## The frequency spectrum, a limited natural resource and the most valuable asset for successful IoT deployments.

Name Niclas Norlén

Abstract text According to UN the most valuable natural resources of today is air, water and coal. Through history we have witnessed oil, gas, minerals, timber and other high value natural resources triggering conflicts in the world. Will our most valuable natural resource of tomorrow be the frequency spectrum?

We are foreseeing a rapid growth in connected things and by 2020 it's estimated that up to 100b things will be connected generating massive amounts of data. The vast majority of those things are expected to be connected wirelessly, connecting billions of sensors and actuators to the cloud. This wireless connectivity is the very foundation of IoT. Without wireless connectivity our modern life with mobile phones, TV and radio would simply not be possible. Importantly the opportunities from IoT estimated to be worth \$1.7 trillion would not be possible to capture without wireless connectivity.

Frequency spectrum is a limited natural resource and the usable spectrums for IoT are rapidly being depleted. Not only because we use more spectrum but many times the spectrum is used in an inefficient way resulting in waste. Spectrum is a finite resource, we cannot simply make more of it, although the common perception is that the spectrum is infinite.

During this session Niclas Norlén will discuss about how the frequency spectrum issues can be dealt with and thus how the revenue stream of IoT can be captured and future proofed. Niclas will share his experience from successful deployments of large scale wireless enabled IoT systems.