DIH – WG : ACCESS TO FINANCE FOR DIHS AND SMES

CASCADE FUNDING : AN AGILE FINANCE TOOL
WITHIN A FULL ECOSYSTEM/DIH DEDICATED TO SMEs
CEA - LETI WITH ITS OWN ECOSYSTEM

CEA
- Annual operating budget of more than €600 million
- 4,500 researchers
- More than 600 priority patent applications / year

MINALOGIC
- CLUSTER created in 2005
- 400+ members academic and industrial (75% of SME)
- 575 supported projects
  - 850M€ Public funding
  - R&D investment : 2,1B€
- Over the 72 finalized Projects :
  - 800+ job created
  - 1,6B€ revenues (3 years after the end of the projects)
- 86 commercial products

LITEN: NEW ENERGY TECHNOLOGIES AND NANOMATERIALS
LIST: SMART DIGITAL SYSTEMS
LETI: MICRO- AND NANOTECHNOLOGIES and their integration into systems

DIH Working Group - Access to finance for DIHs and SMEs | Feb, 21st, 2018
LETI mission: Innovate and Transfer to industries

Industrial network from Startups to Large Groups
⇒ 350 bilateral contracts (incl. SMEs)

Startup program operated by CEA LETI: Innovation management (market place, VC network, …)
⇒ 64 startups created within the last 20 years
MINALOGIC, Global innovation cluster for digital technologies, created in 2005

- 400+ members academic and industrial (75% of SME)
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CAP’Tronic, a national leader cluster organised to federate the complete ecosystem

- **Digitalisation**: help French SMEs & Startups improve their competitive edge by integrating embedded software and electronics in their products,
- **Network** with Large Groups,
- **Incubators, Platforms**,
- **Projects Funding**: 400 supported projects each year (to enable companies to quickly find realistic and cost-effective technological solutions)
- **200+ training courses and technical seminars each year**
- **1000+ members (90% of SME)**
• Transborder cooperation
• Early stage
• Conceptual
• Prefiguration
• Innovation management
Success Stories - Flyers

**NEUMANN**

Secure monitoring of medical samples throughout the lab

**Challenge & Solutions**
High-throughput medical diagnostics laboratories and clinical labs face an ever-increasing number of biomedical samples to be processed and stored locally. This is to meet the demand for rapid identification of new viruses in the multi-laboratory network in just a few days, the lab must manage hundreds of thousands of sample tubes. These facilities are under constant pressure to monitor samples during processing, transportation and storage of tubes and to ensure the correct test conditions to provide reliable data.

Innovative solution: user-friendly interface, in-print challenges.

With the extended fit-for-purpose, the system uses an integrated test, test and sample holder. The task is to reliably and flexibly store and transport the sample. The identification technology ensures reliable and secure monitoring of test tubes. The incubating system ensures reliable performance in all three categories.

**EuroCPS Support**
In the framework of the OEROS project, EuroCPS takes the role of the OEROS platform if the sensors to take a sample of the raw material are active. The sensors are then connected to the node, which ensures that data can be transmitted to the platform and can be analyzed.

**Digital Skills**
- Laboratory automation technologies
- Laboratory automation processing
- Integrated systems
- Embedded systems, wireless technologies
- IoT, mobile to mobile
- Internet of Things

**Impact/What's next**
- New methods: Fast, reliable, and secure
- Secure and efficient handling of medical samples
- Improved sample tracking and monitoring
- Enhanced data security and privacy
- Better patient care and treatment outcomes
**Encore Lab** is a technology-based company whose main aim is the development of innovative systems dedicated to sustainable farming.

**Partners:**
- CEA LETI
- ST Microelectronic
- CESENS

**Since 2014**
**Based in Spain**

**Company**
Encore Lab is a technology-based company whose main aim is the development of innovative systems dedicated to sustainable farming.

11 employees
Sustainable Farming
Fewer Pesticides Thanks to IoT Technology

Challenge:
- agriculture accounts for more than 70 percent of the world’s water consumption - up to 58 percent of the pesticides applied in agriculture is unnecessary

Solution:
- a built low-cost sensor nodes: air temperature and humidity, and soil moisture at three different depths
- The nodes require minimal maintenance
- reduce pesticide application by 35 percent and irrigation-water consumption by 50 percent.

