening in various situations.
Is careful to take his contacts' needs and frame of reference into account.
Expresses gratitude regularly.
Takes the needs of his staff into consideration, is sensitive to signs of stress and able to provide

support and advice when needed.

Business management and value creation

PHASE 1 **Project management**

A big project such a PhD thesis requires the student to plan long-term goals and set a realistic planning of the work to be done years in advance, developing the skills of project management.

Plans projects to meet goals in accordance with strategy and priorities, and taking quality, deadline and budget constraints into account.
Knows how to write specifications.
Is accountable for resources used and for meeting the deadlines and quality requirements of the deliverable.
Reacts efficiently and appropriately to change and unforeseen events.
Conducts his project within a framework of auditing and evaluation, deploying the appropriate systems.

PHASE 2 **Managing risks**

Working in the laboratory with radioactive materials requires a thorough assessment of the risks involved.

Analyzes and identifies the risks created by an activity.
Educates and trains staff and partners in the implementation of appropriate risk management procedures.
Takes social and environmental imperatives into account in the projects he manages.
Educates and trains his staff in the imperatives of social and environmental responsibility.

PHASE 2 **Decision-making**

In many situations, reality does not allow to achieve all the expectations one has. In those situations, I have had to rethink the objectives to adapt to the technical means available, or develop an alternative approach that allowed me to achieve my objectives making use of the available tools.

Realizes that no one solution is perfect; can reconcile the imperatives of the market with the quest for technical optimization.
Is able to make choices and assume the consequences of his decisions; has the ability to reconsider decisions when needed.

PHASE 1 **Producing results**

Knows how to transform ideas into innovations.
Quickly deploys prototype and test phases; involves internal and external customers in these phases.
Learns the lessons of the initial tests.
Understands the policies and processes involved in publishing and exploiting research outcomes in his entity.
Is able to determine the most appropriate means of exploiting his results (e.g., patent, publication).

Strategy and Leadership

PHASE 1 **Strategy**

As part of a larger group of scientists who work with the same overall objective, my research project serves to research the answers for one of the many challenges that the group is facing.

> Being a part of this group has helped me understand how my project fits into the organization and how it relates to the work of other members of the group.

Is aware of how his project fits into the organization's strategy and the strategic directions of the sector or field of activity.
Understands relationships between entities and individuals (the role and drivers of each).
Is able to identify influent people that support his projects and understand what they stand to gain from it.