

|                     |   |  |
|---------------------|---|--|
| Title:              | FIT/CortexLab   | Space for laboratory logotype<br>Resolution: 400 × 125 |
| Responsible person: | Tanguy Risset   |  |
| Institution:        | Inria (France)  |  |
| Short description:  |   |  |
| Contact (email):    | <a href="mailto:tanguy.risset@insa-lyon.fr">tanguy.risset@insa-lyon.fr</a>  |  |
| Website (if any):   | <a href="http://www.cortexlab.fr/">http://www.cortexlab.fr/</a>   |  |
| Equipment:          | Large facility in a 200 m <sup>2</sup> room, entirely faradised and covered with EM, absorbers, equipped with 22 USRPs (National Instruments), 16 PicoSDRs, (MIMO 2x2 and 4x4, from Nutaq) and 42 WSN nodes (Hikob). All these equipments are remotely accessible and programmable through the Internet to launch experimentations. The frequency range spans from 400 MHz up to 4 GHz.   |  |
| Aims:               | The main objective of this facility is to offer a large set of Software Defined Radio (SDR) systems in a controlled environment. This testbed is dedicated to be open to the scientific community, free of charge. As everything is programmable on a wide set of frequencies, this testbed is a unique facility to test the behavior of any kind of wireless network at a large scale, from PHY layer to MAC layer. Scenarios of Cognitive radio systems, 5G, cooperative communications or IoT could be tested. |  |
| Availability:       | Is it remotely accessible? Yes<br>Is it available on the site? Yes but remote access is preferable<br>Is it for free? Yes   |  |
| Annex:              |   |  |

#### Place in IRACON RESEARCH MATRIX

|               | EWG-IoT | EWG-LT | EWG-RA |
|---------------|---------|--------|--------|
| Working group | X       |        |        |

|                       | Antennas and Propagation | PHY | MAC | NET |
|-----------------------|--------------------------|-----|-----|-----|
| eHealth               | X                        | X   | X   | X   |
| Factory of the Future | X                        | X   | X   | X   |
| Connected Cars        |                          |     |     |     |
| Energy Management     | X                        | X   | X   | X   |