National Quality Framework for Doctoral Training in Luxembourg

- External Assessment -

Call for Tender
Deadline 1st September 2017

Terms of Reference (ToR)

1. Background

Within its performance contract with the Ministry of Higher Education and Research covering the period 2014-17, the FNR has set itself several strategic objectives, among which one is to successfully attract and support the best doctoral candidates by offering them attractive working conditions and by developing doctoral training of a high quality, which is suited to the needs of the research, society and the economy.

Doctoral training in Luxembourg has considerably evolved over the past years. Important milestones include the first attribution of doctoral degrees by the University of Luxembourg in 2006 (the only doctorate degree awarding institution in the country), the transition from fellowships to employment contracts under FNR's AFR grant scheme since 2008, the establishment of Doctoral Schools at the University of Luxembourg since 2012, the introduction of the new PRIDE funding scheme for structured doctoral programmes by the FNR in 2015 as well as the introduction of the National Quality Framework for Doctoral Training in 2016.

Luxembourg research institutions have invested a lot of effort in addressing the requirements of the National Quality Framework for Doctoral Training. They are in the process of developing policies, procedures and institutional guidelines, in order to be able to offer an attractive and well-structured PhD training environment. Furthermore, since 2016, representatives in charge of doctoral training from the major institutions and the FNR meet regularly with the aim to discuss current issues in doctoral training, to coordinate actions, to strengthen mutual learning and collaborations in doctoral training and to set up a national training platform for all doctoral candidates in Luxembourg. A first achievement of this collaboration is the joint organization of the first national PhD Welcome Day held on 7th December 2016 in Luxembourg to introduce first year doctoral candidates to research and networking opportunities in Luxembourg.
ONGOING & SUCCESSFULLY GRADUATED PHD 2015

ONGOING BY HOST INSTITUTION

TOTAL PHD 2015: 682
FNR-FUNDED: 355 (52%)

BY DOMAIN

SOCIAL SCIENCES & HUMANITIES
PHYSICS, MATERIAL SCIENCES & ENGINEERING
LIFE, ENVIRONMENTAL & BIOMEDICAL SCIENCES
ICT
ECONOMICS & LAW
MATHEMATICS

UNIVERSITY OF LUXEMBOURG: 79.3%
LUXEMBOURG INSTITUTE OF SCIENCE AND TECHNOLOGY: 11.4%
LUXEMBOURG INSTITUTE OF HEALTH: 6%
LUXEMBOURG INSTITUTE OF SOCIAL-ECONOMIC RESEARCH: 3.2%

PHD GRADUATES 2015

UNIVERSITY OF LUXEMBOURG: 121
LUXEMBOURG INSTITUTE OF SCIENCE & TECHNOLOGY: 13
LUXEMBOURG INSTITUTE OF HEALTH: 10
LUXEMBOURG INSTITUTE OF SOCIAL-ECONOMIC RESEARCH: 3

Data provided by Luxembourg Institutions on 1/12/2016
(not included: Doctoral Candidates at the Max Planck Institute Luxembourg\(^1\))

\(^1\) The Max Planck Institute has own PhD Quality Standards; currently 25-30 PhD are ongoing at MPI Luxembourg, mostly with PhD awarding institutions abroad.
2. Objective of the assignment

The aim of this external assessment is to take stock of the institutional implementation status in 2017/18 of the National Quality Framework for Doctoral Training (see annex 1). Considering past achievements, the assessment serves as guidance to the institutions and the FNR to further develop the quality of doctoral training in Luxembourg to the best international standards.

The institutions participating in the assessment are the University of Luxembourg (UL; www.uni.lu), the Luxembourg Institute of Science and Technology (LIST; www.list.lu), the Luxembourg Institute of Health (LIH; www.lih.lu), and the Luxembourg Institute of Socio-Economic Research (LISER; www.liser.lu). The assessment is commissioned and coordinated by the Fonds National de la Recherche (FNR; www.fnr.lu).

The assessment shall be undertaken between autumn 2017 and autumn 2018, with a report and recommendations to the Luxembourg institutions involved in doctoral training (one detailed report with recommendations per institution) as well as an overall final report to the FNR.

