

How to address the last 1% of white areas

BCO seminar – 12 March 2024

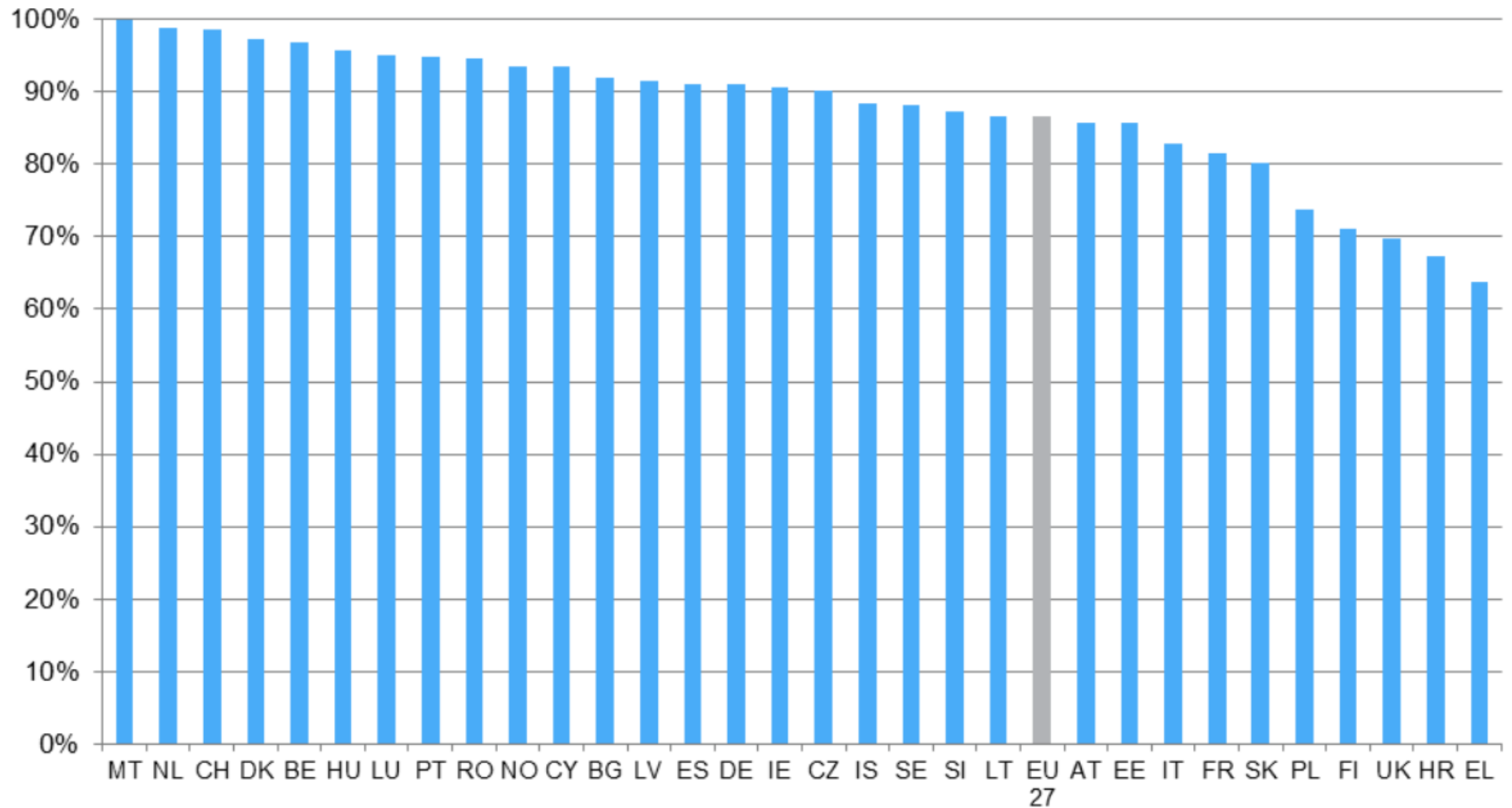
Intro by Marco Forzati

Gigabit Society connectivity targets

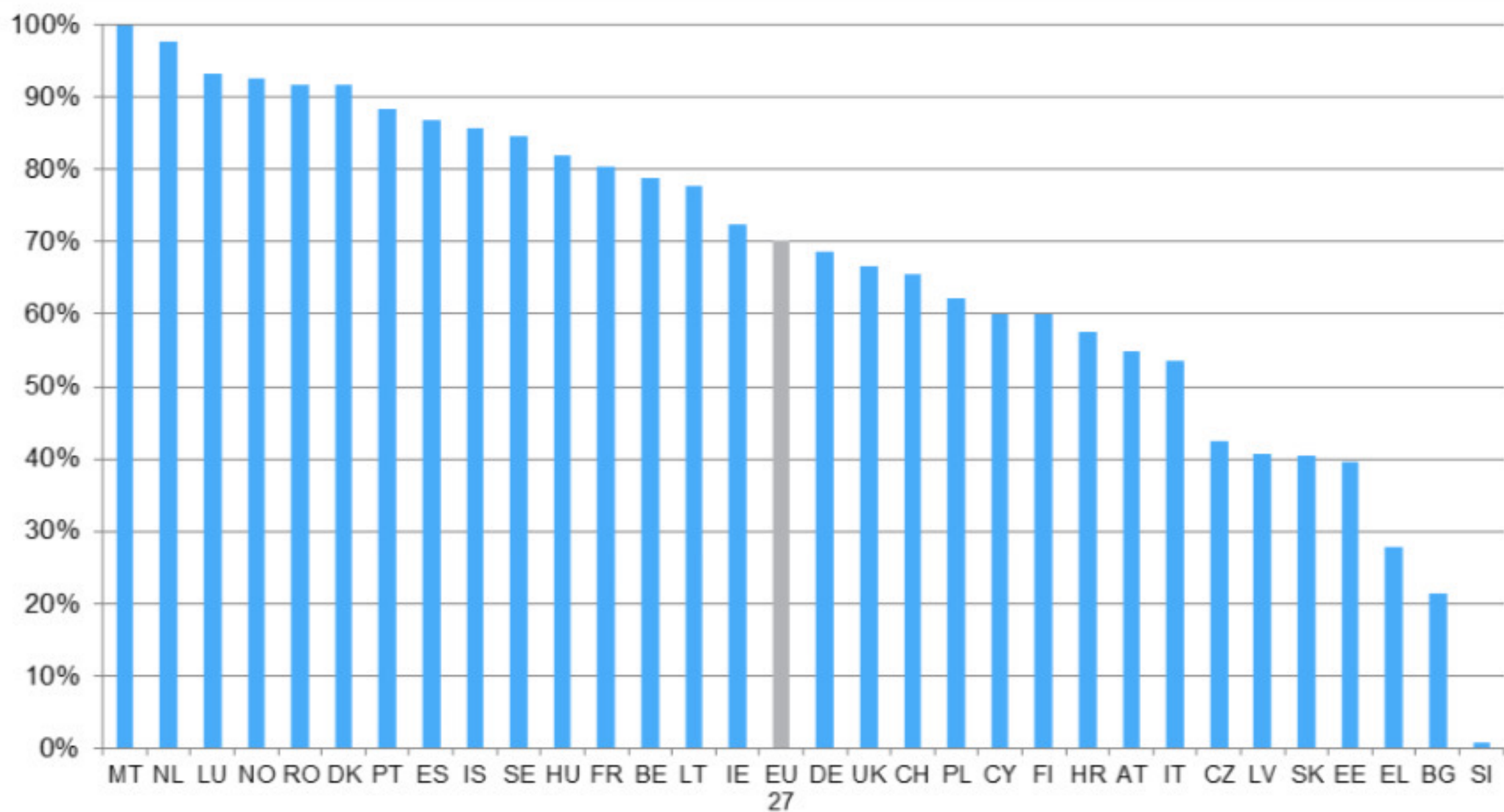
By 2025:

- **Gigabit connectivity for all main socio-economic drivers** (schools, transport hubs and main providers of public services as well as digitally intensive enterprises).
- **All European households**, rural or urban, will have access to Internet connectivity offering a download speed of at least **100 Mbps**, upgradable to Gigabit speed.
- All urban areas and all major terrestrial transport paths to have uninterrupted 5G coverage.

