



## Growing demand for 5G New Radio: Leading companies and research organizations join forces in European research project ONE5G

**Stuttgart, August 2017** – Thirteen leading telecommunications innovators have joined forces to advance the development of new radio technologies for 5G (5G New Radio - 5G NR) driven by growing interest in mobile 5G applications based on fully standardized technology. The European research project ONE5G\* focuses on boosting the capacity of mobile networks, improving their energy efficiency and enabling a variety of new vertical use cases in dense urban areas as well as in rural environments.

ONE5G has received funding from the European Commission under the EU's "Horizon 2020" initiative to drive research that enables a swift move towards 5G NR and advance digitization.

In a nutshell, the two-year project is

- to propose 5G NR extensions for standardization, targeting to enable high-performance and cost-efficient wireless services in 'Megacities' – i.e. very dense urban environments with very heterogeneous requirements – and 'Underserved Areas'— e.g. less populated areas with relatively homogeneous requirements.
- to develop advanced 5G technologies and enhancements, beyond release 15 of 3GPP (being the first set of 5G standards in 2018). These advanced technologies include future-proof access schemes, advanced massive MIMO enablers and multi-link management.
- to deliver on 5G NR performance optimization schemes for successful network deployment and operation, with a focus on improved performance and customer experience for both, the network operator and the end-user;
- to identify and improve the cost driving elements in roll-outs and operations in order to allow for the sustainable provision of wireless services in underserved areas under constrained circumstances.

Members of ONE5G across Europe include telecommunications operators (Orange, Telefónica), component and infrastructure vendors (Huawei, Intel, Nokia, Samsung), SMEs (B-COM, WINGS ICT Solutions), universities (Aalborg University, Freie Universität Berlin, Universidad de Malaga) and research institutes (Centre National de la Recherche Scientifique, Fraunhofer Heinrich Hertz Institute).

"ONE5G holds a key role in advancing 5G NR towards its goal of supporting a multitude of vertical services and boosting capacity anytime and anywhere. Special attention will be paid to cost-efficient roll-outs and operations in dense urban areas as well as sparsely populated areas, building upon the initial considerations of 3GPP", says Frank Schaich, (Dr.-Ing.) Nokia Bell Labs, coordinator of the project.

## Background on Horizon 2020

Horizon 2020 is the biggest EU Research and Innovation programme ever with nearly €80 billion of funding available over 7 years (2014 to 2020) – in addition to the private investment that this money will attract. It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market.

Horizon 2020 is the financial instrument implementing the [Innovation Union](#), a [Europe 2020](#) flagship initiative securing Europe's global competitiveness.

\* ONE5G stands for E2E-aware Optimizations and advancements for the Network Edge of 5G New Radio

## Links:

ONE5G website: [www.one5g.eu](http://www.one5g.eu)

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## Partners of ONE5G:



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