Among Luxembourg institutions involved in doctoral training, the University of Luxembourg plays a leading role since it is the only doctoral degree awarding higher education institution in the country. Thus, besides its own institutional quality standards for doctoral training, the UL has also a role to play in the collaboration of doctoral training between Luxembourg institutions. The UL has signed a Memorandum of Understanding with LIST, LIH and LISER defining the collaboration in doctoral training between Luxembourg institutions. Following this MoU, the UL has developed regulations to award supervision rights to senior researchers at LIST, LIH and LISER. On their side, LIST, LIH and LISER have their own institutional quality standards for doctoral training, and they have collaboration agreements for doctoral training with Universities abroad, i.e. not only with the University of Luxembourg.

The assessment exercise comprises the assessments of the major institutions in charge of doctoral training in Luxembourg, i.e. UL, LIST, LIH and LISER.

The institutional assessments (UL, LIST, LIH and LISER) shall be structured according to the major chapters and set of principles laid down in the National Quality Framework for Doctoral Training (see Annex 1). They shall start with an assessment of doctoral training at the University of Luxembourg, including an assessment of the coordinating role of the UL and distinct requirements incumbent on it as a degree-awarding institution, followed by the institutional assessments of LIST, LIH and LISER.

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2 The Luxembourg Max Planck Institute (MPI) for International Procedural Law also organizes a doctoral school in partnership with the Universities of Heidelberg and Paris Sorbonne, as well as the University of Luxembourg. Given that their doctoral training is organized according to the standards of the MPI and assessed by their committees, the MPI Luxembourg is not included in the present assessment.
3. Content and Timing of Tender

Offers must be submitted to the FNR per email at the latest on the

**Deadline: 1st September 2017**

by email to: tom.jakobs@fnr.lu

Offers comprise the following:

- The methodology and timing of the assignment (the suggested approach is given in chapter 4); the consultant shall illustrate their offer by giving examples (one example could be how a given chapter of the National Quality Framework on Doctoral Training would be assessed during the on-site visits and interviews)

- The composition of the consultant’s expert team with the CVs of the coordinator and the team members

- A suggestion of 2-3 additional internationally renowned experts in the domain of doctoral training with a short CV indicating how their experience is relevant for the assignment

- References of similar assessments or studies carried out in the past

- A detailed price offer using the following level of detail:

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<tr>
<th>Phase 1: Remote Document/ Survey Analysis and Kick-off meeting in Luxembourg</th>
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- Two external experts
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Travel and other costs have to be explained. The tender shall give a detailed cost overview including up to a 10% margin, the offer may contain optional modules.

During September 2017, the FNR analyses the offers and may request additional information. The selection of the consultant and the contract negotiation shall be finalized by end September, followed by the contract signature in October 2017.
4. Suggested Approach for the Assignment

The FNR suggests a methodology for the Assessment Exercise that comprises 3 phases, starting between November 2017 and January 2018 and stretching over 10-12 months. The consultant will be flexible to adapt these phases and the methodology if there are convincing arguments to do so:

Phase 1: Remote analysis and kick-off meeting in Luxembourg


An initial document and survey analysis will take place at the start of the assignment comprising the following elements:

- specifically compiled documentation on doctoral training by each institution UL, LIST, LIH and LISER (available 16th October 2017, as indicated hereafter)
- results from the PRES survey 2017 on doctoral training which is an international survey carried out by i-Graduate between May and June 2017, based on a standardized questionnaire; UL, LIST, LIH and LISER participated in the PRES survey 2017 and agreed that the results shall be used in the framework of the present external assessment (see PRES survey questionnaire of the 2015 survey is attached in Annex 2 and is available online; the survey questionnaire for 2017 was only slightly adapted; aggregate survey results as well as anonymized data shall be available to the consultant in autumn 2017).

The institutional documents compiled by UL, LIST, LIH and LISER will be available by 16th October 2017 and comprise a first part with an overall description of doctoral training in the institution, history of doctoral training, structure, incl. decision structure and responsibilities, doctoral programmes and main thematic domains, data on past and current doctoral candidates per faculty or department/research group (per discipline, gender), etc.