Speed coverage by country: At least 100Mbps download, 2022



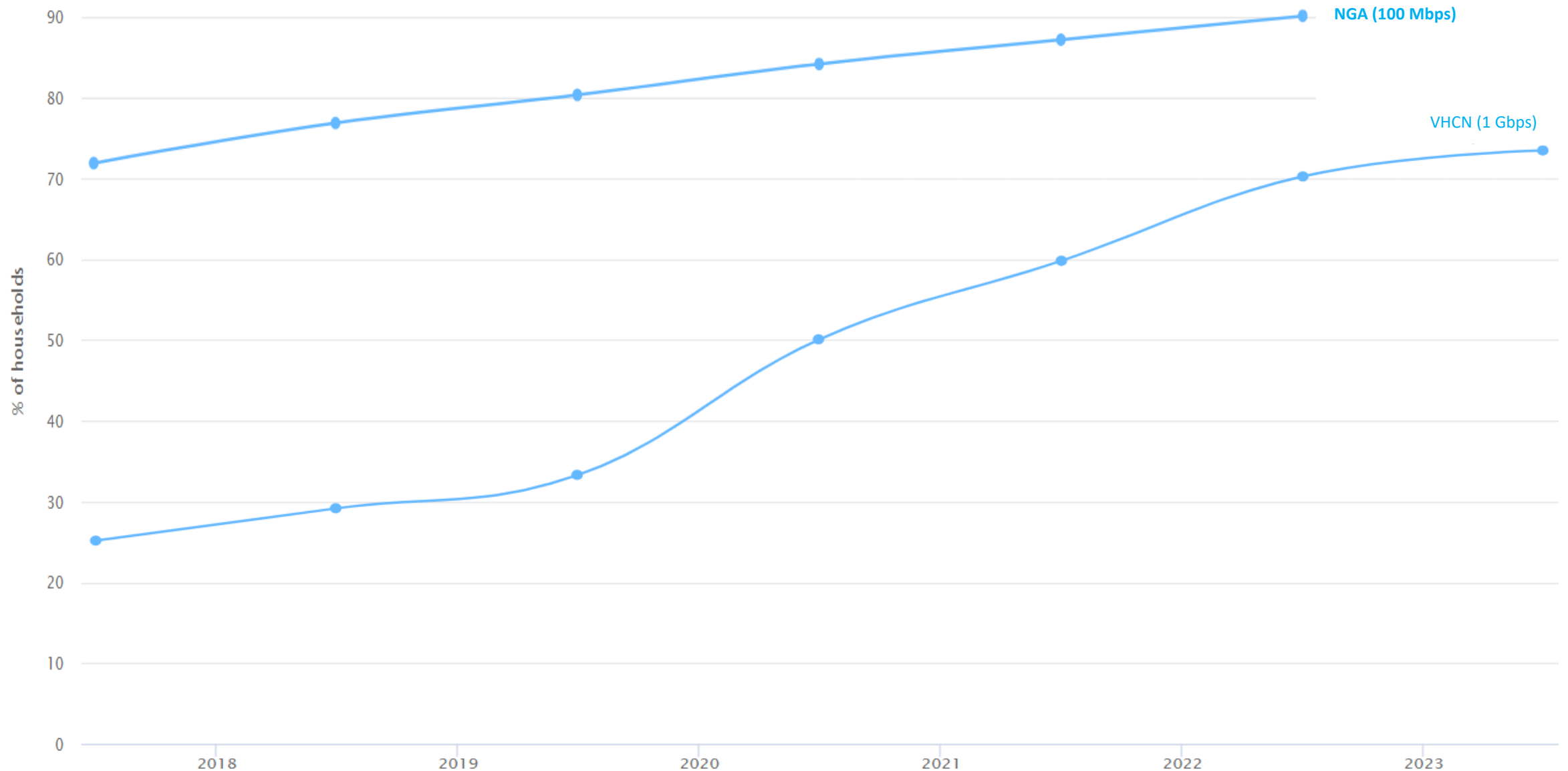
Speed coverage by country: At least 1Gbps download, 2022



