inLab FIB UPC is a research and innovation laboratory of the Barcelona School of Informatics at UPC, specialized in applications and services based on the latest ICT technologies.

inLab FIB UPC has over 30 years of experience collaborating in cutting edge projects, creating customized solutions for public and private institutions and organizations, and providing learning labs specialized in informatics engineering.

Our Mission

- To transfer knowledge to society through developing human talent and R&D&i multidisciplinary projects based on breakthrough ICT technologies, Simulation and Data Science.

The Universitat Politècnica de Catalunya - Barcelona Tech (UPC) specializes in the areas of architecture, science and engineering technologies.

The UPC is the leading university in Spain in volume of research and technology transfer to companies, and has become one of the major hubs of knowledge in Southern Europe.

The UPC is also a major player in European projects.
**RESEARCH AND INNOVATION AREAS**

**DATA SCIENCE AND BIG DATA**
Smart data, methods and statistical techniques for analysing and processing data and their interoperability: data mining, advanced statistical analysis, measurement of intangibles, Open Data, integration, fusion and processing of large volumes of data, dashboards, Big Data architectures, data warehouse...

**MOBILE SOLUTIONS**
- Integration with wearables technology and IoT
- Mobile applications for geoservices based on OpenStreetMap
- Mobile Apps Learning Lab
- iOS, Android Apps development

**SMART MOBILITY**
Public transport systems, traffic management, dynamic routing applications, traffic and mobility data processing
- New generation forecasting models for high quality traffic and travel information, short-term real-time predicitions.
- Traffic data analytics: data filtering, completion and fusion, big data, interoperability, floating passenger data.
- New mobility concepts: ridesharing, demand-responsive transportation modes, connected cars.
- Multimodal journey planners, dynamic vehicle routing for fleets.
- Macro, meso and micro traffic simulation.

**MODELLING, SIMULATION AND OPTIMIZATION**
Feasibility studies and/or improvements to systems and processes using modelling, simulation and optimization techniques applied to transport, manufacture, logistics, industrial processes or emergency systems. Social Simulation applied to demography, epidemiology, population dynamics, health or environmental systems. Modelling and simulation of energy efficiency in buildings and transport.

**SOFTWARE ENGINEERING**
- Semantic integration
- Interoperability and integration of systems

**CYBER SECURITY**
Information security (audits, forensic analysis, monitoring of networks), development of systems for detecting malware and electronic fraud, security of applications, training and cyber security awareness

**ICT ENVIRONMENTS AND SERVICES TO SUPPORT LEARNING**
Learning analytics, smart learning environments, information systems for university management, computer labs and systems for measuring and analysing academic results.

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**Direct access to students:** the future developers, IT professionals and entrepreneurs

**Talent Training program using learning-by-doing and skills-oriented methodologies**

**Granting and training system**

**Mentoring**

**Internationalization**

**Financial aid for students**

**Recognition and accreditation**

**Professional environment**

**Bachelor Final Project or Masters Final Thesis**

**Values acquisition**

**Sponsored by:**

**With the collaboration of:**

**Barcelona Share Innovation Center**