HOW **PROVOTYPES** CHALLENGE STAKEHOLDER CONCEPTIONS IN INNOVATION PROJECTS

By Laurens Boer

POPULAR ABSTRACT

In the context of industrial innovation projects, research about people's daily practices is often used to inform and inspire the development of a new product or service and to ensure its fit with the intended use context. However, the user knowledge that is revealed through this research can be at odds with the developers' expert, often taken-for-granted, understandings of the use context. On the one hand, these understandings can become problematic if they remain taken-for-granted throughout a development process (e.g. when a product is put on the market and mismatches use context), but on the other hand, it creates an opportunity for reflection on these taken-for-granted understandings when revealed at the start of innovation projects. Design researchers can play an important role in bringing these conceptual tensions between developers and users to the foreground, in order to support a better fit between a new product or service and use context.

In this dissertation, I revive the provotyping approach from the 1990's systems design community, as this approach argued to build on problems in a practice in order to develop new systems. Based on my participation in a project that involved industries in the field of indoor climate and that employed user research, I develop the approach with respect to contemporary design research concerns. These include the areas of critical design and participatory innovation. I propose provotypes as technically working, robust artefacts that deliberately challenge user and developer understandings by embodying tensions that surround a use context of organizational interest.

Provotypes can be deployed in a use context but also the developers' daily industrial environment. Provotypes can be brought into the previously studied use context to inspire and inform the design process with user knowledge about the embodied tension. Provotypes can also be brought into the developers' daily industrial environment, to provoke developers to reflect on how taken-for-granted understandings can become problematic in the development of new products or services. As provotypes are employed in the beginning of a development process, they not only leave room to act upon reflections in subsequent prototyping and concept development activities, but they also initiate these activities as the design qualities of provotypes provide handles for the project participants to collaboratively explore new product or service directions. Provotypes therefore can bring analytical and generative activities together in innovation projects.

Overall, this dissertation argues that design researchers can approach early stages of an innovation project as opportunities to play out conceptual tensions between user understandings and expert developers' understandings through provotyping. I provide design guidelines and design characteristics of provotypes to support design researchers in developing provotypes. This dissertation can as such support design researchers in the transfer of user-knowledge that is at odds with developers understandings of use context, to ensure a better fit between a new product or service and use context.