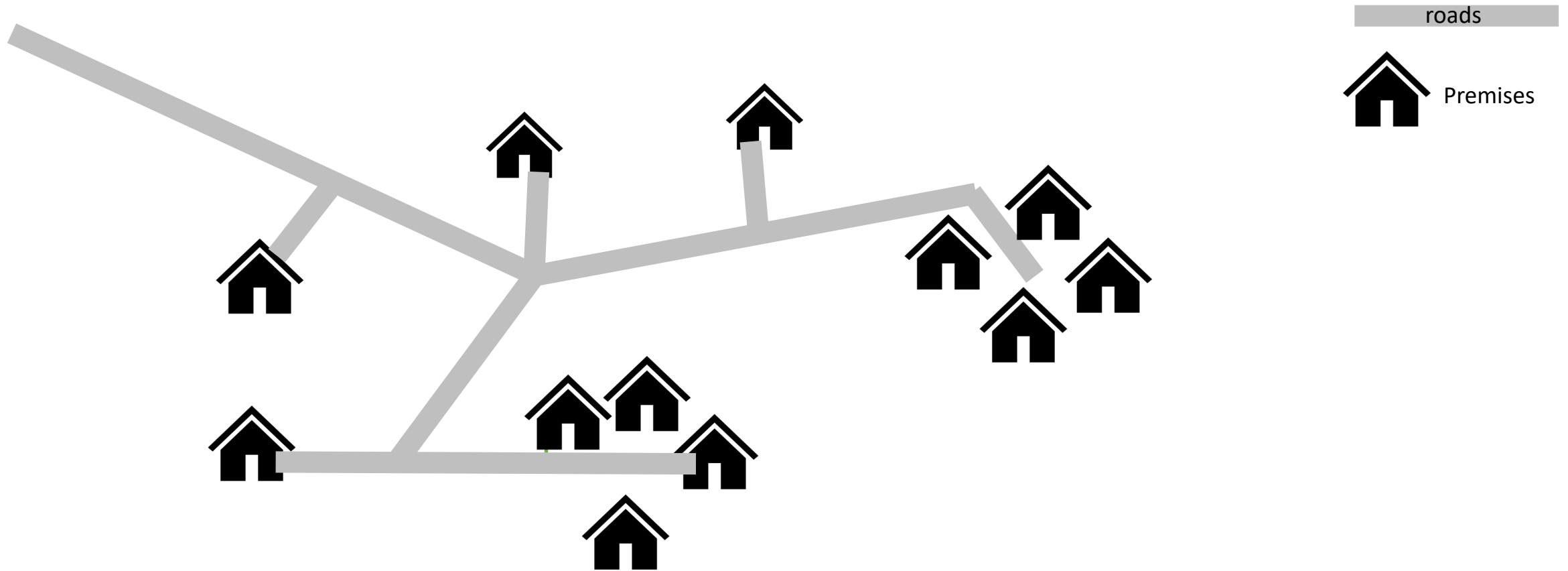
Source: Broadband Coverage in Europe 2022, a study by Omdia and Point Topic for the European Commission

