Summary Report of the 2nd Meeting of the e-Service Knowledge Cluster held on 26th June 2023

Summary of presentations

The second meeting of the Smart Rural 27 E-service Cluster focused on presenting and discussing a methodology for the co-design of e-services in rural communities. In addition, four participating communities presented experiences they have made so far with developing innovative digital services. At the beginning, Edina Ocsko (Project Coordinator) explained the specific goals of the event, namely to:

- help making sure that any efforts taken towards introducing **digital technologies** do not remain an end in themselves, but **create tangible social and/or economic impacts**,
- offering support to local communities in **taking action** by means of an e-service co-design methodology that has proven to work in similar contexts,
- gather feedback on whether the participating villages were interested in **applying the co-creation methodology**, or parts of it, within their own local context.

A survey conducted among the cluster participants prior to the event had revealed that there was **general interest in harnessing digital technologies in diverse fields,** including for instance:

- electronic government services,
- community apps,
- smart mobility solutions,
- smart tourism solutions,
- smart waste management solutions,
- smart solutions building on the application of weather sensors,
- and the deployment of electronic network infrastructures such as Wifi and fibre optic networks.

Lutz Kubitschke (empirica) presented a brief overview of a **multi-staged e-service co-design methodology** that has been successfully applied in similar contexts over the recent years:

- There are countless digital innovation projects that have finally fallen short of expectations or fizzled out after an initial euphoria. One of the main reasons is that it had often not been considered that sustainable benefits for people and organisations cannot usually be achieved through technological innovation alone, but through a **sensible interweaving of technological and organisational or social innovation**.
- Against this background, a step-by-step co-design approach should be adopted which considers both the **technological and non-technological requirements** for the introduction of digital services in a local community. Furthermore, such an approach should be iterative so that lessons learned during the design process can be considered in an effective way.

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- With its initial phase of **ambition focusing**, the co-design process starts by making sure that all stakeholders indeed share the same vision when it comes to utilising digital technology for addressing perceived local challenges. It should not at all be considered certain that all parties concerned really mean the same thing when they talk about harnessing digital tools for specific purposes.
- Once a joint vision for the digital solution has been agreed among all local stakeholders, the next work step focuses on a critical appraisal of this initial vision. In the so-called **maturity assessment** phase, the stakeholders are requested to critically reflect on the strengths and weaknesses of the hitherto envisaged digital approach. When doing so, potential "road bloggers" that might make it difficult or perhaps even impossible to put the currently stated ambition into practice should receive particular attention.
- In the subsequent **operational implementation planning phase**, the outcomes of the previous work steps are translated into an operational plan setting out how the envisaged digital solution is to be put into practice. Here, the focus is on transforming the consolidated vision of a digital solution into a practical implementation project.

Kateřina Čadilová presented the approach taken by **Mukarow,** a village located 25 km away from the Czech capital Prague, for harnessing digital solutions for supporting public service delivery:

- With about 2800 inhabitants, Mukarov has joined the Smart Village Network in 2019. A **good telecommunications infrastructure** is available throughout the community, including a broadband network and public WiFi network. The latter was set up in the framework of the WiFi44EU project.
- The village is represented on the internet by a modern municipal website and a Facebook presence. Mainstream cloud services are used for document management internal to the public administration. In addition, **several projects** have been implemented up to now.
- An **online-payment portal** was introduced to enable citizens to pay public fees. The utilisation has increase from 543 users in 2022 to about 1000 users today, meaning that almost half of the population meanwhile uses the portal.
- A **participatory budgeting system** was introduced, where citizens had the opportunity to propose initiatives to be financed by the public purse. All in all, the interest at the part of the citizens turned out to be rather low. Only 135 citizens participated on the voting on the initiatives proposed.
- A **waste management system** has been introduced to monitor the amount of waste generated by individual households and to grant a discount to waste-efficient households. A gamification approach is used to provide an additional incentive to reduce waste.
- A **municipal agenda management system** is currently being piloted, to make the preparation of council meetings and other municipal events more efficient.
- The population has been growing over the past years and the municipality increasingly faces challenges in **involving all citizen in local decision-making**. Mainstream social networks such as Facebook are considered unsuitable for this purpose.

