


LEITAT

managing technologies



ICT & Smart Systems

Expertise in ICTs

Smart Systems

- Sensor and actuators development and integration applied in environmental, automotive, health and building sectors
- Wireless IoT networks (Low-Power networks: ZigBee, NFC Identification, BTLE, LoRa, Sigfox and NB...)
- Firmware and software development
- Data Management and data mining

Medical devices

- Custom made portable devices
- Bio-parameter monitoring devices
- Bio-sensors

Thermoelectricity

- Specific applications design and prototyping
- Custom made thermoelectric modules development
- Thermal requirements calculation and simulation

Photovoltaic systems

- Organic/hybrid PV technologies
- Down-shifting and up-conversion
- Solar concentrators and tracking systems
- Photovoltaic refrigeration concepts

Characterization and modelling of systems

- Systems modelling (control strategies for electronics, Mechanical, chemical and biological complex systems)
- Characterization of new components (supercapacitors, biosensors, functional inks, Electrochemical cells...)

Enertronics: Energy harvesting & Energy Storage

- Energy Harvesting systems: renewable energy sources (power management) and Self-powered devices
- Energy harvesting modules: design and development → Photo-Piezo-Termo Electric energy capture, storage management and energy release
- Advanced Energy Management systems: Li-ion Batteries (battery management systems, thermal management) and Super capacitors (energy management systems)
- System characterization and modelling

Printed Electronics

- Flexible Electronics and printed electronics devices
- New electronic components (sensors, NFC/RFID, energy harvesters, batteries...)
- Integration printed systems + conventional electronics

Prototype development

- Applications in different industrial sectors (automotive, health&wellness, lighting...)
- Design & develop new commercial products
- Small production series custom-made devices

New production processes

- CAD/CAE/CAM & reverse engineering
- Additive manufacturing technologies
- Artificial vision systems, digital image processing and smart navigation

Robotics

- Novel robot functionalities & Human-robot collaboration
- Automatic definition of robot tasks by human-robot / robot-geometry interaction
- Dimensional and haptic inspection for quality control

Relevant EU projects awarded



BASMATI (H2020 646159): Bring innovation in the Scaling up of nano-materials and Inks for printing
<http://www.basmati-project.com/>

PRINT4PACK (RDNET12-2-0008): Low cost integrated autonomous RF temperature sensors for food packaging
<http://chimigraf.com/Print4Pack/>



NANOCATE (FP7 604647): Nano-carbons for versatile power supply modules
<http://nanocate.eu/>

DeNeCor (ENIAC/324257): Devices for NeuroControl and NeuroRehabilitation
<http://www.denecor.info/>



DEMANES (ARTEMIS/295372): Design, Monitoring and Operation of Adaptive Networked Embedded Systems
<http://www.demanes.eu/>

ERG (ENIAC/270722-2): Energy for a green society: from sustainable harvesting to smart distribution, equipments, materials, design solutions and their applications
<http://www.eniac-erg.org/>



SMARTBLIND (FP7/314454): Energy efficient smart window including a photovoltaic film.
<http://www.smartblind-project.eu/>

COMMONSENSE (FP7/614155) support the implementation of the Marine Strategy Framework Directive (MSFD) and other EU policies, providing innovative sensors.
<http://commonsenseproject.eu/>



SMARTPRO (FP7/607295) The concept lies in the development of lightweight and smart protective clothing, incorporating smart functionalities and designated for law enforcement authorities <http://smartpro-project.eu/>

Click [here](#) to look at the complete project list and more detailed information.

Horizon 2020 topics of interest

Information and Communication Technologies

Deadline 25/04/2017

ICT-05-2017	Customised and low energy computing
ICT-19-2017	Media and content convergence
ICT-20-2017	Tools for smart digital content in the creative industries
ICT-23-2017	Interfaces for accessibility
ICT-25-2017	Advanced robot capabilities research and take-up
ICT-27-2017	System abilities, SME & benchmarking actions, safety certification
ICT-28-2017	Robotics Competition, coordination and support
ICT-30-2017	Photonics KET 2017
ICT-31-2017	Micro- and nanoelectronics technologies
ICT-32-2017	Startup Europe for Growth and Innovation Radar
ICT-33-2017	Innovation procurement networks
ICT-40-2017	Reinforcing European presence in international ICT standardisation
ICT-41-2017	Next Generation Internet

Besides the ICT Work Programme, we are interested in cross-cutting activities like: Internet of Things (**IoT-03-2017** R&I on IoT integration and platforms) topics in the Societal Challenges such as Circular Economy, Blue Growth, Earth Observation, Printed electronics, Advanced manufacturing and 3D printing and Health. LEITAT is also interested in JTIIs like **ECSEL**, EUREKA programme, PPPs **FoF**, **GV**, **SCC** and 5G.

Contact

Marta Domper
International Project Manager

mdomper@leitat.org
<http://ipo.leitat.org>

C/ de la Innovació, 2
08225 Terrassa (Barcelona), SPAIN
Tel. +34 93 788 23 00 Ext. 3166
Fax +34 93 789 19 06
<http://www.leitat.org>