The second and main part of the document is composed by a description of the institution’s PhD policies and practices, structured according to the chapters of the Quality Framework and addressing the detailed points specified under each chapter:

- Doctoral Research Environment and Management
- Recruitment and Admission into Doctoral Training
- Supervision
- Skills Training and Professional Development
- Dissemination
- Good Practice in Research
- Thesis Assessment Committee and Procedures
- Other

For each chapter, the institutional document describes what is already in place and what is under development. Weblinks to existing documents, guidelines and forms will be provided and good practice examples from the institutions illustrated.

The UL will describe in a separate document the coordination between the institutions and any special obligations incumbent upon it as a degree-awarding institution.
Phase 1 of the assessment may be undertaken between November 2017 and February 2018, with a Kick-off meeting with the consultant foreseen on 15 and 16th January 2018 at the FNR in Luxembourg to clarify the mission and overall timing. In addition to a meeting with FNR, a meeting with the FNR and 1-2 institutional representatives will take place for the kickoff: institutions designate the main contact person (and a representative) for the project, one of whom shall be present if possible at the kick-off meeting.

Phase 2: Institutional assessment & interviews: March-April 2018

- An information session on 14th March 2018 shall take place at the start of phase 2 with FNR and institutional representatives as well as supervisors or managers of doctoral training, organized by the consultant and hosted by FNR, to present the assessment exercise and prepare the institutional on-site visits and interviews.
- For the on-site visits, an overall tour of the institution's facilities is foreseen, plus a total of 6 interviews at the UL, and 3 interviews at LIST, LIH and LISER respectively, including:
  o coordinator(s) of doctoral training
  o administrative personnel hosting and monitoring doctoral candidates
  o a representative group of doctoral schools or programmes' coordinators (such as the PRIDE Doctoral Training Units)
  o on-site group interviews of doctoral candidates and supervisors in the participating institutions

Meetings can be regrouped in case the group of people involved is very small. On-site interviews are organized by the institutions jointly with the consultant.

The external assessment shall address all aspects enumerated in the National Quality Framework for Doctoral Training with a focus on quality control measures. It shall look into 1-2 thematic doctoral training programmes per institution to fully understand the PhD parcours, rules and regulations.


- Based on the results of the analysis of the institutional documents and the PRES survey and following the institutional on-site visits and interviews, the consultant shall produce individual reports per institution with findings and recommendations for each of the visited institutions: UL, LIST, LIH and LISER (addressed only to the concerned institution and the FNR). The FNR and institutions shall include their comments before finalization.
- An overall report, describing the main work conducted and the findings and recommendations of general relevance for the Luxembourg research system shall be drafted until 4 weeks before the final workshop and sent to all participants of the final workshop.
- A final Workshop will be organized by the consultant and hosted by the FNR, taking place on 12th September 2018 in Luxembourg, with the consultant, the external experts, institutional representatives and FNR, based on the draft final report: Presentation and discussion of main findings and recommendations
- Between the final workshop and the end of the assignment, the consultant shall revise the overall final report, and the individual reports with findings and recommendations per institution. Before finalization, the FNR, institutions UL, LIST, LIH and LISER have the opportunity to send corrections and comments. The overall final report shall be edited and proof-read for publication/dissemination. The individual institutional reports remain internal documents of each concerned institution and the FNR.
- All reports need to be finalized by 30th October 2018 at the latest.
The above timing and methodology is a suggestion, and it is possible to deviate from this plan if there are good reasons to do so. In the offer, a coherent timing should be proposed leaving sufficient room to allow finalizing the project at the latest by the end of October 2018.

5. Definition and Role of Actors

Consultant: Assessment Team

The Consultant/Assessment Team to carry out the assignment is considered as follows:

- Coordinator (senior expert)
- Support team

The following qualifications of the coordinator are expected:

- A minimum of 10 years’ professional experience in evaluation, in particular proven knowledge in assessment of doctoral training programmes;
- Ideally having a doctorate degree;
- International experience;
- Professional command of English (speaking, reading and writing) and ability to rapidly produce high-quality reports (in English);
- Sound communication skills in dealing with researchers and public research administrations.

