

## 5G Evolution - A Telco Perspective

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It is not unknown that until recently the telco and the IT worlds were separated. 5G changes this paradigm introducing IT concepts in the telco world: (1) APIs that facilitate access to the network; (2) virtualization of the network functions (Virtual Network Functions – VNFs) decoupling therefore the software from the hardware; (3) automated deployment and in life management of different VNFs over an IT programmable infrastructure. These concepts will further allow the implementation of the slicing concept, which allows the creation of dedicated logical networks with personalized customer specific functions. Therefore, they are able to accommodate/integrate different vertical industries (e.g. automotive, energy, manufacturing, entertainment). The research on the slicing concept is intensive and Orange is actively involved in 5GPPP European projects such as SLICENET (<https://slicenet.eu/>), MATILDA ([www.matilda-5g.eu](http://www.matilda-5g.eu)), 5G-EVE (<https://www.5g-eve.eu/>) and 5G-VICTORI (<https://www.5g-victori-project.eu/>). However, besides the active research and in order to be able to implement the 5G network and to make full use of its benefits, it is mandatory for the telco players to completely change their operational model by adopting agile principles and making the shift from hardware centric towards software centric networks.

The purpose of the tutorial is to present how the telco operators could prepare for the 5G adoption focusing on key technical challenges, but also on the adaptation of the current operational model.