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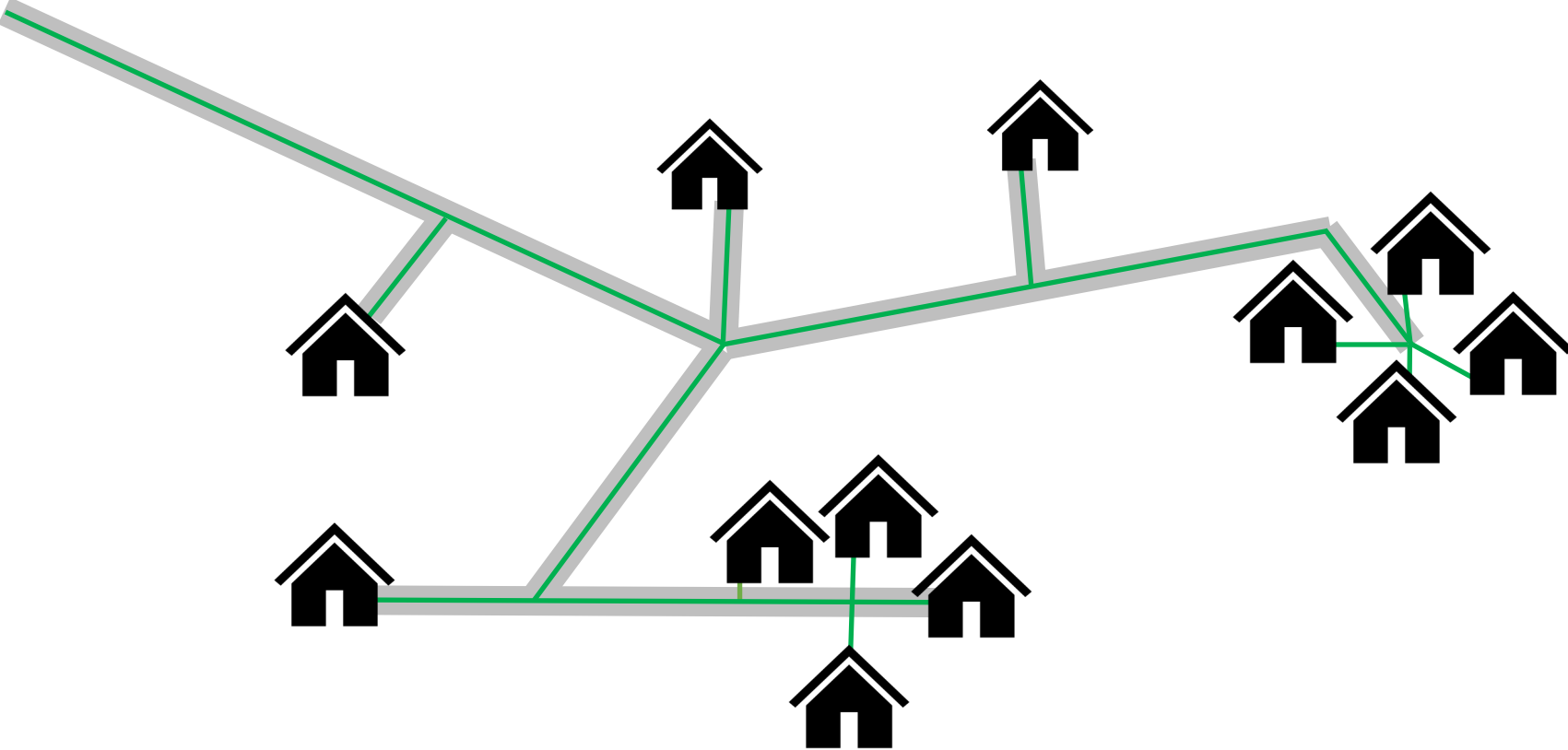
Is the EU on track?



