

# The professional profile of PhD-holders

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## Core business

### PHASE 2 Skill development

I consistently evaluate my skills and experiences, adjusting my career goals as necessary to stay aligned with the evolving landscape of green traction technology. I am committed to lifelong learning and regularly acquire new skills to keep pace with the rapidly changing knowledge and needs in the field of green traction technology. I have the ability to transition from a technical expert to a managerial role.

*Takes a critical look at his skills and experience and regularly fine-tunes his career goals.  
Knows how to develop new skills to keep step with changing knowledge and needs.  
Relies on advice from competent professionals (coaching) or experienced staff and takes their opinions into account; uses his networks to manage his career.  
Is able to evolve gradually from technical expertise to managerial expertise.  
Helps his staff develop their skills and networks and assists them in achieving career development goals.*

### PHASE 1 Evaluation

Through my Ph.D. and research work at ALSTOM, I have had numerous opportunities to evaluate technical documents, judge my own work, present my ideas to critical audiences, and evaluate the work of others. These experiences have honed my skills in critical analysis, presentation, and peer-review. I continue to develop these skills as I progress in my career.

*Evaluates the value of various documents concerning his field of expertise.  
Is able to judge his own results in terms of both quality and added value.  
Is willing to expose ideas to a critical audience; takes others' opinions of his work into account.  
Is willing to evaluate the work of other contributors and provides reasoned, realistic judgments of others' work.*

### PHASE 1 Information management

I am proficient in reviewing the state of the art in green traction technology, keeping abreast of the latest advancements and trends in the field. I employ efficient information-gathering methods and identify relevant resources, with a particular focus on bibliographic resources. I am adept at web-based research, utilizing bibliographic and patent databases to gather and analyze information. I have the ability to assess the relevance of information, critique sources, and verify the reliability of sources.

*Knows how to review the state of the art (SOTA) in a scientific topic.  
Makes efficient use of information-gathering methods, identifies pertinent resources, particularly bibliographic resources.  
Masters web-based research (e.g., bibliographic databases, patent databases)  
Knows how to judge the pertinence of information, critique sources and check source reliability.  
Designs and implements information-gathering and management systems using suitable technology.  
Addresses issues relating to the security and life cycle of data.  
Seeks out support from experts in information and data management.*

## **PHASE 2 Expertise and methods**

I stay updated with the latest advancements in green traction technology and related fields, ensuring my research is informed by the most recent progress. I actively engage in dialogue and collaboration with experts from various disciplines, fostering a multidisciplinary approach to problem-solving. I take ownership of new research methods and techniques, incorporating them into my work to enhance the quality and impact of my research. I have the ability to formulate complex problems that correspond to new challenges in the field of green traction.

*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 3 Communication**

I am frequently consulted for my expert opinion on key issues in the field of green traction. I strategically select content, register, and communication channels that best serve my objectives and the specific circumstances. I utilize national and international media platforms to disseminate my research findings and contribute to the discourse on green traction technology. I am proficient in managing and negotiating complex matters in English and at least one other world language, enabling effective international collaboration. I initiate and promote actions to disseminate knowledge, contributing to the advancement of green traction technology and fostering a culture of learning and innovation.

*Is asked to provide input on key questions in his area of expertise.  
Chooses content, register and channels of communication appropriate for the circumstance or to serve his strategy.  
Uses national and/or international media.  
Can manage and negotiate complex matters English and at least one other world.  
Initiates and promotes actions to disseminate knowledge.*

### **PHASE 2 Collaboration**

I collaborate with individuals and teams who are key players in the global arena, contributing to the advancement of green traction technology on a global scale. I lead professional networks and facilitate dialogue between diverse entities, fostering collaboration and knowledge exchange. I am capable of co-producing results and innovations, working collaboratively with others to drive progress in the field of green traction.

*Collaborates with people/teams who play a pivotal role on the global scale.  
Leads networks and helps to institute dialogue between different entities.  
Knows how to establish partnership relations with people working outside his field.  
Has the ability to co-produce results and/or innovations.*

## **PHASE 1** Analysis, synthesis and critical thinking

I critically analyze my own research findings as well as those of my peers, ensuring a comprehensive understanding of the field. I have the ability to synthesize complex information and express key ideas clearly, facilitating effective communication of research findings. I can sort and rank information according to the specific goal, ensuring that the most relevant and important information is prioritized. I pursue my reasoning and hypotheses with an open mind, free from dogmatism or ideological bias, ensuring objective and unbiased research.

*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 2** Open-mindedness and creativity

*Explores related fields.  
Conceives new projects to find answers to essential questions.  
Encourages his staff to seek challenge, be curious and engage in scientific questioning.  
Defines and carries out innovative interdisciplinary projects with the help of contributors from various backgrounds.  
Serves as a vector of innovation, a realistic visionary, a constructive agitator.  
Encourages creativity and innovation among his staff.  
Has acquired professional experience abroad in a culture other than his own.*

## **PHASE 1** Commitment

I actively explore fields related to green traction technology, broadening my knowledge and fostering interdisciplinary understanding. I conceive new projects aimed at answering essential questions in the field of green traction technology, driving innovation and progress. I define and carry out innovative interdisciplinary projects, collaborating with contributors from various backgrounds to leverage diverse perspectives

*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

I am self-aware and can clearly identify what motivates me in my work, which is primarily the potential of green traction technology to contribute to a sustainable future. I am resilient and able to maintain my commitment and motivation even when faced with challenges or setbacks. I strive for excellence in all that I do and show determination in pursuing my research goals.

