

EUROPE MUST ACT NOW TO ENABLE NEXT-GENERATION WI-FI ACTIVITY

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Across Europe, there are now 728 million active Internet users online, with more people becoming connected each day. European countries are experiencing Internet penetration rates of up to 96 percent, as connectivity becomes more integrated in daily lives. As European citizens continue to learn, work, shop and interact online, the pressure on Wi-Fi to keep up with this demand becomes greater and greater.

EUROPE'S DIGITAL FUTURE

As part of its Digital Decade program, Europe is setting out its objectives and goals leading up to 2030. With the EU set to roll out a new Radio Spectrum Policy Program this year, the role Wi-Fi will play in achieving its connectivity targets and unleashing the full potential of digital and green technology cannot be understated. Cities across the continent continue to be modernized and enhanced through the use of digital technology, with further innovations such as e-medicine, e-education and haptic systems expected.

Asked about how the EU will ensure adequate access to Wi-Fi, given its importance for driving digital development particularly for small to midsize enterprises, in a recent event on Europe's 2030 digital targets, EVP Margrethe Vestager expressed her support for Wi-Fi as a fundamental technology in public places like libraries and squares (where technology is provided for free) and in other locations across Europe. Indeed, Wi-Fi alongside satellite, fiber, and 5G is crucial to ensure a real European connectivity mix. In this context, and to make sure that Wi-Fi is not "taken for granted," license-exempt access to the entire 6 GHz band is required.

In comparison to regions like the Middle East and Africa, Europe's broadband penetration rates are high, but more still needs to be done to build on these foundations. Opening up the 6425–7125 MHz band for license-exempt access in Europe

will help connect users across the continent to high-quality Wi-Fi, supporting seven sufficiently wide channels for newer applications in the band.

WHY THE ENTIRE BAND, AND WHY NOW?

Spectrum is a finite source and needs to be used in the most efficient way possible. By opening new bands of spectrum for license-exempt access, congestion in the existing bands is relieved, and innovative use cases are supplied with the necessary spectrum and channel bandwidths. A white paper published in partnership with the Dynamic Spectrum Alliance, along with other partners such as Intel and Qualcomm, identifies the opening of the full 1200 MHz in the 6 GHz band to license-exempt radio local area network (RLAN) technologies as the best public policy choice for regulators globally. Doing so would avoid inconvenient spectrum clearance events while maintaining potent connectivity.

The European Commission (EC) has begun to allow some license-exempt access to the 6 GHz band, but more still needs to be done. The 480 MHz made available by the EC is a promising start, but by 2025, we are expected to face a spectrum shortfall of up to 1.6 GHz in the mid-frequency range, which will limit the performance and availability of broadband. This will directly impact both residential and corporate networks, and it is increasingly likely that this additional Wi-Fi spectrum is required to just to keep afloat with requirements of existing uses, let alone for the innovative technology still to come. Currently in Europe, there is a policy gap for indoor connectivity and authorities should not ignore what happens after the fiber reaches the households. The European 2030 Gigabit Society connectivity targets will need performant Wi-Fi 6E and Wi-Fi 7 technologies operating in the entire 6 GHz band for this to be achieved.