Jan Malgren presented digital services developed in **Veberöd**, a Swedish village with 5000 inhabitants, presenting itself as a research village for smart and solutions:

- In 2008, a **digital communication platform** was set up. Its continued operation is financed by private companies. Through this initiative, numerous digital projects have been developed up to now.
- A **digital water management system for cattle** alerts the farmer when the drinking trough in the pasture needs to be refilled. Similarly, a sensor-based system has been developed indicating when trees need to be watered.
- As a proof of concept, a **tracking system for stolen bikes** is currently being implemented. It alters the policy and/or other parties and located the stolen bike on a map.
- A solution has been developed to **measure water coming in and out of the villages** according to diverse parameters such as pollution due to different substances.
- Through a **smart street lighting system**, the lighting can be optimized, e.g. in relation to energy consumption.
- A speed radar-based **traffic monitoring system** helps optimizing the traffic flow in and around the village. Boston university is using the village as a digital twin for simulating and optimsing traffic also for other places.
- Through an **AI optimized mobile phone that identifies cracks in the street** a map indicating can be generated on street damages.
- A **virtual 3D-model of the villages** to which we can zoom in and, for example, visualize busses in the model as they go in the real world.
- A **self-driving vehicle** is developed for delivering goods, e.g. meals and pharmacies, to the citizens# homes.

Huw O'Toole presented a voluntary initiative that has emerged in **Newtownmountkennedy**, a fast-growing village south of Dublin that is increasingly becoming a commuter village:

- Six villages in the region are interested in working together to address the challenge of a rapidly **growing population and an increasing shift of local employment** to an urban metropolitan center in the wider area (Dublin).
- An **analysis of structural problems** was carried out by a volunteer initiative. The integration of newcomers into the local community, the creation of local employment and the creation of a network of safe cycling and pedestrian routes have been identified as important issues in this context.
- A vision has been developed based on **three inter-dependent strategic pillars**, namely improving interconnectivity (e. g. through a safe walking and cycling infrastructure), stimulating a smart green economy (e. g. through Smart Village solutions and a business network) and facilitating biodiversity and sustainability (e.g. through protecting local flora and fauna.
- As the initiative is **exclusively relying on voluntary engagement**, there is great interest in learning how others may have dealt with similar challenges and how a digital platform might best be harnessed for sustainably engaging with the local population.

Daiga Kalnina presented how **Alsunga**, a village with just over 1000 inhabitants on the west coast of Latvia, has experimented with digital solutions so far:

- An existing **mobile app enabling citizens to report problems**, e. g. a broken streetlight, to the public administration was tested for one month. Initially, the app was used by very view citizens. This situation started to slightly change only when the existing Facebook presence was closed. After all, usage of the App was not continued due to low usage rates. Dealing with problems reported via Facebook is nevertheless not considered a viable option, it is a labor-intensive task at the part of the public administration. One person needs to constantly monitor the Facebook page for complaints potentially raised by the citizens.
- A mobile app was developed enabling entrepreneurs to **offer local products and/or accommodation to tourists**. After the test phase, the mobile app died because there was no sufficient demand for such a digital communication channel. Tourist preferred to use the telephone for interacting with local providers.
- With a view to facilitating local tourism, a mobile app was developed which **enables tourists to download GPS files with interesting walking trails**.
- I order to **develop digital skills in the local community**, a school project was launched to teach programming skills. Supported by an expert, pupils developed, for example, a artificial reality solutions that can be used at school. Others were supported in programming a digital weather station.
- A **digital community calendar** was developed enabling the public administration, volunteer associations and local businesses to publish local events. The municipality makes the calendars available through its website as a one-stop-shop where citizens can look up information about local events.

Summary of the discussion

The focus of the subsequent discussion was on the question **how the concrete activities in the participating villages could best be supported**, in particular by means of the e-service co-creation methodology presented earlier. **Key aspects** of the discussion can be briefly summarized as follows.

Alsunga pointed out that developing a **strategic perspective** towards digital service development is considered very important. Alsunga now wants to develop such a strategy. Rather than pursuing innovation as an end in itself, emphasis should be given to take **real problems as a starting point** for any digitalization efforts. The mobile App that was tested in the community to enable citizens reporting problems to the public administration was mentioned as an example. In the end of the day, it turned out that there was no real demand in the local community for the functionalities provided by this digital solution. On the other hand, it was highlighted that experimentation with digital solutions, if implemented even with confined resources, can help creating local collaboration infrastructures and developing further ideas.

empirica emphasized that the consideration that any community-based e-service development should take real-world challenges as a starting point is at the **core of the presented co-creation methodology**. It is, of course, possible to experiment with an existing solution in an ad-hoc manner and to learn some lessons from such experiments. In times of scarce resources, it may however not be the most efficient way to spend local resources - i.e. money, peoples' time and

so on - that way. It may, therefore, be worth taking an effort to reflect in advance on a variety of aspects that may impact on long term success, and to involve all relevant stakeholders in structured self-reflection process right from the beginning.

