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Developing Participatory Public e-services for Rural Peripheries

Purpose of this abstract is to provide an overview on participatory digital technologies used in the public sector. Academic research on information systems increased substantially in the 1990s. The 2000s witnessed the similar surge of studies covering the issues of eGovernment. Recently, researchers have been addressing participatory public e-services by analysing concrete development cases.

There are unique challenges for citizens' participation in developing remote locations. The key question for rural areas is how to provide high-quality and sustainable public services, and to support the adoption of novel technological innovations given that these areas are often characterised by long distances, expensive service production per capita, scarce material and human resources and lack of access to the latest innovations. Technology developers introduce novel solutions, but the public sector actors tend to realise only short experiments, which seldom results in viable services or products. In addition, the public sector scarcely collects or evaluates the experiences afterwards, and therefore, the best practices are only randomly identified.

We identified participatory technologies and methods already utilised in the public sector and those that could have promising prospects in the near future. Literature review, web searches and case analyses based on convenient sampling resulted in 15 technologies. We divided them further into three groups, based on their current or hypothetical future usage and popularity. These are *The Cold Techs* (e.g. E-forms and feedback forms, online questionnaires), which are very basic online technologies and commonly used. *The Hot Techs* (e.g map and GIS-based technologies, mobile apps and platforms, hybrid digital platforms, chatbots and digital recommendation systems, social media, participatory design/living labs, and crowdsourcing platforms) are technologies that are used, tested or developed actively at the moment. *The Warm Techs* (e.g. virtual reality and augmented reality, virtual assistants, games and 3D applications, real time participation technologies, and blockchain technologies) could make a breakthrough in the future, but are currently still not in widespread use.

The identified technologies are analysed in the participatory framework and contrasted against the rural context. The user perspective should be one of the central considerations when utilising participatory technologies. Participation should be made low-threshold and the technology used should feel rewarding or motivating in itself. Whereas older technologies are exploiting citizen participation for identifying possible problems, the future of citizen participation may increasingly rely on technologies that enable users to participate in problem-solving and other co-creative practises.