

European Commission launches study on 5G supply markets and Open RAN

An independent study will kick off shortly to analyse global 5G supply market trends and set out possible options for the Commission to facilitate the development of a diverse and sustainable 5G ecosystem in the EU.

Context

The study will serve as input for the Commission to support the implementation of the 5G cybersecurity toolbox adopted last January. It is complementary to the mitigation measures taken by Member States as outlined in the NIS report on the state of its implementation published on 24 July. The important role of equipment suppliers for the cyber-security of 5G networks has been underlined in the context of the toolbox. Its strategic measures include ensuring supplier diversity through appropriate multi-vendor strategies and fostering a diverse and sustainable 5G ecosystem in the EU. In this context, the Commission aims to assess and promote standardisation activities enabling interoperability of 5G equipment. The study, with a budget of 190.000 € and a duration of 11 months, will be conducted by a consortium involving RAND Europe, Austrian Institute of Technology, Arthur D. Little, Fraunhofer, and IMEC.

Purpose of the study

The purpose of the study is, firstly, to describe as a baseline the status of the European and global 4G and 5G supply markets in 2020. It will identify existing and expected market trends that could be shaped by the technological and strategic developments in this field. Furthermore, it will identify possible policy measures for European and national authorities to address the risks and opportunities of such developments, as well as forecast their impacts on the supply market structure. Such measures could range from stakeholder engagement, funding opportunities through European programmes, launching standardisation and certification initiatives, and regulatory measures.

The 11 months study will have a strong focus on stakeholder participation with two workshops and a broad set of planned expert interviews. The first workshop is planned for the end of this year and first results can be expected for beginning of 2021.

Supply market trends

With the gradual roll-out of 5G technology, there will be opportunities and challenges concerning new business models and players through software networks with architectures such as Open-RAN, i.e. more open and interoperable interfaces in Radio Access Networks (RAN). The two major European equipment suppliers are in a world-leading position, holding around half of the combined global mobile equipment market share, as well as of the relevant IPR share held by the four major suppliers globally. Building on this solid basis, Europe needs to position itself to ensure the best outcome both

for the digital economy at large, but also for the technology capabilities of our existing and emerging industrial leaders. The upcoming European Partnership on Smart Networks and Services is expected to play a major role in shaping the technology agenda for 5G and later 6G systems.

Evolution of 5G technology

5G technology and standards will evolve in the next few years in several phases, just as deployment advances. The first commercial 5G networks were launched at the end of 2019 in some major European cities. According to the European 5G Observatory, 138 European cities will have 5G commercial services by end of 2020. This early deployment will build on 4G networks and will aim primarily at enhancing mobile broadband services for consumers and businesses. A more comprehensive deployment covering all urban areas and major transport paths across Europe is expected by 2025. 5G technology is planned to evolve towards new 'stand-alone' 5G core networks enabling industrial applications such as Connected and Automated Mobility (CAM) and industry 4.0. These are major opportunities in particular for a digital and green recovery from the COVID-19 crisis. The effective and timely implementation of the 5G cyber-security toolbox will ensure that 5G networks will be sufficiently secure for such critical services.

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