TIC
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HORIZON 2020
LE PROGRAMME DE RECHERCHE ET D'INNOVATION DE L'UNION EUROPÉENNE

Appels à projet 2017 : TIC pour l'Industrie du futur

FoF-12; ICT-04 ; ICT 25, 27 et 28

Paris 7 juillet 2016

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PANEL

Positionnement de la France (1)

	Etat	% Horizon 2020	Contr. budget UE (2014-15)	Taux de retour (*)	% GERD UE28 (2014)	% ETP pers. R&D UE28 (2014)	% ETP cherch. UE28 (2014)	% demandes brevet OEB UE28 (2013)
1	DE	16,2%	21,5%	76%	29,5%	21,8%	20,1%	39,3%
2	UK	15,2%	11,4%	134%	13,5%	14,1%	15,6%	9,4%
3	FR	10,4%	16,2%	64%	16,9%	15,3%	15,3%	15,8%
4	ES	9,1%	8,0%	113%	4,5%	7,3%	7,0%	2,6%
5	IT	8,4%	12,0%	70%	7,3%	8,9%	6,8%	7,3%
6	NL	8,0%	5,6%	143%	4,6%	4,5%	4,3%	5,9%
7	BE	4,2%	3,9%	109%	3,5%	2,5%	2,7%	2,7%
8	SE	3,4%	3,3%	104%	4,8%	3,0%	3,8%	5,0%
9	AT	2,8%	2,3%	124%	3,5%	2,4%	2,3%	3,3%
10	DK	2,6%	1,3%	196%	2,8%	2,1%	2,3%	2,8%

Sources: eCorda (après retraitement MENESR) et Eurostat

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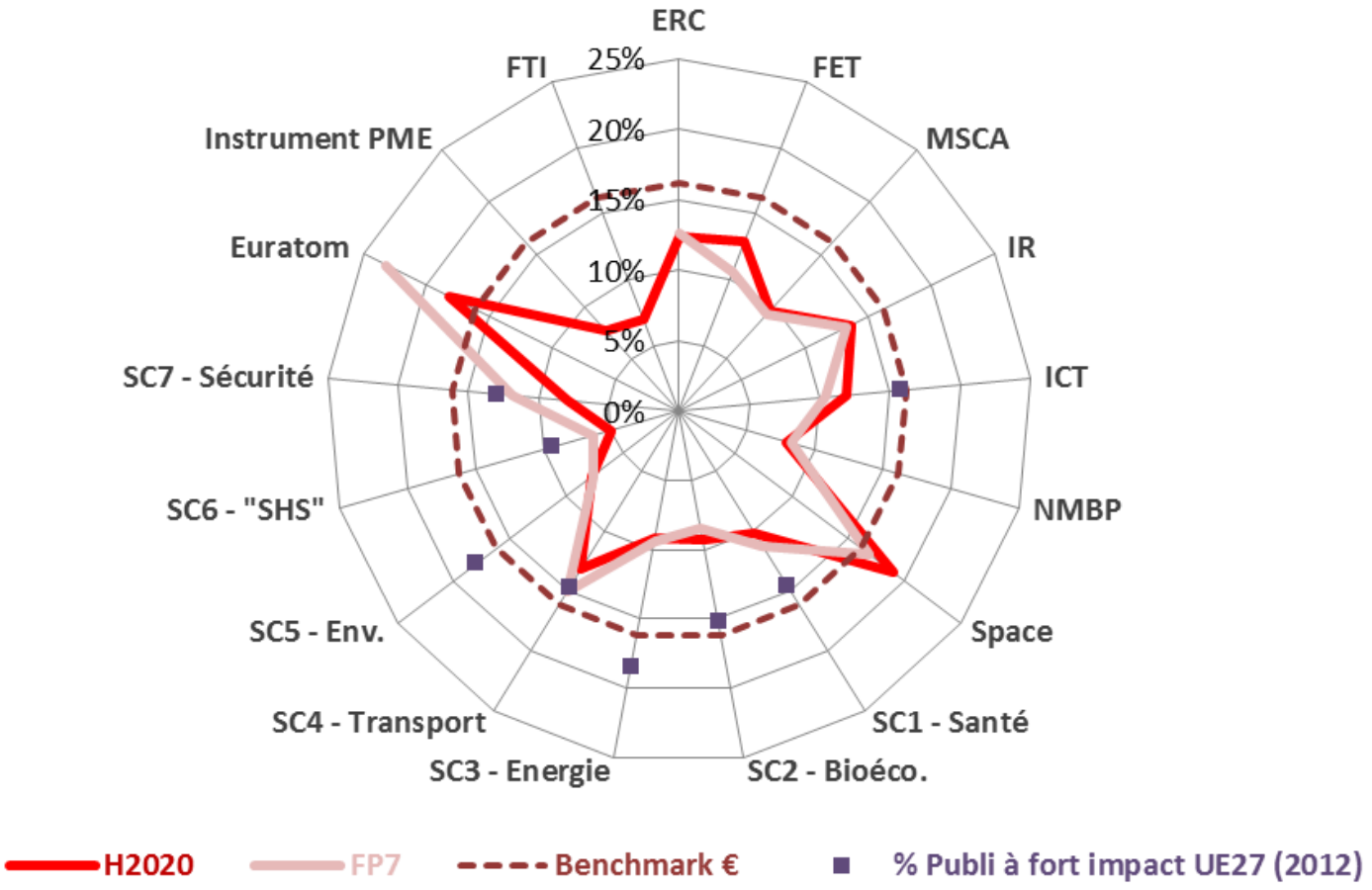
LE PROGRAMME DE RECHERCHE ET D'INNOVATION DE L'UNION EUROPÉENNE

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE

Positionnement de la France (2)