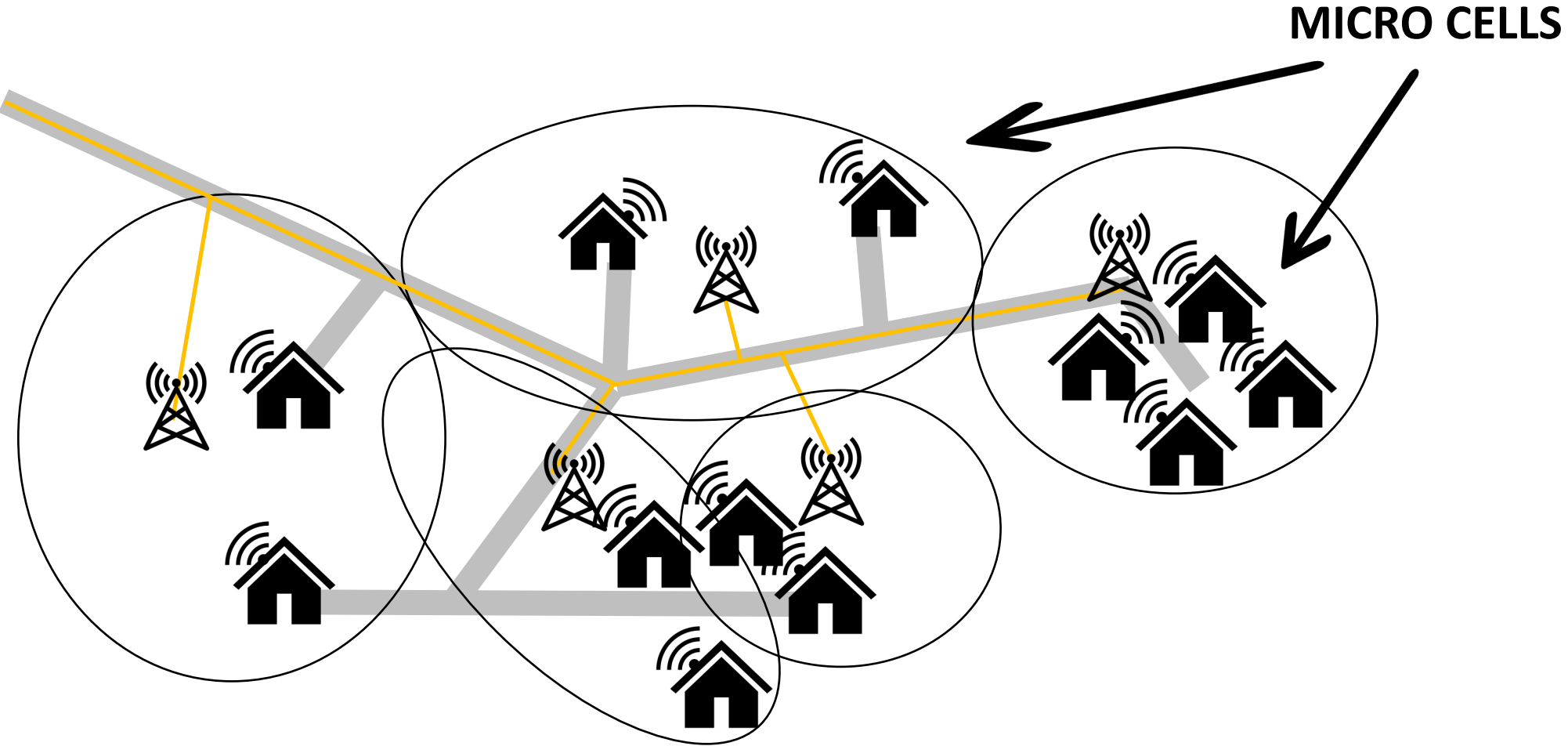
PROVIDING CONNECTIVITY IN RURAL AREAS



SCENARIO 1: FULL FIBRE CONNECTIVITY (VHCN PERFORMANCE)



SCENARIO 2: FWA WITH FIBRE-CONNECTED MICROCELLS (NGA PERFORMANCE)



