CortXLab is a part of the FIT (Future Internet of the Things) platform. FIT is a set of complementary components that enable experimentation on innovative services for academic and industrial users. FIT gives French Internet stakeholders a way to experiment on mobile wireless communications to the network and on application layers, thereby accelerating the design of advanced networking technologies for the Future Internet. FIT is also a part of the OneLab consortium.
CorteXlab is a leading edge testbed for testing innovative and state of the art with physical layer techniques for wireless communications.

It is composed of a mix of radio nodes, including Wireless Sensor Network (WSN) nodes with a fixed physical layer (IoT-lab nodes), Single-Input Single-Output (SISO), and Multiple-input Multiple-Output MIMO SDR nodes.

CorteXlab aims at the scientific and industrial communities and is openly accessible to anyone in the world with an Internet access.

**WHAT IS CORTEXLAB FOR**

CorteXlab provides the complete flexibility of multiple SDR nodes (80 nodes from which 38 SDR nodes) and experimentations may span the whole OSI protocol stack, featuring:

- **PHY layer base-band signal processing**
- **RF front-end prototyping**
- **Collaborative and / or distributed communication techniques**
- **New technologies for 5G and beyond**
- **Multi-hop and intelligent routing mechanisms**
- **Mobility mechanisms, using our SDR-on-robot fleet**

**WHERE CORTEXLAB COMES FROM**

CorteXlab inherits the leading experience from the established IoT-Lab testbed, created by Inria and is part of the French FIT Equipex project, itself referenced as a platform of the European consortium OneLab.

CorteXlab is an Inria testbed, hosted at the CITI-Lab of INSA-Lyon.