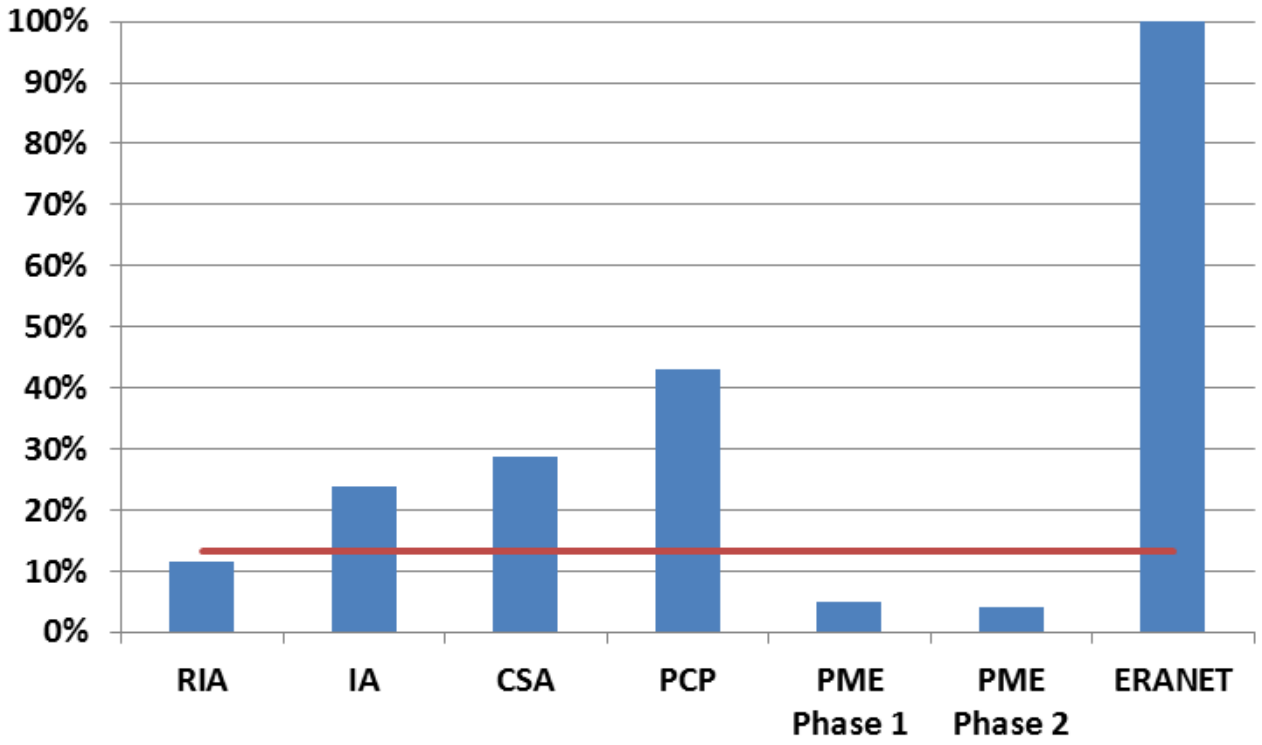
H2020 – WP14-15: analyse (1)

Quelques chiffres « bruts »:

- 9098 propositions (dont 4211 PME phase 1 et 1365 phase 2) réunissant 14600 participants pour une demande totale 16 Md€
- 737 projets retenus (dont 210 PME phase 1 et 50 phase 2) réunissant 2800 bénéficiaires ayant obtenu un total de 2 Md€
- 1105 participants FR ayant demandé un total de 1,5 Md€
- 264 projets à participation FR, 296 bénéficiaires FR se partageant 233 M€ (soit 116 M€/an!), dont 9 instruments PME phase 2

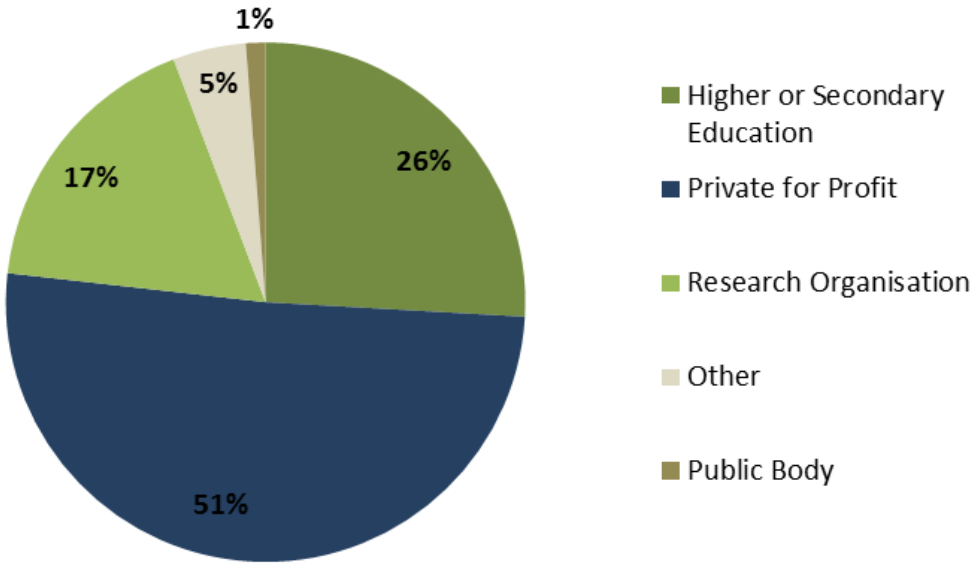
H2020 – WP14-15: analyse (2)

Une concurrence (très) variable entre instruments

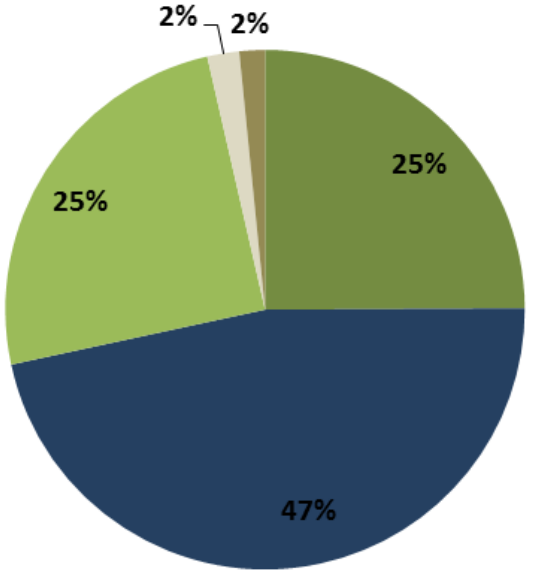


H2020 – WP14-15: analyse (3)

Une dimension industrielle forte



Propositions
(part des € demandés)



Projets
(part des € distribués)