EXAMPLE STUDY* – SWEDEN UP TO 98% ^{~430,000 households}

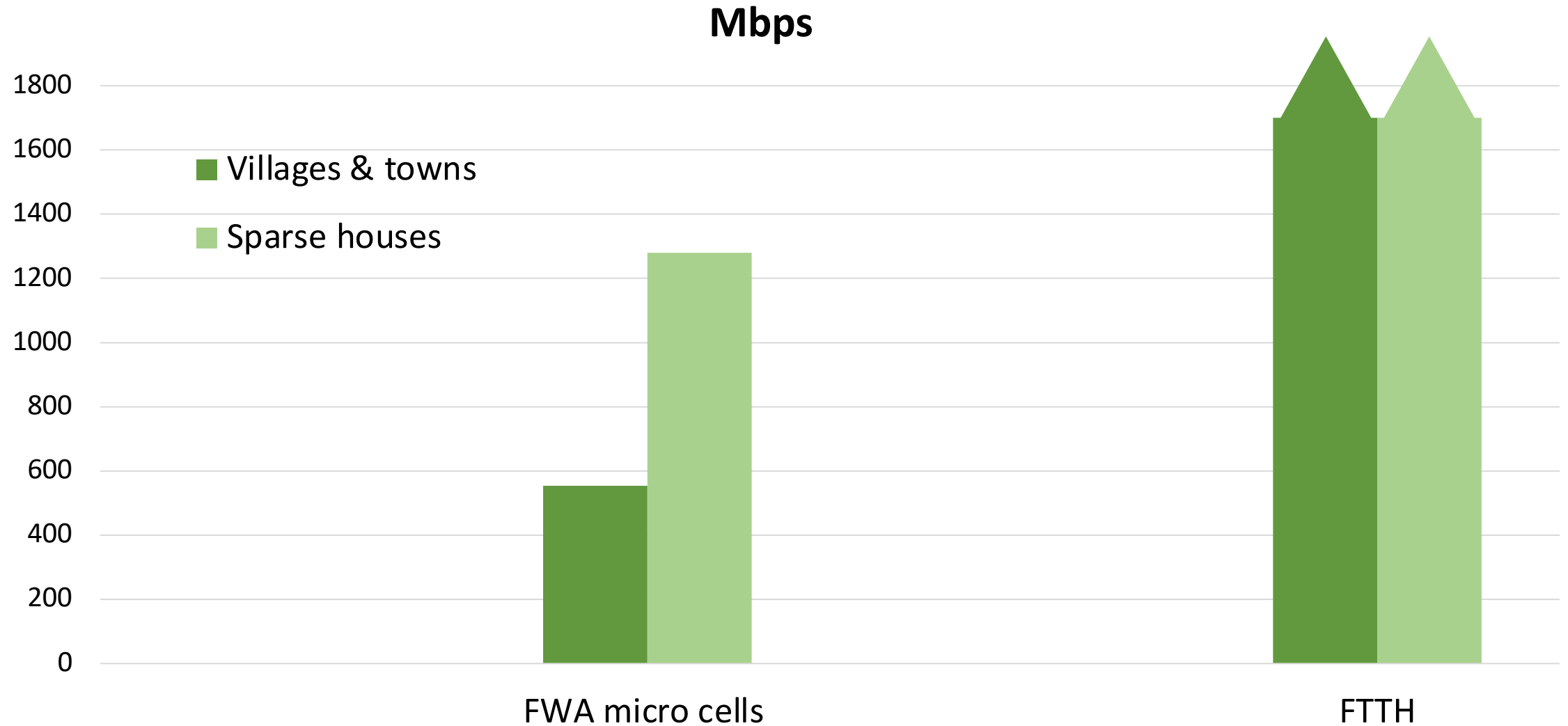
Investment cost, €bn (10 years)