*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 2** Balance

I am skilled in managing strong opposition, navigating conflicts and disagreements in a constructive and respectful manner. I leverage my strengths and work on my weaknesses to continuously improve and grow both personally and professionally. I have developed effective strategies for coping with the pressures of my career and personal life, ensuring that I maintain a healthy work-life balance.

*Knows how to deal with strong opposition.  
Draws on his strengths and transcends his weaknesses.  
Knows how to cope with pressure generated by his career or his personal life.  
Is able to keep his work and home environments separate.*

### **PHASE 1** Listening and empathy

I possess strong active listening skills, enabling me to understand and respond effectively in a variety of situations. I have the ability to understand the needs and perspectives of individuals from diverse fields of expertise, occupations, and cultures. This understanding enhances my ability to collaborate effectively and drive innovation in my field.

*Has the ability to listen in various situations.  
Understands the needs and way of thinking of the people he deals with, including those with a different field of expertise, occupation and/or culture.*

### **PHASE 2** Negotiation

I am well-versed in various negotiating techniques, enabling me to effectively navigate discussions and reach mutually beneficial agreements. I strive to find win-win solutions in negotiations, ensuring that all parties involved benefit from the outcome.

*Is familiar with negotiating techniques.  
Knows how to come up with win-win solutions.  
Is able to negotiate in order to obtain the resources needed for projects.*

## **Business management and value creation**

### **PHASE 1** 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 change

*Is able to get people to see the need for change.  
Defines objectives and rallies support for them.  
Creates momentum and builds alliances.  
Achieves initial results rapidly.  
Understands the possible causes of the failure of a change plan.*

### **PHASE 2** Managing risks

*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 3** Decision-making

*Is able to instigate and control major change.  
Knows how to make decisions in an unstable and uncertain environment taking all technical, financial, human, organizational, political and other factors into account.*

### **PHASE 1** Obtaining and managing funding

*Manages his own funding and is comfortable in discussions with budget, financial and economic decision-makers.  
Understands the funding process and knows how to determine the profitability of an activity.  
Knows how to answer a request for proposals and/or write a grant application.*

### **PHASE 2** People management

*As a manager, makes appropriate use of the full spectrum of HR policies and management tools with regard to his teams (recruitment, promotion, evaluation, safety rules, principles of non-discrimination and diversity, etc.).  
Puts together and directs a team, taking advantage of the strengths and skills of each member.  
Has the ability to set objectives for his staff and evaluate their attainment.  
Knows how to delegate and monitor.  
Supports his staff; encourages them to become more autonomous and recognizes their commitment and results.  
Ensures the collective success of projects.  
Detects and nurtures the talents of his staff and supports to their professional development.  
Knows how to deal with conflicts.  
Involves his staff in decision-making.  
Has his own management style.  
Is able to define guidelines for safety and social responsibility.  
Accepts responsibilities beyond his defined scope for the good of the organization as a whole.*

### **PHASE 2** Producing results

*Always seeks news ways to improve his performance and that of his staff.  
Knows how to detect opportunities liable to lead to a commercial application.  
Manages the transition from research to innovation: organizes processes and manages non-deterministic aspects.  
Meets the challenges and opportunities for value creation in his field.  
Deploys experimental platforms.*

### **PHASE 2** Intellectual and industrial property

*Is familiar with the process of filing a patent and with all forms of protection of research outcomes (technical protection and marketing).  
Makes his peers and staff aware of the legal requirements of intellectual/industrial property and/or copyright.  
Is able to list the areas of technical knowledge that is strategic for the company and identify the individuals in possession of it. Knows how to manage the sharing and perpetuation of knowledge.*

### **PHASE 1** Customer focus

*Is attentive to national and international markets; takes incoming and outgoing communication (suppliers, customers) into account.  
Gathers information on the needs and expectations of internal and external customers.  
Uses his technical expertise and familiarity with products to propose solutions tailored to customers.  
Masters the basics of marketing.*

## Strategy and Leadership

### PHASE 2 Strategy

*Observes his environment; recognizes discontinuities and micro-trends; detects weak signals.  
Develops his own approach and shapes his understanding of the topic.  
Encourages brainstorming and draws conclusions relevant to his area of activity.  
Regularly produces documents of a forward-looking and strategic nature.  
Makes sure that his activities contribute to the company's strategy and attainment of its objectives, and to the enrichment of his organization or sector of activity.  
Is familiar with various innovation strategies.  
Ensures that his staff is aware of and understands their environment and the importance of strategy.*

### PHASE 2 Leadership

*Recognizes the need for and merits of collective effort; knows how to motivate and drive the entity he manages.  
Is familiar with various leadership styles and adapts them to the specific project and the people on the team.  
Is known within the company as a leader with the potential to promote ideas and initiatives and contribute effectively to their implementation.  
Is able to impose his leadership in a competitive context.  
Coordinates and mobilizes networks.  
Encourages his staff to build a climate of trust.  
Grooms his staff for future leadership roles.*