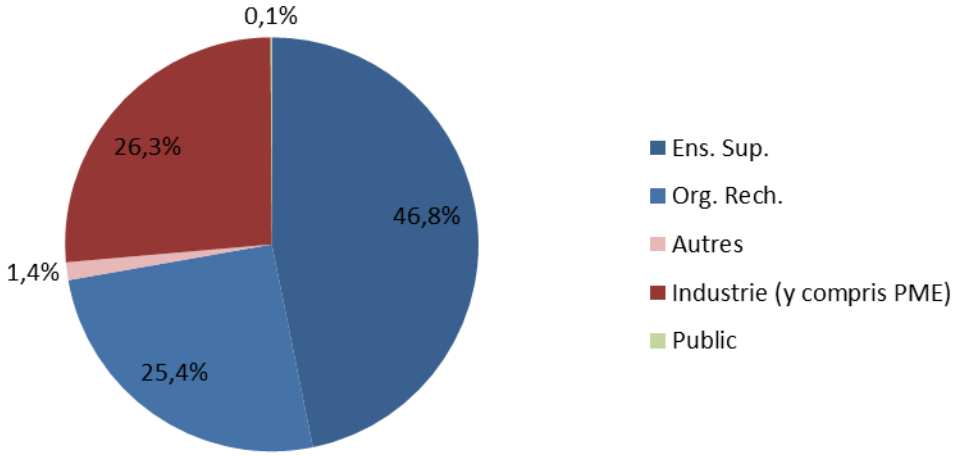
WP14-15: Robotique (hors FoF)
Eléments statistiques

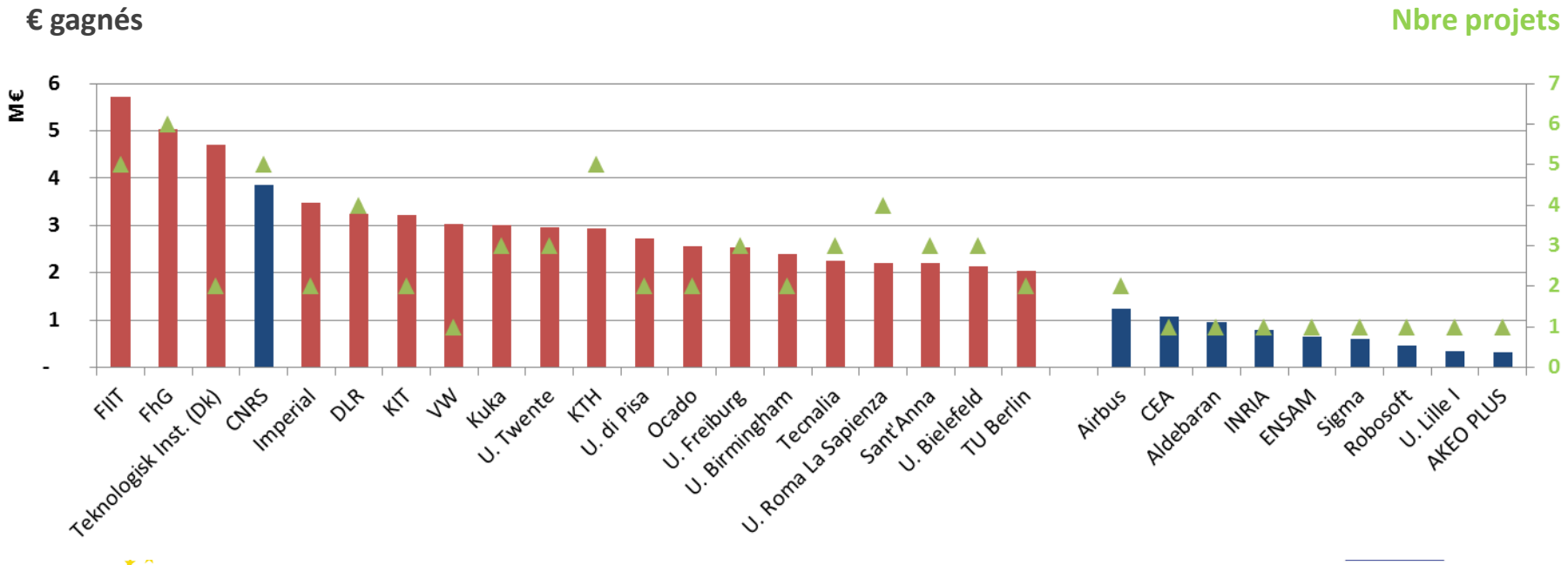
346 propositions pour 1,5 Md€ demandés
36 projets pour 160 M€

~1350 participants dont 93 français

200 bénéficiaires dont 16 français

Part FR: 7,2% (6ème) vs. 27% pour DE





Les chances de réussir

Thématique	Appels	Type d'action	Taux de succès (projets)	Taux de succès (financier)
Robotique	ICT-23 2014	RIA	10,2%	10,5%
		IA	14,3%	13,4%
	ICT-24 2015	RIA	7,6%	8,0%
		IA	13,7%	13,8%

[1] Ratio du nombre de projets financés sur le nombre de projets évalués

[2] Ratio des financements distribués aux projets lauréats sur les financements demandés

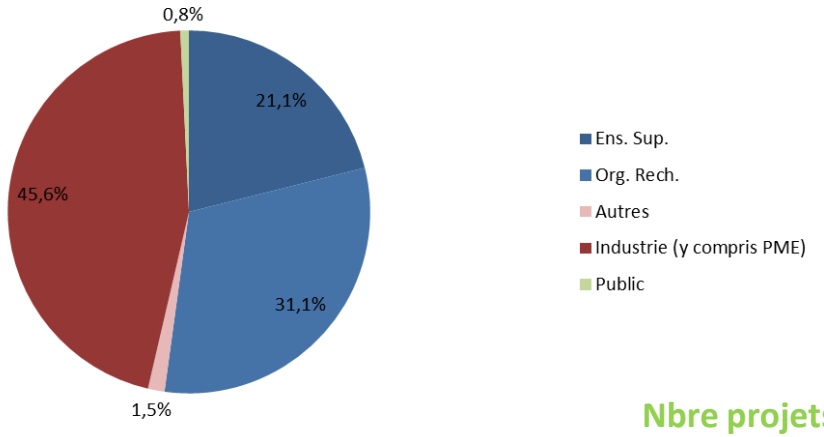
WP14-15: ICT 1, 2, 3 – Eléments statistiques