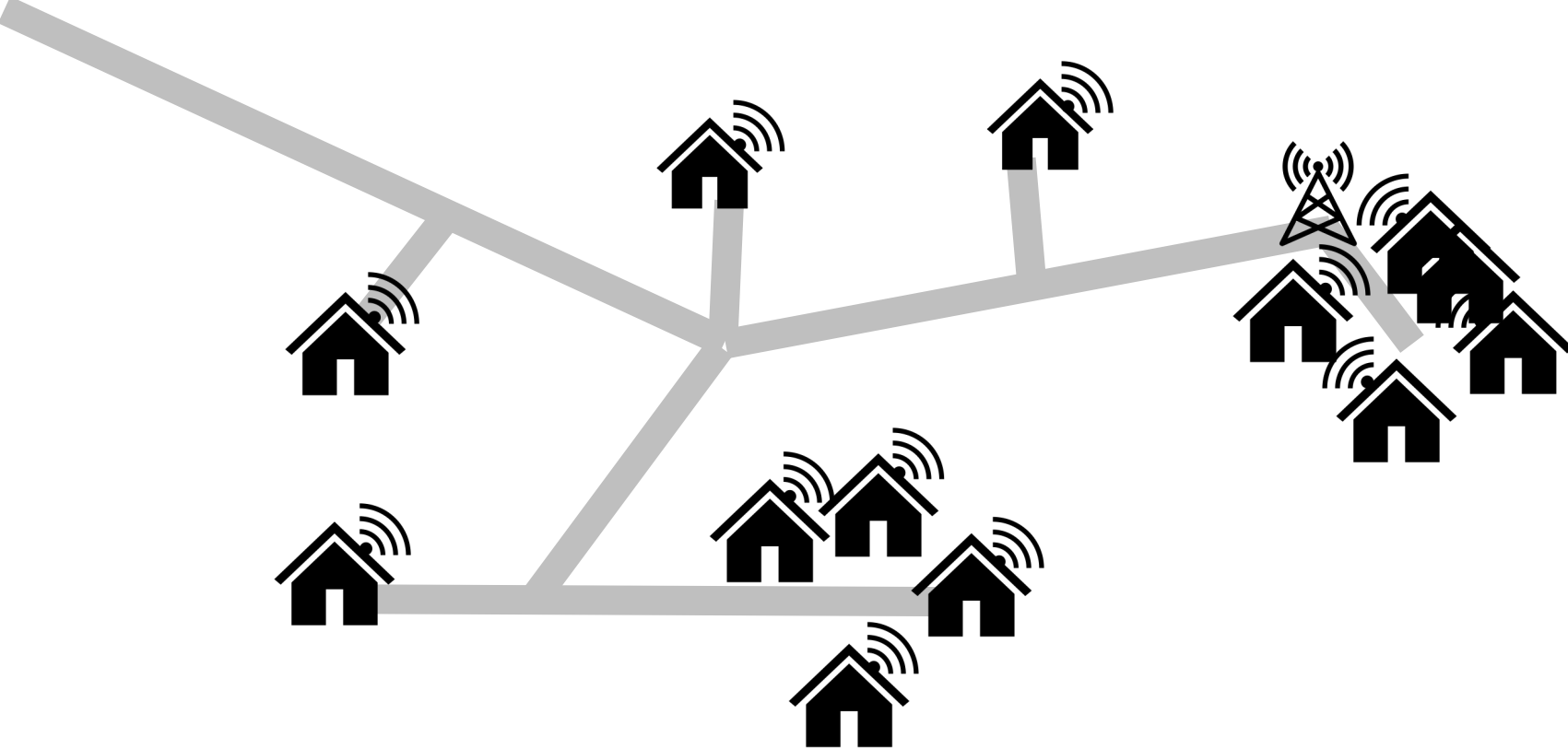
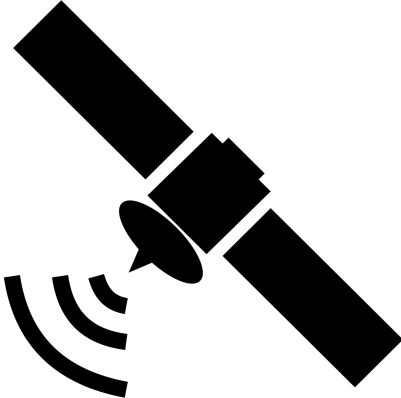
* Li, Forzati (2020): Cost, performance and energy consumption of 5G fixed wireless access versus pure fiber-based broadband in Sweden, ITS Online Event, 14-17 June 2020, International Telecommunications Society (ITS)

■ CAPEX ■ OPEX

EXAMPLE STUDY – SWEDEN UP TO 98%



SCENARIO 3: LEO SATELLITE SOLUTION (NGA+ PERFORMANCE??)



Some questions to think (and discuss) about

If Gigabit connectivity for all the end goal (100 Mbps **"upgradable to Gigabit speed"**), then there is little alternative to **full fibre** connectivity.

- How **strict** should the definition of "upgradable" be?

not strict

very strict

We allow for an interim solution

- How are we **subsidising the OPEX gap?**
- What can the **role of LEO satellite** solutions be?

We go for full fibre now

- How can we boost the **CAPEX subsidisation?**
- Can we reduce cost by leveraging **alternative installation methods?**