

Digitalizing Labor Intensive Services

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Introduction

Digitally enabled service innovation of manual labor-intensive services is an area in development. Digital service innovation of manual services is a particular instance as it only partly transforms the service often resulting in a combined digital/manual service.

There seems to be a general hope that IT can provide for a digital transformation of most sectors this also includes the public sector (Barrett et. Al., 2015). The public sector is under pressure in many countries with a growing cohort of elderlies and a reduced workforce to pay but also provide the level of services expected. The digitalization of the public sector is therefore pursued by the need of cost reductions and a reduced workforce along with a need for quality levels regulated by law. Such changes however demand profound rethinking of the service production and delivery to succeed. A couple of municipalities in Denmark invest in such kinds of innovation, understanding that new avenues are needed to develop workable solutions, which delivers quality at a lower cost.

We argue that there are a lack of knowledge and thus special needs for research into digital service innovation of labor-intensive services to help organizations manage these innovations. We use a newly started research project on digitally enabled service innovation in home care to argue for this.

Experimental and emerging service eco-system

The integration of technology in labor-intensive service areas such as home care presents a disruptive element and a need to redesign the practice. This redesign is complicated; it involves a plethora of actors, material and processes and it draws on technology that is often immature and under development. However at the same time, this challenging situation provides a unique opportunity for co-creating an entangled practice of the socio-material practice (Orlikowski & Scot, 2008). The core is the infusion of information technology into labor extensive services and includes a service-dominant logic (Vargo and Lusch, 2008) in the development and use of the information systems.

We are investigating such a service innovation project in the municipality of Viborg in collaboration with Viewcare, a telecare service provider. Inspired by existing tele care technology used elsewhere Viborg municipality initiated a collaboration with the small application provider to convert physical home care visits to virtual home care whenever it would make sense. To be successful they need to develop the practice of virtual homecare, which is a different kind of service than the ordinary physical visits. The qualifications and understandings of both the home caretakers and the citizens receiving the service will need to change as they co-produce the service. In addition the telecare technologies are not yet mature for these kinds of services. Together Viborg municipality and Viewcare are exploring and developing an infrastructure of working practices and technology in collaborations with stakeholders such as relatives of the citizens, broadband providers etc. The service innovation process is ongoing and whenever new opportunities turn up they are explored with regard to the technological solution, the collaborative practices, norms and regulations.

Demand for new formalized partnership

What we see is a rather unique innovative collaboration between a private company and a municipality. They have different but aligned interests in the collaboration: The municipality provides a testbed for the application service provider to develop and organize their tools and services. The service provider gets unique insight into the various challenges of developing, running and implementing virtual homecare that they use to develop their service to other customer organizations in that market. The application service

provider on the other hand develop the virtual homecare solution based on the needs of the municipality and provides an ongoing service of developing, maintaining and supporting the service.

The collaborative construction has developed on the way along with the occurring situations and needs. The collaboration crosses the traditional organizational boundaries between the service provider and the use organization. One reason for the close collaboration is the needed development and changes which are transboundary and experimental and in need of courage and risk taking. To ensure workable technological solutions, the service provider has taking on the tasks of the IT-department during the development phase. The IT department of the municipality is therefore only limited involved in the development stage. They are involved in the strategic discussions and they ensure integration, and finally they prepare to take over maintenance in the future.

The close collaboration between the service provider and the municipality is rather unique and may help us provide new insight into PublicPrivatePartnerships especially for collaboration between municipalities and sme's. How do the service provider handle diverse needs especially when counterproductive or when known to be very organization specific, as they develop a technological communication platform to be used in other settings by ensuring generification of technology and services (Hanseth et al., 2012; Pollock & Williams, 2009)

Employee driven service innovation

This kind of experimental service innovation is in need of involvement and positive engagement of the employees. The employees are at the core to make virtual home care a success. The employees do not only provide the digitally enabled service, they develop it as a group and they promote it individually to the citizens and the relatives.

Providing home care services digitally is a paradigmatic shift as home carers see themselves as providing "warm hands". The shift challenges the professional identity and the embedded emotions. It also provides a change in the daily rhythm and demands different capabilities, that many of the employees (and citizens) need to develop.

Organizational structures and standardized service design processes (Stickdorn, 2014) involving groups of employees in service innovation are a way forward to involve employees in innovation rather than external users. It builds ownership of the change project, but even more importantly provides for organizational implementation that follows the experiences gained and capabilities build. At the same time it allows to investigate unforeseen applications beyond what was expected, which may enlarge the value.

Extended business cases moving beyond an isolated economical perspective

Working with the value co-creation of everyone involved goes beyond an economical perspective. More business cases are at play at the same time (the service provider and the municipality) and the business case of the pilot home care service included the economy but also the value to the other actors involved such as employee satisfaction, the life quality of the citizens and the trust of the relatives.

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