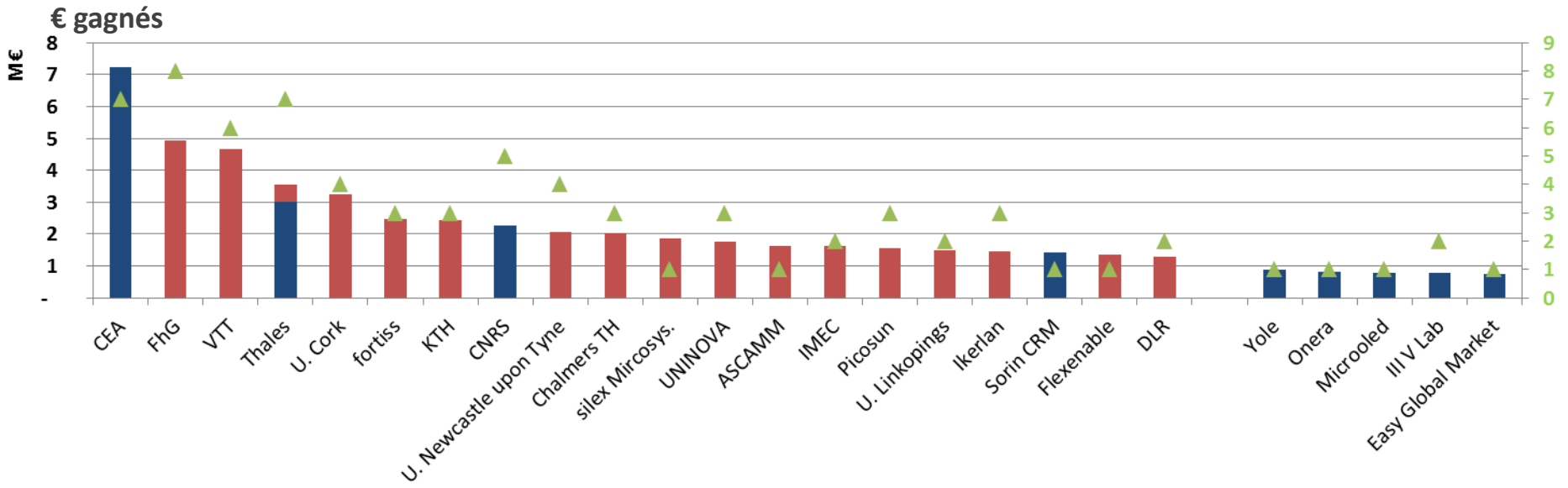
293 propositions pour 1,3 Md€ demandés
34 projets pour 145 M€

~1500 participants dont 156 français

>200 bénéficiaires dont 26 français

Part FR: 18,1%





Les chances de réussir

Thématique	Appels	Type d'action	Taux de succès (projets)	Taux de succès (financier)
Smart Everything Everywhere	ICT-1 2014	RIA	5,8%	5,9%
		IA	44,4%	44,7%
	ICT-2 2014	RIA	8,1%	8,1%
		IA	66,7%	71,4%

ICT/FoF: Eléments statistiques

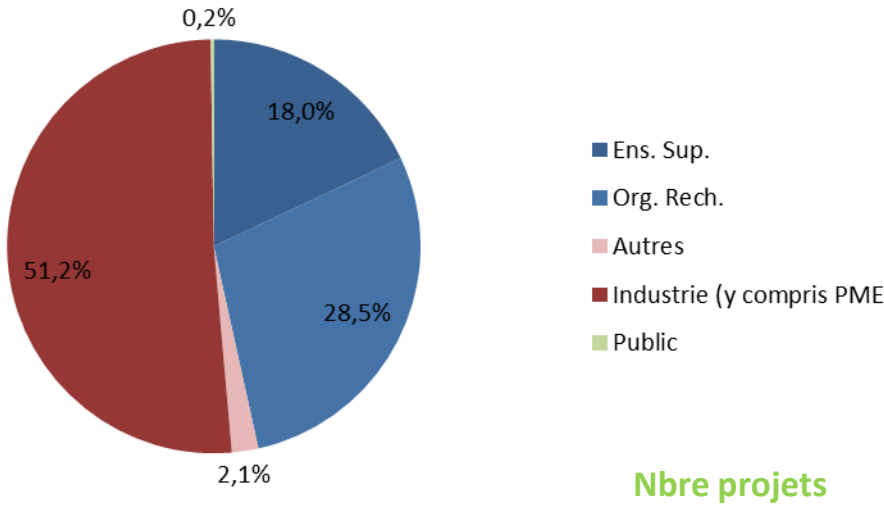
(inclus call 2016)

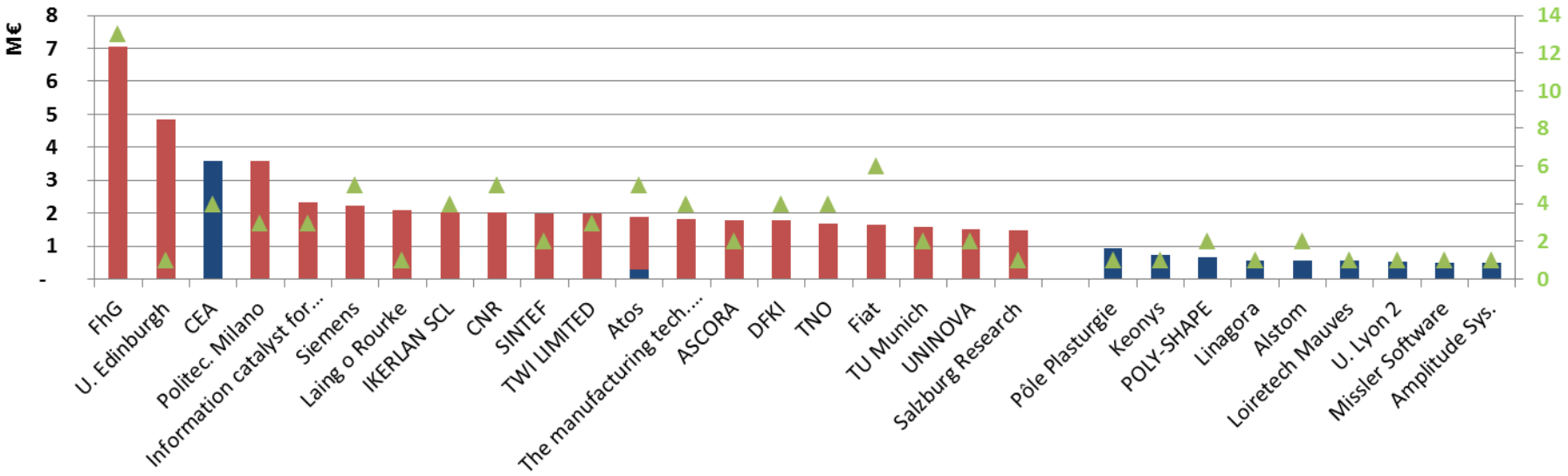
253 propositions pour 1,2 Md€ demandés
39 projets pour 143 M€

