

## Forecasting VHCN coverage in the Czech Republic



### Studie 24

#### AT A GLANCE

**Study 24** forecasts how coverage by Very High Capacity Networks (VHCN) will develop in the Czech Republic through 2030, in step with the 5G roll-out. It benchmarks Czech progress against the EU **Digital Decade** targets, sets out the technology mix that will drive coverage, and quantifies the gap likely to remain between forecast coverage and the national 95% goal.

### What the study covers

VHCN are the backbone of modern digital infrastructure, enabling the fast, reliable data transfer that advanced services depend on. The study first defines VHCN across EU and Czech law — the **European Electronic Communications Code (EECC)**, the national Electronic Communications Act and the **BEREC** guidelines — then assesses 5G and fixed wireless access (FWA) as VHCN technologies, maps current coverage, reviews EU and national strategy and support programmes, and closes with a household-coverage forecast to 2030.

### Why it matters

Reliable high-capacity connectivity underpins competitiveness, innovation, public services and crisis response. Yet progress is uneven: cities advance quickly while rural areas lag, and a widening **urban–rural digital divide** threatens equal access to education, healthcare and work that increasingly rely on quality connections.

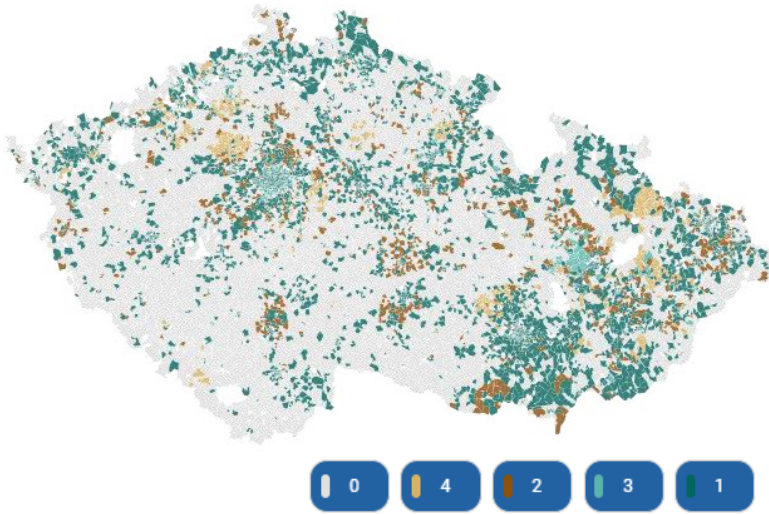
### Where the Czech Republic stands today

Key indicators versus the EU27 average (*Broadband Coverage in Europe 2023*):

Indicator (% of households)	Czech Rep.	EU27
Fixed VHCN (FTTP + DOCSIS 3.1)	50.5%	78.8%
FTTP — fibre to the premises	36.0%	64.0%
Coverage ≥ 1 Gbps available	40.3%	75.6%
5G coverage (populated areas)	94.6%	89.3%
FWA — fixed wireless access	80.5%	68.5%
Fixed VHCN in rural areas	7.2%	55.7%

*The Czech Republic leads the EU on 5G and FWA, but trails badly on fixed VHCN — and rural fixed coverage of just 7.2% is the core challenge.*

## Coverage today — a tale of cities and countryside

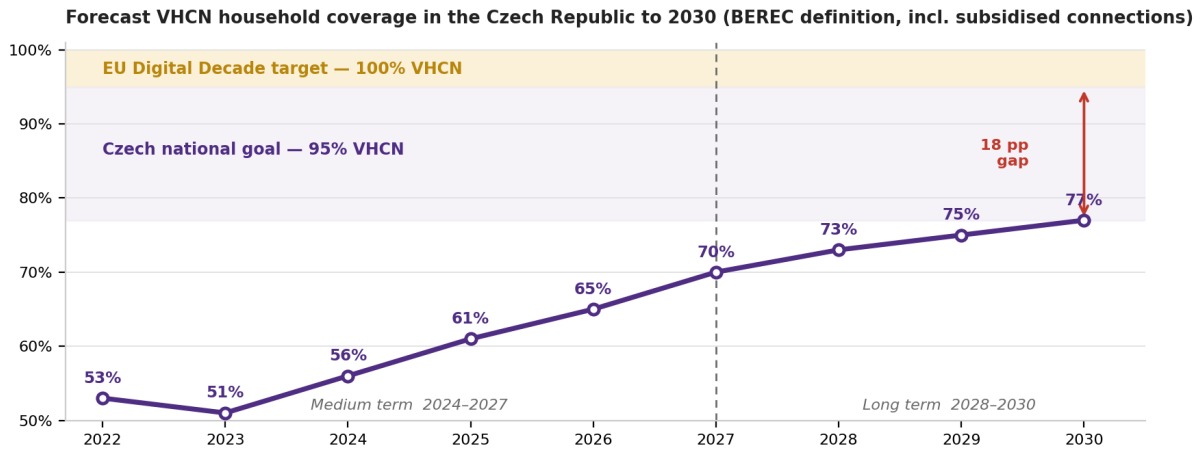


- 0. = Not covered by the VHCN network
- 1.= Deployment of a fully optical network to the specific location
- 2.= Deployment of a fully optical network to a base station or similar AP (relevant for wireless networks)
- 3.= No optical network is deployed to the address location, but all performance thresholds 1 are met
- 4.= No optical network is deployed to the base station or equivalent AP, but all performance thresholds 2 are met (relevant for wireless networks)

VHCN coverage by settlement unit, 31 Dec 2023 — green: full fibre to the address; orange: partial. Source: ČTÚ Visualisation Portal.

## The forecast to 2030

The study models two horizons. In the **medium term (2024–2027)**, growth is driven mainly by FTTP fibre, reaching roughly **69.5% of households** by end-2027 under the BEREC definition. In the **long term (2028–2030)**, growth slows as the cost-effective urban areas are saturated, reaching about **77%** by 2030 — well short of the national 95% goal and the EU's 100% target.



## The technology mix that will close — and bound — the gap

<p><b>FTTP fibre — the dominant driver</b> Backed by private investment and public subsidies. XGS-PON and NG-PON2 push symmetric speeds to 10 Gbps and beyond.</p>	<p><b>DOCSIS 3.1 → 4.0 — urban complement</b> Upgraded cable networks add gigabit capacity where coaxial infrastructure already exists; Full Duplex (FDX) improves symmetry.</p>
<p><b>5G &amp; FWA — reaching the countryside</b> 5G-based FWA brings gigabit-class access to hard-to-serve rural areas, using 26 GHz mmWave for capacity and sub-6 GHz for reach.</p>	<p><b>Satellite &amp; smarter build methods</b> Modern satellite and lower-cost installation methods can serve the costliest last percentages where even 100% subsidy is uneconomic.</p>

**KEY TAKEAWAY** Even with sustained private investment and EU-funded support, Czech VHCN coverage is forecast to reach about 77% of households by 2030 — close to, but short of, the national 95% goal. Closing the remaining rural gap will depend on FWA, 5G and satellite, and on a successor to the current National VHCN Development Plan.

Source study: "Predikce vývoje pokrytí sítěmi VHCN v České republice ve vazbě na rozvoj sítě 5G", prepared by Grant Thornton Advisory for the Ministry of Industry and Trade, November 2024, financed by the EU — NextGenerationEU / National Recovery Plan.