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 and creating customized solutions for public and private institutions and organizations.

Missions
- To develop R&D multidisciplinary projects and to transfer knowledge to society.
- To build a professional environment focused on the development and training of the talent of our students: Talent training program.
- To provide a learning lab specialized in informatics engineering.

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

ANALYSIS, DATA PROCESSING 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, control panels...

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. Simulation applied to the social sciences and environmental systems.

SMART CITIES
Modelling and simulation of energy efficiency in buildings and transport, smart mobility (public transport systems, traffic management, dynamic guide applications and services, traffic and mobility data processing).
- New generation forecasting models for high-quality traffic and travel information, short-term real-time predictions
- Traffic data analytics: data filtering, completion and fusion, big data, interoperability
- Future travelling: Real-time multimodal journey planner, dynamic ridesharing
- Macro, meso and micro traffic simulation

MOBILE APPLICATIONS AND GIS
Mobile applications for geoservices in areas such as transport, sports and health. Systems based on OpenStreetMap for monitoring and guiding vehicles or people. Alarm service based on position. Security of mobile applications.
- Geoservices provider: tracking, monitoring mapping, specific routing
- Mobile Apps Learning Lab
- iOS, Android Apps development

COLLABORATIVE INTERNET
Web-based environments and architectures, distributed applications on the internet, collaborative and social intranet, multimedia information systems, accessibility, interoperability and integration of systems, federated social networks, Activity Stream and other interoperability standards.

SECURITY AND ICT INFRASTRUCTURES
Information security (audits, forensic analysis, monitoring of networks), development of systems for detecting malware and electronic fraud, infrastructure management, high availability, resilience, server virtualization and other leading technologies in security, infrastructures and services.

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

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