E40 mentioned that the e-service co-creation methodology is not only applicably by villages that consider developing a digital solution in the future. Parts of it can also be applied in cases where such a development has already started, or a first output has already generated. Here the focus would be on systematically **preparing sustainable mainstream utilization** after an initial development phase.

Newtownmountkennedy emphasized that it plans to **develop a digital platform for engaging people in a local initiative.** The initiative is however exclusively driven by voluntary groups. This makes it difficult to ensure long-term support by the citizens and continuous engagement across six villages that have joined forces in this volunteer initiative. Existing social mainstream platforms such as Facebook are considered unsuitable for this purpose, as there is too much interference in such an online environment. Clarification was thought what the role of this project's e-service cluster could be and in particular what support would be available from empirica.

empirica explained that its role would be to provide a helping hand on **how the methodology presented earlier could best be applied in a specific local context**, and to customize related tools according to local circumstances. The village would then apply the customized methodology, ideally together with all local stakeholders, on its own. empirica would be able to provide guidance and on-demand support until February 2014.

Newtownmountkennedy asked whether there are any experiences whether the utilization of a **digital platform as such might increase the attractiveness of a local initiative for citizens**, in particular when it comes to those moving into the local community from outside. The Irish community is growing rapidly, and digital solutions might generally be considered as modern and progressive, which again might help in catch peoples' interest for local matters more generally.

Torup which participated in the Smart Rural 21 project already responded that positive experiences were made with a local App that had been developed with a view to better integrating newcomers into the local community. Inhabitants can offer their talents and tools they possess to others by means of this App. The **underlying idea is to make local resources available for free and at the same time facilitate a sense of belonging**. Today, the App is frequently used. Further information on the local journey taken by Torup when developing this App can be found on the web presence of the Smart Rural 21 project (https://www.smartrural21.eu/smart-solution/tools-talent-app/). It was however emphasized that it is very difficult to rely on voluntary groups exclusively. The success of the digitalization efforts which have been pursed in Denmark for quite some years by now rests not at least on the availability of government support to local initiatives.

Mukarov highlighted that the progress that has been achieved so far in relation to the digitalization of local government services relies on a small group of enthusiasts who constantly push the issue on the ground. There are however problems with reaching out and involving the wider community on a more permanent basis. The **core challenge now is to better communicate with the citizens**, and it is hoped that digital technology could help solving this problem. Further support and exchange in this regard is very welcome.

By means of a short Mentimeter-poll, participants were finally asked to **indicate their interest in receiving further support based on the co-development methodology** presented earlier. As can be seen from Figure 1, half of the respondents are interested to apply the methodology with the support of the Smart Rural 27 project over the coming months, while the other half are not quite sure yet. Community engagement and tourism emerged at the two core areas where the respondent hope to benefit from the methodology (Figure 2)

Figure 1 – Online-responses received in relation to the first Mentimeter-question

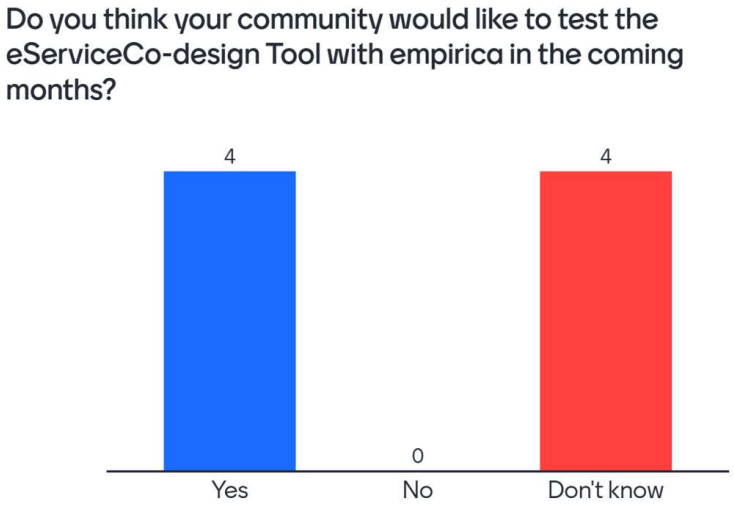

Figure 2 - Online-responses received in relation to the second Mentimeter-question

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