~1500 participants dont 100 français

240 bénéficiaires dont 33 français

Part FR: 11% (5ème), Part DE: 25%





Les chances de réussir

Thématique	Appels	Type d'action	Taux de succès (projets)	Taux de succès (financier)
ICT for the factory of the future	FoF-9 2015 (I4MS phase 2)	IA	33,3%	37,3%
	FoF-8 2015	RIA	6,2%	6,6%
	FoF-11 2016	RIA	18,8%	19,6%
	FoF-13 2016	RIA	33,3%	34,1%
		IA	60,0%	66,1%

Les conseils pour réussir

Fouad EL-KHALDI, ESI GROUP - partenaire du projet SIMUTOOL (FoF – 8 – 2015 - RIA)

Régis HAMELIN, BLUMORPHO - coordinateur du projet GATEONE (ICT 2 – 2014 - IA)

Eric HORESNYI, StreamData.IO - Instrument PME phase 2

Christophe GUETTIER, évaluateur - SAFRAN ELECTRONICS & DEFENSE

Jean-Paul MONET, évaluateur

David SERVAT, CEA - partenaire du projet BEinCPPS (FoF-9-2015-IA) et ConnectedFactories (FoF-11-2016-CSA)

gateone PROJECT

Innovation action

INITIATE THE INNOVATION CYCLE WITH SMEs

SAE Workshop June 2016 - Brussels

Project ID: 644856

H2020-ICT

Big Data

Cloud

Smart cities

Autonomous vehicles

Robotics

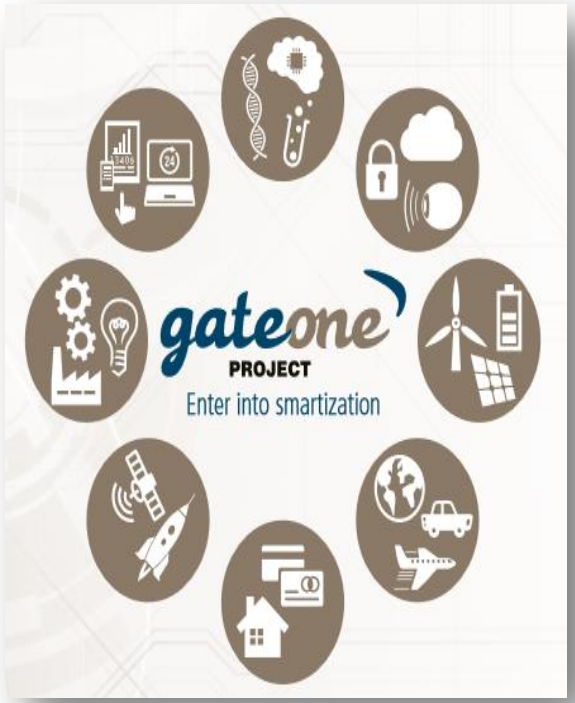
Smart buildings

Quantified self

”Smartization is in progress. It is a 54B€ innovation opportunity in 2020 for connected devices.

Source: Yole Développement

MISSION



Smart System is a huge innovation opportunity for SMEs.

Gateone-project ambition is to generate a sustainable "venturi effect" for smart systems solutions adoption by European SMEs.

Gateone-project initiate the innovation cycle

RTOs and SMEs work together to design new products representing breakthrough or radical innovation

A simple process to engage SME into innovation

≥ 200 ideas of products

Select

Specify and adapt

Validation Bus. Case

Decision to invest

Development

Delivery for testing phase

Hands on experience on the technology

Free of charge (50 k€ average value)

No ties attached

Makers


leti
ceatech


BLUMORPHO


csem


Tyndall
National Institute


Teesside
University


LAAS
CNRS
INSTITUT
CARNOT
LAAS CNRS


Fraunhofer
IPMS


IK4 IKERLAN
Research Alliance


VTT

European Investment in Smart System Innovation Actions

www.smartanythingeverywhere.eu

4 Innovation Actions, 25 M€ with 11 member states

Company profiles ?

- SMEs which are not yet into Smart Sy

  To demonstrate the value of Smart systems

- SMEs in Bioelectronics:

  To reduce the innovation barrier in bioelect

- Start-ups

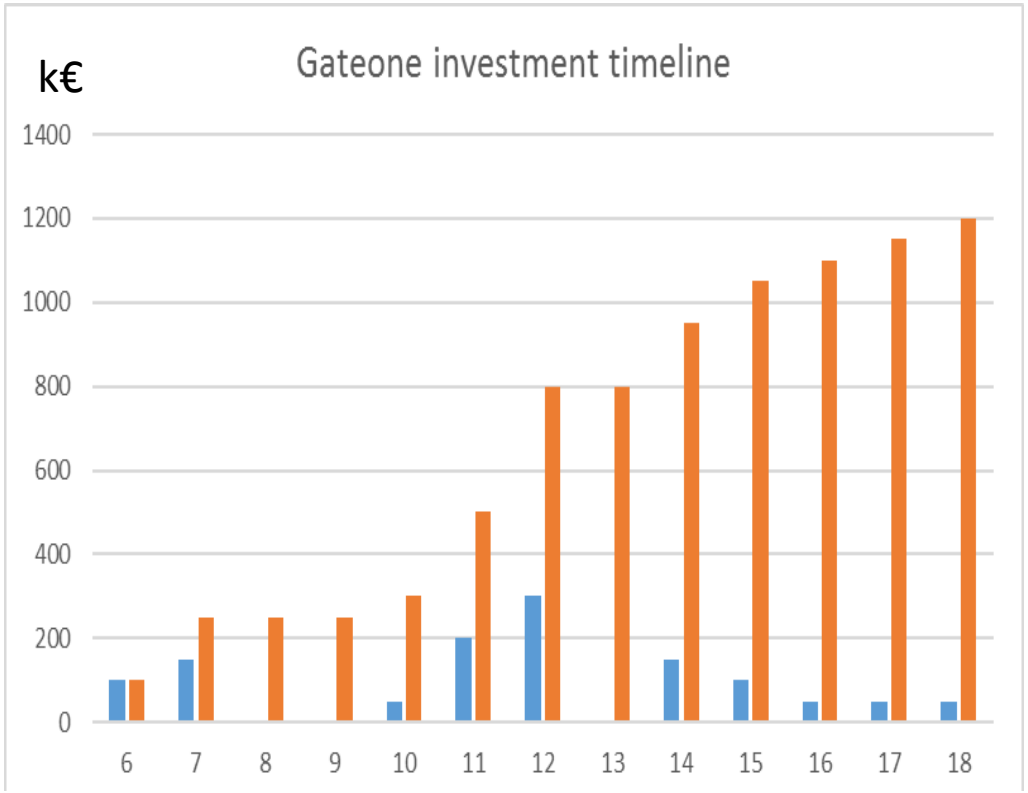
  For the highest risk / highest reward demonstrators

