

## **Infrastructures of Inclusion: The Underrecognized Agency of Community Anchor Institutions in Bridging Rural Digital Divide**

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### **EXTENDED ABSTRACT**

We would like to start with a narrative, a takeout from an interview with two active seniors (R1 and R2) living in island Hiiumaa, Estonia.

Q: 'How could older people be motivated to use more digital services?'

R1: 'I'm trying to imagine how someone could motivate me to use them. I really can't say how I could be motivated. But I'd rather ask back: why should I?'

R2: 'To make something easier? You do a lot of those quiz questions and things but think how great it would be to just type it into Google. You know how easily the answers come from there...'

A1: 'That's true, but am I supposed to burn down my entire home library? I use those books!'

This quote shows the multifaceted nature of digital divide that can be illustrated as a complex set of constraints and enablers starting from internet connection, devices, skills, motivation and user experience. This interview conversation reflects several core questions not often raised in digital divide research, such as why should we 'digitalise' rural older people or why digital literacy programmes often align digitalisation efforts with abstract efficiency goals not users' lived realities?

Indeed, many countries, such as Estonia, are rapidly digitizing public and private services, meaning that essential functions—such as applying for social benefits, booking healthcare appointments, accessing banking services, or communicating with government agencies—are increasingly available online. In some locations – online only. This trend significantly heightens the urgency of improving digital participation in rural areas, where limited infrastructure, lower digital skills, and fewer support institutions can compound exclusion.

Ensuring that rural populations can use digital services is thus not simply a technological matter but a prerequisite for equity, wellbeing, and full participation in contemporary society. As studies on digital inclusion show, the shift toward online-only public services risks widening existing inequalities unless rural populations are equipped with the skills, confidence, and connectivity needed to use them effectively (Salemink et al, 2017; Anrijs et al, 2023; de Clercq et al, 2023; Marshall 2023; Leetmaa et al, 2025).

The digital divide can be defined as 'the uneven diffusion of digital technologies, in terms of their availability, their use, and their potential impact (Caragliu and Del Bo, 2025). It is a complex phenomenon shaped not only by personal characteristics—such as age, gender, and ethnicity—but also by positional factors, including geographical location, educational background, social networks, trust relations, cultural competencies, and income (Van Dijk, 1999). As our interview take-out showed, older adults frequently express low intrinsic motivation for adopting digital services, especially when existing non-digital routines still work well for them. This aligns with van Dijk's (2013) claim that motivation is a foundational layer of digital inequality, influencing both skills acquisition and use. It

means that overcoming digital divide, for especially underskilled and underserved populations with low motivation, needs not only effective digital support in terms of access and technical help but the emotional and social support that probably takes most of the effect in reducing the digital divide (Asmar et al, 2022).

Most of the studies of digital help discuss the support by family, friends and colleagues (Courtois and Verdegem, 2016). However, less effort has been conducted in this field to study different public and private institutions that can be an important source for people who lack from social contacts and loneliness in old age—that is known to be a common situation in rural areas. This statement confirms what some authors have been found before that there is a strong narrative that pathologises poverty and inequalities in pointing the blame at individuals rather than recognising structural deficiencies including poor policy responses (Shildrick 2018). It initialised us to think about analysing the mechanisms of local institutional capacity of support mechanisms to digital services.

This article examines how rural communities deal with challenges arising from digitalisation of public and private services. It primarily expands the discussion to the role of different organisations in this process. Taking the case study from Estonia, we provide insights into the potential for adopting the discussion to local anchor institutions such as libraries, post offices, village societies, and day care centres.

We first show how these institutions play a pivotal role in reducing the digital divide in Estonia, by asking the following questions:

RQ1: What is the role of local institutions in providing digital support in rural areas?

RQ2: What are the advantages of anchor institutions in addressing the rural digital divide?

Then we propose for a conceptual change to start to think about anchor institutions by prioritising and resourcing the engagement with helping to digitalisation ‘micro assets’ in rural context, and ask:

RQ3: How to empower local anchor institutions in addressing the rural digital divide?

## References

Anrijs, S., Mariën, I., De Marez, L., & Ponnet, K. (2023). Excluded from essential internet services: Examining associations between digital exclusion, socio-economic resources and internet resources. *Technology in Society*, 73, 102211.

Asmar, A., Mariën, I., & Van Audenhove, L. (2022). No one-size-fits-all! Eight profiles of digital inequalities for customized inclusion strategies. *New Media & Society*, 24(2), 279-310.

Caragliu, A., & Del Bo, C. F. (2025). Regional institutions and the urban digital divide. *Papers in Regional Science*, 100118.

de Clercq, M., D'Haese, M., & Buysse, J. (2023). Economic growth and broadband access: The European urban-rural digital divide. *Telecommunications Policy*, 47(6), 102579.

Courtois, C., & Verdegem, P. (2016). With a little help from my friends: An analysis of the role of social support in digital inequalities. *New media & society*, 18(8), 1508-1527.

Leetmaa, K., Bochkova, M., Kangro, K., Kübar, T., Lepik, K. L., Pastak, I., & Plüschke-Altof, B. (2025). Digital transformation through the lens of peripheralisation: Double exclusion of ageing rural localities in an advanced e-country. *European Urban and Regional Studies*, 09697764251388979.

Marshall, A. (2023). A new rural digital divide? Taking stock of geographical digital inclusion in Australia. *Media International Australia*, 190(1), 68-84.

Salemink, K., Strijker, D., & Bosworth, G. (2017). Rural development in the digital age: A systematic literature review on unequal ICT availability, adoption, and use in rural areas. *Journal of Rural Studies*, 54, 360-371.

Shildrick, T. (2018). Poverty propaganda and reproduction of poverty, power and inequality. In *Poverty Propaganda* (pp. 131-150). Policy Press.

Van Dijk, Jan. 1999. *The network society, social aspects of new media*. Thousand Oaks, CA: Sage.

Van Dijk, J. A. (2013). A theory of the digital divide 1. In *The digital divide* (pp. 29-51). Routledge.