Template for PhD Project Description

Department of Technology Systems, UiO

This template has been approved by the PhD committee of the Department of Technology Systems. All PhD project descriptions should adhere to the template, effective from 1 April, 2018.

The PhD thesis is an independent scientific work that meets international standards regarding academic level, method, and ethical requirements. The preferred format of the thesis is a collection of publication/articles published in internationally recognized publication channels (scientific journals or conferences).

The PhD degree at the Department of Technology Systems (ITS) is a supervised study requiring a project description for admission to the PhD program. The project description is a required attachment to the formal application for admission, a description to be approved and signed by the PhD candidate and the supervisors. The main purpose of the project description is to ensure a smooth collaboration and good progress with proper research focus and clear milestones. The project description should be detailed enough for the PhD Committee at ITS and the Faculty to assess research goals, scientific challenges, incremental milestones and publication plan. It also forms the baseline for the third semester evaluation.

The project description should be between 4 – 10 pages, and should contain the following eleven elements:

1. Project title

2. Main objective and summary of the project Present the main objective and a brief summary, explaining how you intend to attain your goal.

3. Project background and scientific basis. Provide a brief survey of existing research efforts and scientific basis, preferably with references to scientific literature. If your project is a part of a larger research effort requiring coordination, explain specifically your planned contributions within the larger framework.

4. Research questions and scientific challenges Outline your research questions and scientific challenges. Explain their scientific foundation and your approach to address them. Describe your ambitions of reaching beyond the state-of-the-art and how to reach these goals.

5. Scientific method Outline your method for reaching your scientific goals. Describe how you are planning to use empirical, analytical or other methods for your research. Please state how these methods relate to the expected scientific contributions of the thesis. If applicable, describe the source of your data.

6. Expected Impact. As the Department of Technology Systems focusses typically on higher technology readiness levels (TRL level), a clear vision of the impact of the

research should be indicated. The description of impact should address impact on science, impact on technology and societal impact, if appropriate.

7. Ethics Describe any research-ethical challenges related to your project. Use the applicable research-ethical guidelines of the Norwegian Research Ethical Committees[1] to identify such challenges and propose means to address these. Also check if your project requires notification to the Data Protection Official for Research[2]. Candidates doing fieldwork abroad should check if they also have to register their project with the applicable authorities there. All PhD candidates registered at ITS, independent of their nationality or the country where they do fieldwork, need clearance from the Norwegian Data Authority represented by the NSD (http://www.nsd.uib.no) when they collect personal or sensitive information from their informants, research participants, etc. (in Norway or abroad).

8. Project timeline Outline a research plan for each semester including course-work, scientific contributions, and planned publications. Preferably indicate publication channel as well. Indicate mandatory/teaching duties (25%) when applicable as well as planned visits to other research institutions (national or international). The project timeline will be assessed during third semester evaluation. The project timeline should contain measures of achievement.

9. Project organisation and cooperation. The principal supervisor should provide an overview of knowledge / expertise each supervisor will contribute, how they collectively cover the academic field of the project, and how the members of the supervisory team will cooperate. One should also describe how the support of the candidate will be maintained if one of the members has to vacate her/his post and therefore has to be replaced. Finally, the robustness of the research group should be addressed; i.e., how other academic staff and their PhD students and PhD projects support the new project and how the new project fits into the ongoing research activity.

10. Cooperation with external parties. Some projects have significant contributions from nonacademic partners, like partial external supervision of the PhD student, or part-time employment of the student by an external partner. For each external partner, the required standard agreement concerning the completion of PhD education in cooperation with an external party has to be signed by the external party and UiO, and submitted as part of the PhD application. The agreement includes a list of specific contributions committed by the external party. The project description may contain further details about the planned cooperation, in particular the potential for innovation for the external party.

11. Literature references Please list applicable references.

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[1] The guidelines of the National Committee for Research Ethics in Science and Technology are central here. Also the guidelines of NESH and the guidelines on Internet Research may be applicable. See the Norwegian Research Ethical Committees: https://www.etikkom.no/en/

[2] Data Protection Official for Research: http://www.nsd.uib.no/nsd/english/pvo.html