OBJECTIVES:

- 50 demonstrators in 3 years
- 50% must deal with companies not in the s
- Cover multiple industrial fields (minimum
- 25% of demonstrators are SMEs in biorelat
- Demonstrate cross border partnerships between SMEs and RTOs (SAE vision)

OUR CHALLENGE : demonstrate the gateone concept

- 300 SMEs have been contacted in the first year
- 95 expressed interest in the gateone-project concept to date
- 25 investments in
  ators at the
  e

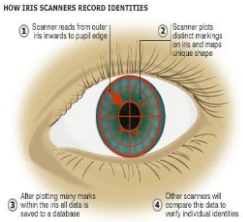


Monthly and cumulative investments / tim

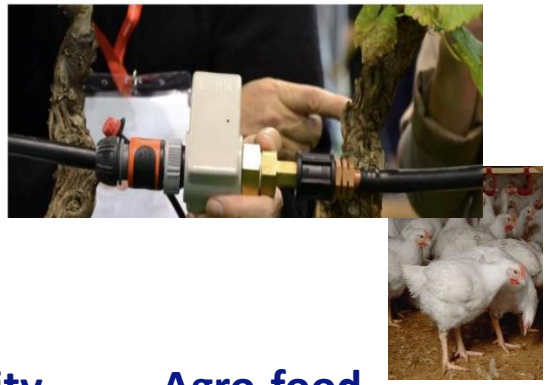
THE gateone-project INNOVATION SCHEME IS UNDERSTOOD AND ACCEPTED

COVER MULTIPLE INDUSTRIAL FIELDS

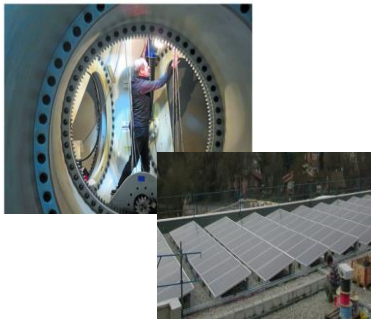
Medical



Safety and security



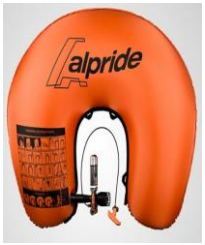
Agro-food



Energy

Instrumentation

Process control



Consumer/sport

Smart cities

Foreseen IMPACT of gateone-project

New products

New features in an existing produc

Differentiation

Support the emergence of new mark

WHY SMEs like Gateone-project

No Financial investment

Access to state of the art technology

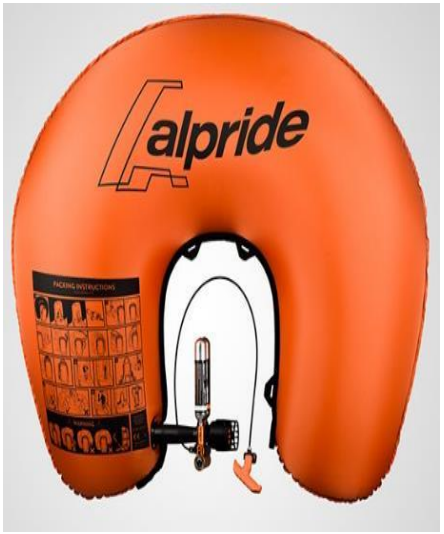
A fast decision process

A risk release on a short timeframe

Support access to new customers for SMEs

Demonstrators

LETI-ALPRIDE



- **The Total Additional Adressable Market** for Alpride is **8M€**

« Thanks to the gateone-project, we made the demonstration of a brand new product concept to our lead customers, this is an important market feedback before we make a decision to launch a product development »

Marc-Antoine Schaer - CEO

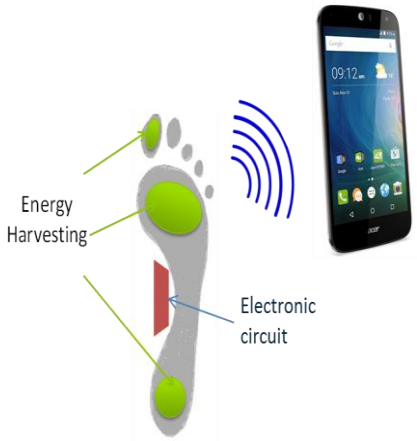
LETI – ITK

- **Ambition : 20M€ of revenue on the IoT offer in 2020**

- **Value Proposition**: Autonomous sensor which measure and transmit water flow information being powered

« The gateone-project supported our hardware transition to the Internet of Things. The acquisition of knowledge during the demonstrator evaluation was of great help during our discussions with our customers. » Eric Jallas- CEO

LETI – Rcup



- **Objective : Test on the first customer site (gas pressure factory)**

« The gateone-project became a tool for our business development and an accelerator of our roadmap. »

Frédéric Lassara- CEO

LAULAGUN bearings

IK4 IKERLAN Research Alliance

Contact

Innovation as a Service for SMEs
Cost : 6,71 M€ - Max. Grant : 5,37 M€

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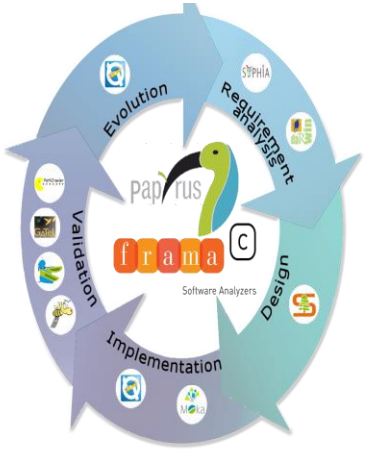
www.gateone-project.eu
www.smartanythingeverywhere.com

