



# The European Open Ecosystem for Future Internet Experimentation & Innovation

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# Crowdsource The Future



IoT Lab is a European Research project which aims at researching the potential of crowdsourcing to extend the Internet of Things (IoT) testbed infrastructure for multidisciplinary experiments with more end-user interactions. It is also researching IoT testbed integration and federation, as well as crowdsourcing and crowd-sensing with a privacy by design approach. It gives the power to the crowd to be at the core of the research and innovation process, including to trigger new research processes. It gives you the power to change the world and the way we understand it.

## How does it work?

The future of IoT research will require closer interactions between researchers and society, in order to better address societal needs and challenges, including end-user acceptance. This will require new approaches for experimentation that will become more pervasive, leaking out from the labs into the real world. IoT Lab is federating several European IoT testbeds to provide Testbed as a Service (TBaaS). In parallel, it is extending experiments with crowdsourcing and crowd-sensing tools to better collect feedback and inputs from real end-users. IoT Lab will serve this future vision by contributing to pave the way to new experimental approaches with innovative "privacy-friendly" crowdsourcing technologies, multidisciplinary approaches and new research schemes, such as crowd-driven research.

## Key achievements

IoT Lab has already developed and implemented most of its targeted platform. It first specified a comprehensive

privacy-by-design architecture for crowdsourcing and testbed virtualization. It then developed privacy-friendly crowdsourcing tools as smartphone applications, enabling both crowdsourcing and crowd-sensing with voluntary participants. In parallel, it interconnected several European IoT testbeds into a shared IPv6 network and integrated them into a common TBaaS. This enables researchers to access both IoT and crowd resources through a user-friendly interface, and to perform experiments. The last year of the project is focused on fine-tuning the tools and performing experiments. Furthermore, IoT Lab has researched and further developed new incentive models for end-user engagement, as well as new business and sustainability models for testbed infrastructures.

Any interested research team is welcome to contact IoT Lab and propose joint experiments. The prime focus is on research involving IoT and end-user acceptance.

## Project Facts

**CALL:** Collaborative Projects Call 10 | **EXECUTION:** From October 2013 to September 2016

**COORDINATOR:** Sébastien Ziegler (Mandat International)

**PARTNERS:** Mandat International (Switzerland), University of Geneva (Switzerland), Computer Technology Institute & Press Diophantus (Greece), University of Surrey (UK), Technical University of Lulea (Sweden), Alexandra Institute (Denmark), University of Southampton (UK), DunavNET d.o.o. (Serbia)