The affiliated Institution of the consultant should have a strong research evaluation background and past experience with doctoral training evaluation.

International acknowledged experts in doctoral training: 2-3 senior researchers/senior experts with international recognition in the field of doctoral training. The experts should reflect different disciplines, geographic backgrounds and genders. The assessment team should make suggestions concerning these experts, but the final choice must be agreed upon with the FNR. To minimise the workload of the experts, their involvement in the project should be efficient, e.g. a short (remote) consultation at the beginning of the process when defining the overall methodology and a participation in the workshop in Luxembourg (scheduled on 12th September 2018) to discuss the outcomes of the survey and the main recommendations.

The consultant or one of the international acknowledged experts should have experience with doctoral training in multi-institutional settings involving as well institutions that do not award doctorate degrees, since this aspect is relevant in the Luxembourg context.

FNR project Team:

- Ulrike Kohl: ulrike.kohl@fnr.lu; 00352-261925-32
- Marie-Claude Marx: marie-claude.marx@fnr.lu; 00352-261925-21
- Tom Jakobs: tom.jakobs@fnr.lu; 00352-261925-25

N.B: The FNR is ISO certified 9001:2015.
Annex 1

National Quality Framework for Doctoral Training
Introduction

Doctoral research is a primary source of new knowledge for the innovation systems in Europe. In Luxembourg, doctoral research is relatively recent and is mainly anchored at the University of Luxembourg and the public research centres. Over the last decade, these institutions have continuously improved the quality of their doctoral training.

The FNR enhances this development by defining, in collaboration with its partners, a framework of quality standards for doctorates funded through its instruments. The framework fully aligns with the principles defined in the European Charter for Researchers and the Code of Conduct for their recruitment and is guided by the following objectives:

- Luxembourg needs to become attractive for the best candidates of Europe and worldwide;
- PhD candidates will be trained by doing original, hands-on research according to the highest international standards;
- PhD candidates will learn skills for a professional life as creative, critical and autonomous intellectual risk takers.

The present document formulates the FNR’s expectations with respect to the management, quality and academic standards of the training of FNR-funded PhD candidates. The implementation of the principles defined in the quality framework will be monitored through external assessment.

Beyond the quality framework, the FNR encourages institutions to consider innovative approaches to structured doctoral training stimulated by international good practice.

Definitions:

- Doctoral training: comprises the educational programme offered in the framework of the doctorate and the research project leading to the doctoral degree.
- Institutions: refers to both PhD awarding institutions as well as research institutions.
- PhD awarding institutions: higher education institutions officially responsible for the verification of academic standards of doctoral training.
- Research institutions: institutions where research projects leading to a PhD degree are carried out.
Doctoral Research Environment and Management

- Institutions ensure that the doctoral training is performed in a research environment appropriate to the PhD project, providing access to adequate research facilities, access to research documentation and suitable possibilities to exchange with other researchers and with the research community as a whole.

- Institutions have in place adequate quality control procedures, foreseeing regular review and updating of the structure, management and quality of their doctoral training.

Recruitment and Admission into Doctoral Training

- Institutions have in place a strategy and deploy adequate means in order to recruit suitable doctoral candidates, giving due consideration to gender balance.

- PhD candidates are admitted into doctoral training on the basis of a transparent and merit-based recruitment process, which is openly communicated and applied consistently.

- Institutions have set up a framework to evaluate and approve the following points:
  - the scientific quality of the research project to be performed by the PhD candidate,
  - whether the project is feasible within a reasonable time frame (3-4 years full time equivalent),
  - the academic ability and research potential of the PhD candidate,
  - the thematic fit and the qualifications of the nominated supervisor(s).

Supervision

- Institutions have in place guidelines for supervision, providing practical information on the formal and informal arrangements that may guide the PhD candidate and the supervisor(s) during the various stages of the PhD trajectory.

- Institutions ascertain that all persons in charge of the supervision are scientifically qualified in the concerned field and have relevant supervision competences. The supervisors must hold a PhD degree and be active scholars with a steady scientific production.