INFODAY FOF PANEL DISCUSSION

INPUTS FROM BEINCPPS AND RELATED PROJECTS

DAVID SERVAT

INTRODUCTION



- **A many domains RTO: LIST-LETI-LITEN, a go-between research and innovation**
- **Software and systems engineering department**
- **15+ years in model-driven design, formal techniques, proof, safety & security of systems**
- **Expertise and commitment to standards**
  - MARTE OMG co-chair of standardization TF
  - AUTOSAR, ISO2626
- **National context: CEA Tech regional action**

- **Our focus**: consistency and completeness in design and validation methods and tools to insure a proper level of safety and security.
- **Our motive**: enable a broader access to such high-end system engineering methods and tools

- **ARTEMIS/ECSEL, Systematic, EICOSE, euRobotics, BDVA, KICs ICT Labs, Health**

BUILDING FROM ECHORD++

Experiments

Robotics Innovation Facilities (RIFs)

Pre-Commercial Procurement Pilots (PCP Pilots)

Robotics Innovation Facilities (RIF)

RIFs are facilities for bringing **researchers and industry** in **direct contact** with current and new **users of robotics technology.**

RIFs aim to attract new user groups and help to build an **innovation technology**.

The user groups we envisage are as follows:

- **E++ Experimenters**
- **External** Users such as:
  - ✓ *SMEs and start-ups*
  - ✓ *Students*
  - ✓ *New user groups*

Instruments in ECHORD++

- **Domains of application**
  - *Healthcare*, *Industry, Logistics, …*
- **RIF@Paris-Saclay connects with different FoF initiatives**
  - **French national initiatives (NFI):** Loraine region platform (*PFLOR*), Ile-de-France region platform (*Factory Lab*)

ROAD2CPS

- Strategic action for future CPS through roadmaps, impact multiplication and constituency building
- Support Action, co-financed by the EC - H2020 - ICT 1-2014: Smart Cyber-Physical Systems
- 7 Partners from 4 European countries
- Coordinator: Steinbeis-Europa-Zentrum, Germany, Dr. Meike Reimann
  EC Project Officer: Dr. Werner Steinhögl
- Project duration: February 2015 - January 2017, 24 months
- Total EC contribution: EUR 832.894
- GA No.: 644164
- Web: www.road2cps.eu

Steinbeis-Europa-Zentrum Germany (Coordinator)	STEINBEIS-EUROPA-ZENTRUM
Loughborough University United Kingdom	Loughborough University
Newcastle University United Kingdom	Newcastle University
Commissariat à l'énergie atomique et aux énergies alternatives France	cea tech list
Fraunhofer Institute for Manufacturing Engineering and Automation IPA, Germany	Fraunhofer IPA
AnySolution S.L. Spain	ANYSOLUTION
ATOS Spain SA Spain	Atos

BEINCPPS IN A NUTSHELL

http://www.beincpps

Factories of the Future obj. 9: ICT Innovation for Manufacturing SMEs
Budget: EUR 8,000,000; Open Calls for SMEs: EUR 2,200,000;
Start Date : November 1st 2015 – End Date: October 31st 2018

A Consortium of 23 partners performing CPPS experimentations in 5 regions (Lombardia, Euskadi, Baden Württemberg, Norte, Rhône Alpes) with Competence Centers, Industries, IT partners, SMEs Technology Transfer bodies)

- **Phase I**: 5 Big Industrial Champions involving their value chain SMEs
- **Phase II**: Open Call for additional platform / application providers (800k for IT SMEs)
- **Phase III**: pan-EU Open Call for replications of the

	ITALY Lombardia	SPAIN Euskadi	GERMANY Baden Württemb	PORTUGAL Norte	FRANCE Rhône Alpes
Competence Centers	POLITECNICO MILANO 1863	innovalia ASSOCIATION, MTC MAIER TECHNOLOGY CENTRE	Fraunhofer IPA	inesc	cea
Industrial Champions (LE)	Whirlpool, AFIL Lombardia	MAIER	JOHN DEERE	KYAIA	Georges Renoud
Regional National Authorities					
CPS Solutions Providers	TRIMEK METROLOGICAL ENGINEERING, ENGINEERING	ITI INSTITUTO TECNOLÓGICO DE INFORMÁTICA, Nissatech innovation centre	FINCONS GROUP	fortiss, HOLONIX BRING THINGS TO LIFE	TTTech Ensuring Reliable Networks, ENGINEERING
IT Solutions	HOLONIX BRING THINGS TO LIFE	DFKI		HOLONIX BRING THINGS TO LIFE	FINCONS GROUP

HORSE

Horse

- Horizon 2020 - FoF9: ICT Innovation for Manufacturing SMEs (I4MS phase 2)
- Duration : 54 month, 15 partners, Start Nov 2015

Ambition

- Flexible model of smart factory involving collaboration between humans, robots and machinery with no fences
- Foster robotics technology deployment towards SME

Objectives

- **Framework** enabling the deployment robotic solutions in manufacturing
- Set up **Competence Centres** acting as clustering points for manufacturing applications for PLM

Framework with manufacturing companies in two phases:

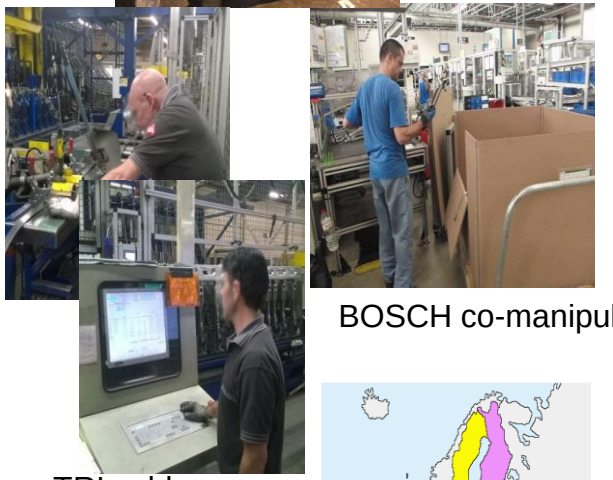
- **Pilot experiments:** iterative framework development with 3 end users
- **Open Call**: validation of suitability and transferability to further applications with new end users

Focuses

- interactions between humans, robots and machines with no fences
- Integration with pre-existing machines and workflows.
- Safety of the worker & reduction of health risks
- Basis for servitisation, for the entire value chain to allow rapid reconfiguration of robots based production processes.

