Chapter 20
Safety Alarm Systems and Related Services:
From Potholes to Innovation Opportunities

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ABSTRACT

This paper examines an assistive technology targeted to ageing people: a safety alarm and the related service system. A safety alarm is not only a technical device; with the related system, it can be seen as a holistic opportunity for innovation. The operation of safety alarm systems and services depends on many critical points. Potholes lying in safety alarm systems are identified in this study, taking into account the technology, services and organizational network. The potholes are studied as sources and opportunities for potential innovation. Service, social, organizational, process and marketing innovations—combined with technology—are significant parts of innovation activity related to the ageing population. A technical device is not used in a vacuum: there is also organization and service acts, as well as the user with her or his values, appreciations, state of health, and so forth. These factors impact the variety of innovation potential in assistive technology. This paper examines the existing technology and related services as well as various innovation opportunities related to uncovering their shortcomings.

INTRODUCTION

"When they brought me this [safety alarm], they told me that I won't be allowed to use the safety chain anymore at the front door... But the safety chain is important, because then I hear if someone is trying to break in." (interviewee: female 84-year old safety alarm user)

Ageing of the population affects all fields of society. It is a multisided phenomenon also from the point of view of innovations: it means both challenges and opportunities. Innovations have traditionally been seen to be linked to high-technology fields of industry, but lately, the definition of

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innovation has been expanded (e.g., Damanpour, 1996; Plessis, 2007). Innovations increasingly presume factors like abilities to interact, learn collectively and build trusting relations between innovating partners (Harmaakorpi, 2004). One expansion has been to bring up and emphasize service and social innovations alongside the traditional technological or product innovations.

The challenges and opportunities related to ageing are not issues only for the social and health care sector. Developing successful well-being products and services requires various kinds of know-how that combine research from the social and well-being sector, management of production, management of services, etc. – without forgetting the end-user her/himself – who is a valuable source of information (cf., Capecchi, 1996, p. 178). Such innovation processes are often socio-cultural learning processes, where innovations emerge as processes deeply embedded in normal social and economic activities (e.g., Harmaakorpi, 2004; Lundvall, 1992). Innovations can thus be triggered by diverse causes, not just by research and development activities.

Innovations related to ageing are typical examples of non-linear and complex innovation processes, where opposing aims, inability and resistance to change exist – even when there is awareness of the need for change (e.g., Pihkala et al., 2007.) Research concerning innovation activities in the field of ageing has started relatively recently, and this is reflected in unclarity of concepts as well as narrowness of discourse. Innovations concerning ageing are typically associated with health care, and innovations in health care are considered to be technology oriented (e.g., Kivisaari & Saranummi, 2008; Väyrynen, 2003).

Innovations related to ageing are, however, a far broader phenomenon. This may be seen also when investigating technical devices related to ageing – like 'the good old' safety alarm systems as in this study. This study emphasizes that even when developing and implementing the technology for ageing, related innovation processes cannot be merely technology driven by nature. Service, social, organizational, process and marketing innovations – combined with technology – are significant parts of the innovation activity related to ageing of the population.

Likewise, looking at the issue from the point of view of services in particular, it is important to note that service experience consists of several components and includes connections between service providers. As the interview quotation at the very beginning of this article implies, feeling of safety is a holistic experience. A very typical mistake is to look at the situation from only one service provider's point of view and not taking into account other elements contributing to the safety experience of the customer.

This study thus focuses on a piece of assistive technology targeted to ageing people; a safety alarm – and the related service system. A safety alarm has traditionally been considered as a technical device only – a technical innovation initially – but when examining it and the related service system more closely, they can be seen as a holistic opportunity for various innovations. In a safety alarm system, a technical device is connected with a service network, and the operation of the system is dependent on many critical points regarding technology, service processes, information flows, etc. (e.g., Melkas, 2004). These critical points may appear as potholes – shortcomings – to be taken into account in future development efforts. The potholes can also be seen as opportunities for innovation, because triggers for innovation often arise from practice-based situations – for example, bad experiences with regard to reliability of technology or unsatisfactory service situations.

The aim of this study is to find the potholes lying in the safety alarm systems – to be investigated from various sides of the system taking into account the technology as well as services and organizational network of the system. The potholes are further studied as sources and opportunities for potential future innovations. The