- A supervision agreement is established between the PhD candidate and all members of the supervisory team. The agreement is written in a language comprehensible to the candidate, the supervisors and the institution and covers the following:
  - Aims and objectives of the doctoral research project;
  - Rights and duties of the doctoral candidate, including teaching activities;
  - Supervision support: main person(s) involved and their role(s)/responsibility/ies; organisation of the supervision;
  - Monitoring of progress;
  - Publication and dissemination plan;
  - Training plan for the candidate, based on a needs analysis.

The supervision agreement is reviewed at regular intervals.

- Institutions have in place a procedure to mediate in situations of conflict, when stipulations of the supervision agreement are not respected.

- If a main supervisor is not able to continue supervising the PhD candidate, institutions ensure that adequate measures are taken to allow the good continuation of the PhD.

- Institutions have in place a procedure to evaluate supervisors and the supervision environment.

- Institutions ensure that training in supervision is available for all supervisors and potential supervisors.
Skills Training and Professional Development

- All PhD candidates have access to structured doctoral training (scientific and transferable skills training). This may be organised in the frame of a doctoral school or, if not possible, on the basis of an individualised training programme.
- Institutions provide PhD candidates with appropriate opportunities for professional development and career orientation.
- Institutions enable and valorise teaching activities by PhD candidates. Teaching tasks should however not be excessive, creating conflict with the good continuation of the PhD project.
- Institutions encourage the participation in outreach activities of PhD candidates as a valuable asset for their career development.

Dissemination

- Results of a PhD project are communicated to the research community according to the methods and standards of the research field, including rules for author/co-authorship acknowledging the original author(s) of research publications. These rules are communicated to all involved parties by the institutions.
- Institutions support the adequate dissemination of research results to a non-scientific public and, if applicable, their translation into socio-economic value.
- Institutions have in place clear rules regarding the protection and ownership of intellectual property generated by PhD candidates and ensure that the candidates receive a fair share of the revenues generated by the commercial exploitation of such intellectual property.
- Institutions ensure that PhD theses are made publicly available, possibly after an embargo period not exceeding two years.

Good Practice in Research

- Research in the framework of PhD theses is consistent with international ethical and data protection standards and approved by the competent committees.
- Institutions make available their ethical and data protection guidelines as well as guidelines for research integrity. Institutions ensure that PhD candidates have adequate training in the rules concerning ethics and responsible conduct in research.
- Institutions ensure that supervisors take the prime responsibility for their PhD candidates to conduct research according to the established standards of the research field.

Thesis Assessment Committee and Procedures

- Research degree assessment procedures, criteria and appeal mechanisms must be clear; they are operated fairly and consistently and are communicated clearly to all involved parties.
- To guarantee an adequate quality control, institutions ensure that the assessment committee includes at least one member, external to the institution.
Annex: References

- Using the principles for innovative doctoral training as a tool for guiding reforms of doctoral education in Europe (ERA-SGHRM, WG on Innovative Doctoral Training, May 2014)
- Good practice elements in doctoral training (LERU, January 2014)
- Standards for PhD education in biomedicine and health sciences in Europe (ORPHEUS-AMSE-WFME, 2013)
- Doctoral degrees beyond 2010: Training talented researchers for society (LERU, March 2010)
- Doctoral studies in Europe: excellence in researcher training (LERU, May 2007)
- Eurodoc Statement of standards in the assessment, expectations and outcomes of doctoral programmes in Europe (July 2006)
  www.europa.eu.int/eracareers/europeancharter
- Salzburg Principles (EUA-CDE, 2005)
- Code of practice for the assurance of academic quality and standards in higher education (QAAHE (UK), September 2004)
- Eurodoc Gathering of Evidence and Development of a European Supervision and Training Charter (September 2004)
- Eurodoc Supervision and Training Charter for Early Stage Researchers (March 2004)
Annex 2

PRES Survey Questionnaire

2015 version; available online:


N.B.: The questionnaire of the 2017 PRES survey was nearly identical and for Luxembourg, it was slightly adapted to the national context/terminology.