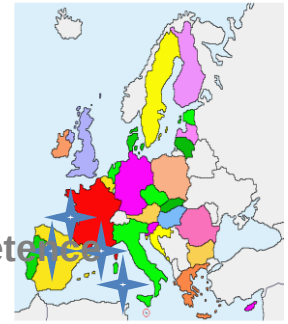
PILOTS

OPSA castings



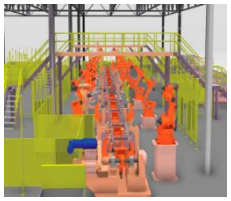
BOSCH co-manipulat

TRI cold forming & quality management



Centres of competence

FACTORY LAB : TOPICS & WAY OF WORKING



Agile digital factory

Automation of production and control processes

20
Projects / year

Physical assistance to operator

Cognitive assistance to operator

20 projets et démonstrateurs par an	50 M€ de projets	5 M€ de CAPEX
33 M€ apport des membres (cotisation+moyens)	15 M€ d'aide BPI (PIAVE)	7 M€ recettes activités

Integrating outline of technologies → **Demonstrator on industrial use case** → **Multi-sector generalisation adaptation** → **Training to Industry**

Research

Large enterprises

SMEs and MidCaps

LESSONS LEARNT SO FAR

- **FoF, I4MS calls: broad scope (of calls), specific construction (of projects), far-reaching impacts (with regional funding initiatives)**
- **New concepts:**
  - ***Cascade funding***: large amount of funding targeting competitive redistribution through open-calls
  - ***Competence centers***: organizations that offer technological infrastructure and accompanying skills and competences to support research, scale-up and valorization of a I4MS technology including supporting experimentation and testing of/with new technologies
  - ***Digital innovation hubs***: 'one-stop-shops' for any business to access support in understanding digital technologies and support on how to finance/nurture the necessary investments
- **New expertise needed at the frontier between technology and business**
- **Proposal set-up is paramount: role matrix of partners and their networks, synergies with regional ecosystem and initiatives**
- **Open call management is a difficult task, models are emerging which will ease future impementations**
- **Technical overlapping of projects may become a problem**
- **CSAs and ETPs building roadmaps feature key actors for IA, RIA projects**
- **A nice way to build an ecosystem of end-users, draw awareness and**

Contact

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Établissement public à caractère industriel et commercial | RCS Paris B 775 685 019

Questions/Réponses

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FoF-12; ICT-04 ; ICT 25, 27 et 28

ACCOMPAGNEMENT NATIONAL

Accompagnement national

	INFORMATION SENSIBILISATION	ASSISTANCE, CONSEIL et FORMATION	AIDE AU MONTAGE
CAP DIGITAL	X Journée d'information R&D corners Entretien individualisé Diagnostics	X Ateliers stratégiques - At. relectures instrument PME, Eurostars - At. rédaction partie impact	X Recherche de partenaires - Ateliers gestion de projets dédiés aux lauréats - Missions partenariales de pôles
MINALOGIC	X Journée d'information Entretien individualisé Diagnostics de la stratégie européenne	X Redirection vers le bon guichet	X Prise en charge partielle des frais d'un consultant pour le montage si pas d'aide BPI
PCN TIC	X Journée d'information dédiée Entretien individualisé	X Hotline H2020 TIC Relecture de l'abstract et instrument PME	X Organisation de session d'émergence et rdv B2B

Le PCN Technologies de l'information et de la Communication (TIC)

ALLISTENE
l'alliance des sciences et technologies du numérique

BUSINESSFRANCE

Coordination

Délégués ICTC

Partenaires

INSTITUT Mines-Télécom

Recherche

Conférence des présidents d'université

Université

Systematic
Paris Region Systems & ICT Cluster

HORIZON 2020

L’équipe

	Prénom - NOM	Rôle	Etablissement
	Claire FERTÉ	Coordinatrice du PCN	Business France
	Frédéric LAURENT	Représentant au Comité de Programme	Ministère de l'Education nationale, de l'Enseignement supérieur et de la Recherche
	Rémi ARQUEVAUX	Représentant au Comité de Programme	Ministère de l'économie, de l'industrie et du numérique
	Pierre SIMAY	PCN	Institut Mines-Telecom
	Tibaire MUNSCH	PCN	Université de Limoges
	Isabelle de SUTTER	PCN	Systematic Paris Région

http://www.horizon2020.gouv.fr/tic

Liens utiles

INFORMATION
Site français H2020 TIC
Digital Europe - EUROPA

PROJET
Portail du participant
Projet de programme de travail TIC 2016-2017

RECHERCHE DE PARTENAIRE
IDEAL-IST plateforme d'idée de projet TIC
CORDIS

RESULTATS
CORDIS

Mécanismes de soutien

Aide au partenariat technologique (APT) - Aider au montage d'un projet collaboratif européen (H2020, ERA-Net, Eurêka, Eurostars) ou national (FUI)

- Pour les PME et les entreprises de moins de 2000 salariés
- Plafonnement de la subvention à 50 k€ ; versement d'avances remboursables au-delà
- Dépenses éligibles : étude de faisabilité stratégique, recherche de partenaires, préparation des réponses aux appels à projets, assistance et conseil juridique

Accès aux programmes européens (APE) - Diagnostic d'aide pour l'accès et l'orientation des

- Diagnostic flash, qui permet d'orienter la PME vers un programme de financement adapté à sa stratégie et à ses besoins – forfait de 1 k€ HT
- Poursuite de l'accompagnement – forfait de 4 k€ HT
  - Si la PME le souhaite, et sous réserve de l'accord de Bpifrance,
  - Pour la préparation d'un dépôt de candidature à la phase 1 de l'Instrument PME, voire pour approfondir une stratégie de participation à d'autres programmes européen

Aide au montage de réseaux scientifiques, européens ou internationaux (MRSEI)

- En cas de partenariat fort avec un organisme de recherche public, possibilité de recourir au MRSEI proposé par l'Agence nationale de la recherche (ANR).
- Aide s'élevant en moyenne à 30 k€ pour une durée allant de 18 mois max.