

# **Research Plan**

## **Internet of Bikes and People (IOBAP)**

Tim von Oldenburg

February 23, 2015

### **1 Research plan summary**

An overall research plan summary. Write this section after you have completed the rest of the document. Summarize your approach as concisely as possible so that readers can quickly understand the fundamentals of your plan. The summary can be seen as an equivalent to the paper/article abstract.

### **2 Introduction and background**

Here you should give a contextual background and setting of the stage of the research project. Facts and references can be used to show that the project is; - Relevant - Not already over-researched - Feasible - Ethically defensible In doing so, the introduction introduces the problem domain and explicates why the research project is relevant. It gives a brief overview of the field, which is expanded later in the section "Literature overview and related work". If references are used they should be cited correctly. It is suggested that you also address why and for whom the project is relevant. The introduction should include a first presentation of external stakeholders (if any).

### **3 Research focus**

Given the elaborated background, this section should lead on to a concise formulation of the research question or knowledge interest that will be the focus for the project. A way to structure the problem formulation is to write a short section on the

purpose of the study, which is followed by a section on objectives for the study, i.e. why the study is conducted and possible knowledge contributions of the project. The section can list different objectives, points of interest or sub- questions to be explored. The above amounts to a hopefully clear research focus, which is finally distilled into a research question – and note that even highly explorative research plans can be framed in research questions.

## **4 Literature overview and related work**

This section gives a critical summary and assessment of the range of existing research within the chosen problem domain. As such, the section positions the project towards the established field of research in the interaction design community (and/or related fields). The section can be seen as a draft for what literature that will be used, arguing for the relevance of that literature. Obviously you will not have done all reading and analysis before the project starts; consider this section to be a first sketch of the literature survey in your final report. In view of the proposed research-through-design approach, an equally important part of the section refers to interesting design exemplars and related work performed by others.

## **5 Methodology**

This section describes the overarching methodological aspect of the project. As such, it proposes methods for field studies or other relevant data collection, how design based experiments can be performed, criteria for evaluation and ethical considerations. It is highly recommended to build your methodological arguments from your research questions or knowledge interests: if this is what I want to accomplish in terms of knowledge production, how can I proceed to reach the goal?

## **6 Collaboration**

Here all stakeholders are described, including their role in the project. Included are issues of recruitment of participants and communication channels that will be used. Names and positions of key people should be included.

## **7 Expected results**

Here you should describe expected results and outcomes of the project. Contributions can be related to other fields or stakeholder organizations/communities, but the focus should be on knowledge contributions to the field of interaction design research. “Internally”, you should suggest what knowledge you expect to produce and consider how it can be seen as a contribution to the academic interaction design community. You should also address how your expected knowledge contributions relate to different forms of knowledge such as reflective analytical knowledge contributions, designed artifacts or methodological contributions. “Externally”, contributions can be discussed in terms of what they might mean outside of the academic interaction design community. This can be in terms of, e.g., use qualities, market effects or societal changes.

## **8 Activity plan, schedule**

You identify the key milestones of the planned project, and the main activities needed to reach the milestones. The activities are synthesized in a schedule covering the project period, and ideally it is also presented in visual form (using, e.g., a Gantt diagram). The schedule should also indicate critical paths and potential bottlenecks. Depending on the nature of the planned project, it may be necessary to provide a more detailed schedule for initial phases and then leave the rest of the schedule at a more general level.

## **9 Pilot experiment(s)**

As part of the research plan, one or more pilot experiments addressing the research framing should be performed, as part of the Design-based research course. The experiments can take on different character depending on the framing of the project. For instance, it can be a smaller design intervention, which illustrates potential problems or design openings in relation to the project, or it can be a material exploration. Similarly, the takeaway can differ depending on the nature of the project. In some cases, it might yield insights into design openings informing the introduction of the thesis. In other cases, the experiments may support the formulation of a concise research question, or decisions pertaining to research methodology.

## **10 Potential risks**

Potential risks area often overlooked when setting up research projects. Try to calculate potential risks in the project and if possible reflect on corrective actions for overcoming the identified risks.