



BEREC GUIDELINES ON VERY HIGH CAPACITY NETWORKS LINKEM'S CONTRIBUTION

The following note represents Linkem's contribution on draft **BEREC Guidelines on very high capacity networks** approved during the 42nd plenary meeting (5-6 March 2020, Belgrade).

This document is structured as follows:

1. Linkem company profile;
2. Linkem input on Draft Guidelines.

1. Linkem company profile

Linkem s.p.a. was founded on 16 June 2001. Today, Linkem operates in the Fixed Wireless Access (FWA) segment and offers ultrabroadband access services at national level, through a nationally owned 4.5G access network on 3.5 GHz frequencies, which it has been assigned since 2008. Linkem strongly believes in FWA networks development as the actual infrastructural alternative in the supply of ultrabroadband fixed services even in 5G perspective.

Today, thanks to its own network infrastructure [...] of the Italian population, Linkem brings fast and quality Internet to [...] customers, both households and businesses, and it is the fifth operator in the Italian fixed access market. Linkem's customer base [...].

Thanks to its experience in the construction of Wi-Fi and WiMax networks and starting from the availability of the latest generation 4G and 4.5G radio systems operating in TDD mode and 3.5 GHz frequencies, Linkem has developed an innovative technology to provide broadband and ultra-broadband services to households and businesses throughout the country.



Thanks to an innovative project, Linkem has strengthened its positioning and business model with a constantly evolving service to end customers in terms of capacity, also with a view to 5G development and quality in the fruition of content increasingly heterogeneous and sensitive to stability and latency factors.

The investment path undertaken by Linkem has been designed to offer in all areas of the country, with technical and commercial uniformity, ultrabroadband fixed services at accessible price conditions on a fully owned access network.

Moreover, the Company has leveraged over 15 years of experience in building and operating ultra-wideband wireless networks to rapidly expand and upgrade its current network with the aim to guarantee the best performance to its customers and to support the development of innovative 5G services in all areas and across the country. The flexibility of the technology model allows the delivery of ultra-wideband Internet services with lower costs than those required for the deployment of fiber networks, as well as significantly faster lead times.

[...].

2. Linkem input on Draft Guidelines

In this historic period in which there are and there will be a lot of technological changes in telecommunications market, Linkem considers this Guidelines a very important and fundamental step for the knowledge and comprehension of new technologies and their challenges. Moreover, the public consultation may permit to all providers to explain their point of view and to express their considerations about functions, characteristics and structure of networks, allowing them also to express their opinion about a specific theme, as the very high capacity network, that will be strategic in the evolution and offering of 5G services. For all these reasons, Linkem appreciates the possibility to express its opinion participating at this public consultation.

In particular, with reference to the Guidelines, Paragraph 3 according to our company, as a FWA operator, the criteria proposed by BEREC to identify a very high capacity Networks are [...] when a wireless connection (like the FWA) may be qualified as VHCN.

Specifically, for what concern criteria 2 and 4, Linkem considers these criteria [...], when a Wireless network could be considered with a “very high capacity”. With regards to criterion 2[...] . Moreover, respect to criterion 4, for the qualification as a very high capacity network, it is [...] that the network is capable to provide a service which meets the performance indicated in thresholds 2 of the guidelines: [...]. Both criteria (2 and 4) are [...] without any possibility [...], circumstance that [...] the term “VHCN “in Europe.

Moreover, the criteria 2 and 4 will apply not only to mobile providers, but also to FWA operators. [...]

Finally, with regards to criterion 4, Linkem [...] to the criteria on the general network performance up to the end users. Indeed, this last criterion [...]. In other words, as explained by Berec, considering network performance only up to the access node and not up to BTS, [...]. Consequently, [...].

In addition, with regards to criterion 4, Linkem notes that: [...].



In any case, for a deep comprehension and evaluation of quantitative radio network performance, [...].

For all the rest, Linkem confirms and refers which it wrote in its document send to this Authority, on April 8th 2019, in the call for **BEREC Guidelines On Very High Capacity networks- Call for initial Stakeholder input.**