



# The European Open Ecosystem for Future Internet Experimentation & Innovation

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# Measuring Mobile Broadband Networks in Europe

Mobile broadband (MBB) networks underpin many vital operations of modern society, and the immense popularity of mobile devices has radically changed the way most people access and use the Internet. Consequently, there is a strong need for objective information about MBB performance, particularly, the quality experienced by the end user. MONROE is designing and operating the first European transnational open platform for independent, multi-homed, large-scale monitoring and assessment of performance of MBB networks in heterogeneous environments.

## How does it work?

MONROE is building a dedicated infrastructure comprising both fixed and mobile nodes (on buses, trains, trucks) distributed across Norway, Sweden, Spain and Italy. The nodes are designed to be flexible and powerful enough to run most measurement and experiments tasks, which includes experimenting novel services and applications. All nodes are connected to three MBB providers, and often also to WiFi. This makes MONROE particularly well suited for experimentation with multi-homing. MONROE nodes collect metadata from the connected modems such as cell ID, signal strength, connection mode, etc. Measurement results and metadata are provided as OPEN DATA in regular intervals.

MONROE makes it easy to access the system and deploy experiments on all or a selected subset of the nodes through a Fed4FIRE compliant interface.

## Key objectives

The main objectives of MONROE are to build, operate and support an open and large-scale European measurement and experimental platform, supporting multi-homing with MBB and WiFi. Furthermore, the project will identify key MBB performance parameters, thus enabling accurate, realistic and meaningful monitoring and performance assessment of such networks. Finally, Experiments as a Service (EaaS) will be provided through well-documented tools and high-level scripts to execute experiments, collect results, and analyze data in order to lower the barrier for external users to use the platform.

## How to get involved?

MONROE is running a series of Open Calls where external users can get funding to run experiments. More than 40 proposals were received from the 1st Open Call. The 2nd Open Call will be announced by the end of 2016. Beside the Open Calls, the platform will be available to external users from 2017 under the Open Access scheme.

## Project Facts

**CALL:** Collaborative Projects Call 1 - ICT11 | **EXECUTION:** From March 2015 to February 2018

**COORDINATOR:** Dr. Özgü Alay (Simula Research Laboratory)

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