Financováno Evropskou unií
NextGenerationEU

MINISTERSTVO PRŮMYSLU A OBCHODU

GrantThornton

AT A GLANCE

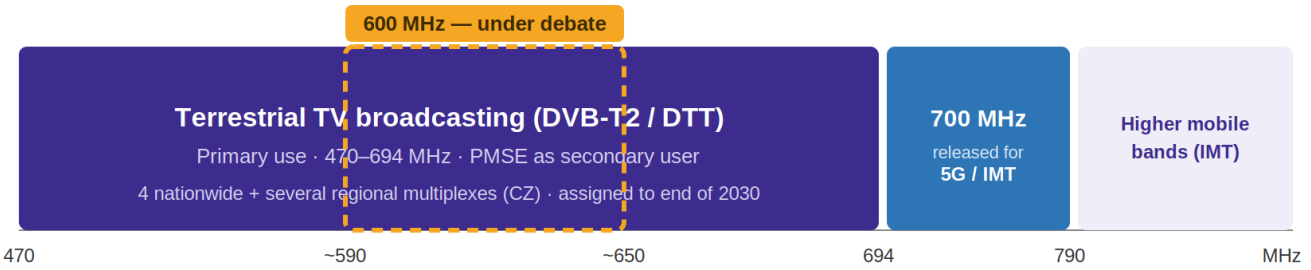
Study 1 analyses the current and future use of the 600 MHz band — part of the UHF band historically reserved for terrestrial television — and the Czech Republic's position on using it for DVB-T/DTT or, potentially, for IMT/5G mobile services. It weighs the technology, the regulatory framework and the economics behind two competing development scenarios.

What the study covers

In ITU Region 1 the UHF band, including 600 MHz, has historically been allocated primarily to terrestrial television broadcasting and secondarily to PMSE. The 2020 transition to DVB-T2 allowed more efficient use of the spectrum and released the 700 MHz band for 5G. Four nationwide and several regional multiplexes still operate in the UHF band in the Czech Republic, with frequencies assigned until the end of 2030, carrying the public-service broadcasting of Czech Television — which must provide accessible, pluralistic content and impartial, independent news.

The UHF band and the 600 MHz question

ITU Region 1 — current allocation and the band under debate (470–790 MHz, illustrative)



2020 DVB-T2 transition freed spectrum and enabled the 700 MHz release for 5G — focusing attention on the remaining UHF band.

Why it matters

Technology trends point to 5G Broadcast as a possible complement to DTT in the 600 MHz band. However, today's mobile networks do not yet reach the coverage needed for adequate mobile reception of 5G Broadcast, and because the standard is still in testing it is hard to predict its advantages over DVB-T2. A major open issue is interference between DTT and IMT: minimum separation distances between transmitters reach 200–300 km. Economically, running 5G networks in the 600 MHz band could generate higher revenue than DTT — but a study of the society-wide impacts on all stakeholders is still missing.

Financováno Evropskou unií
NextGenerationEU

MINISTERSTVO PRŮMYSLU A OBCHODU

GrantThornton

The regulatory landscape

Where the main bodies stand on the future of the 470–694 MHz spectrum:

WRC-23 (ITU)

Confirmed the global priority of TV broadcasting in 470–694 MHz.

RSPG

Backed using the spectrum for crisis communication and national defence should the need for DTT decline.

ECC

Together with RSPG, stresses preserving spectrum for PMSE (programme making and special events).

GSMA

Supports deploying 5G in the 600 MHz band for better rural coverage and lower operating costs.

Two development scenarios

For the 600 MHz band the study identifies two possible development paths. The specific recommendation depends on which service is preferred; in both cases international coordination is essential given the very different characteristics of broadcasting and mobile services.

Two development scenarios for the 600 MHz band

Both paths require international coordination given the characteristics of the two services.

Scenario 1 · Keep UHF for DTT

Maintain current allocation for terrestrial TV

Potential benefits

- Slower decline in TV viewership
- Regionalisation of broadcasting preserved
- Competition maintained on the platform
- Free-to-air programmes can continue

Trade-offs

- Extra IMT capacity (rural) needs network densification or another band
- Higher costs → possible lower service quality or slower innovation cycle
- Cross-border impacts on both services from separation distances if IMT starts earlier abroad

Scenario 2 · Allocate part to IMT

Assign part of the 600 MHz band to mobile

Potential benefits

- Lower cost than densifying / new band
- Spectrum for innovative services (e.g. network slicing)
- Potentially higher competition
- Room for 5G Broadcast as innovation

Trade-offs

- Smaller programme offer → DTT appeal drops, pressure on commercial FTA
- Reduced regional reach; one nationwide network potentially cancelled
- Decision before 2030 adds costs: network optimisation, transmitter/antenna swap, possible compensation for lost revenue

Recommendations — next steps

The study sets out the following actions, primarily within radio spectrum management:

1. Prepare an analysis of the efficiency and significance of the 600 MHz band for the Czech Republic — covering a description and prediction of DTT (and other platforms') viewership, a prediction of tax revenues from IMT services, and a comparison of the benefits against TV-licence-fee revenues and the taxes generated by producing free-to-air content in the 600 MHz band.
2. Take a strategic decision on the country's future direction and actively engage in EU and ITU working groups.
3. Implement the consequent decision adopted at the supranational level.

KEY TAKEAWAY

The 600 MHz band sits at the crossroads of public-service broadcasting and next-generation mobile. Keeping the band for DTT and opening part of it to IMT are both viable — the choice depends on national priorities, demands a society-wide impact study that is still missing, and in every case requires international coordination.