Impact:
- expects to sell more than 10,000 units (2017 + 5 years)
- expects to double its staff to 20

Encore Lab: Agro-climatic sensor nodes to monitor crops and environmental variables.
CEA-Leti: Ultra narrowband (UNB) transceiver for Sigfox Internet of Things network, validation of sensor nodes
ST Microelectronics: STM32L0 Microcontroller Platform
CDE Communication Data engineering

CDE : We support our customers in the conception and development of their products

Core competences:
- Embedded Software & Hardware
- Apps & Web
- Data Mining & Predictive Analytics

• Application Domains
  • Health / Safety / Mobility / Energy

Company
CDE is a technology-based company whose main aim is the development of innovative systems

22 employees

Partners: AVL

Since 2001
Based in Austria
Rapid verification of new functionality features

Challenge:
- Safety and reliability of new features must be tested in realistic environments before finding their way to commercial markets
- Tractors & Smart Medical Devices

Solution: an Automatic Test and Verification System platform has been developed to shorten testing time and to improve testing quality. The system reduces both the effort and testing time by 30-50% depending on the application.

Impact:
- New business models
- Expected that the revenue will increase by 30 percent by 2020.

CDE: CDE is an Austrian embedded hardware and software company / 22 employees / Created in 2001
AVL: AVL Graz (technology provider + design center): Integrated and Open Development Platform (IODP) for integrating simulation models, test beds, data and devices.
Alitec: Reflects on the present, Imagines the future

Core competences:
- Renewable energy and energy saving
- Sensors and control
- Process analysis
- Health management

• Application Domains
  - Energy
  - Environment
Teaching Building Heating Systems to Respond to the Weather

**Challenge**: Buildings account for 40 percent of energy consumption in the EU and generate 36 percent of Europe’s greenhouse gases. The power needed to adjust the temperature is greater than maintaining the target temperature.

**Solution**: The SolarSensNet (SSN) system developed in this project cuts building energy consumption for heating and cooling by up to 8 percent.

**Impact**:
- Sales are projected to exceed **1M€ by 2020**, 
- Alitec has more than doubled its staff to support product development and market launch, and expects to grow headcount by 30 percent in the first three years following launch.

**CDE**: Alitec is an R&D company located in Pisa, Tuscany, devoted to the development of environmental technologies and solutions for the renewable-energy sector / 10 employees / Created in 2006

**Fine power**: Design Center - Experience and expertise with the XMC platform.
EuroCPS project has worked with SMEs to accelerate CPS technologies

Follow up : Business Coaching event – London – January 19th 2018

SME Bootcamp is to deliver a **tailored coaching event** to assist in developing the skills that will help SMEs to scale their businesses moving forward.

• Pitching ideas and concepts
• Value Proposition development
• Growing teams / attracting CPS technology expertise
• Go-to-market strategy development
• Best practice in exporting within the EU
• Effectively marketing products/services
• Accessing finance and capital

The Bootcamp event will also provide time for SMEs to develop their own business or CPS product/service pitch (e.g., to customers or investors)
Europe - DIH

- Transborder coopération
- Early stage
- Conceptual
- Prefiguration
- Innovation management
SMART ANYTHING ANYWHERE (ICT-04)

2015 - 2018

EuroCPS
Cyber-Physical Systems

gateone
PROJECT

CPSE Labs

SMARTER - SI

Pan European network of CPS Digital Innovation Hubs

Industrial PF
Advanced PF
Funding
Innovation Mgt
DIGITAL INNOVATION HUB SUPPORT

Ideas needs
Start-up, SME, Mid-caps

Broker
Link to investors

Innovative products
Industrialization

Application Experiment
Development & Innovation management

Existing innovation hubs

Funding
Advanced Platforms
Industrial Platforms

RTO as DIH operator

- Technology diffusion at European Level in its DNA / digitizing EU industry
- Leadership and strong financial structure
- Issue: admin overload / subcontracting to be put in place?

- RTOS well adapted to LEIT projects / medium (3 to 5) TRL investigation with RTO leadership
- Need for European technology champions (RTO) support – TRL 3 to 5 programs for tomorrow technologies
THANKS FOR YOUR ATTENTION

pierre-damien.berger@cea.fr
+33 6 84 20 86 67