2020 at the Horizon

Upcoming calls in Electronics

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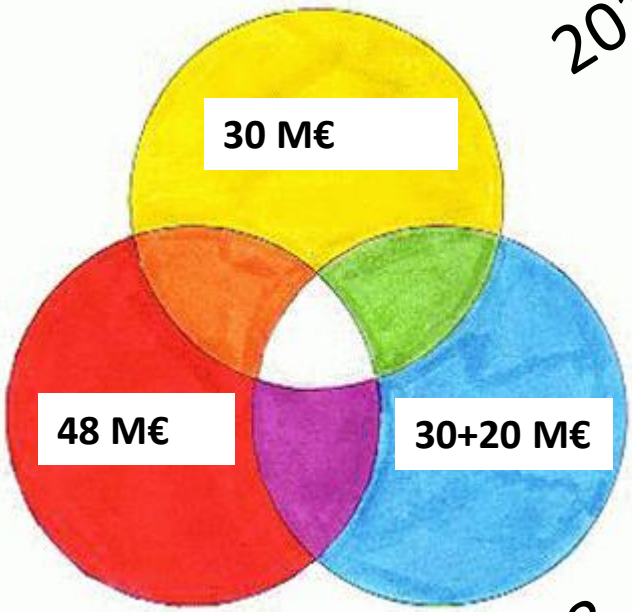
Reinforcing the Electronics sector in Europe

Unconventional Nanoelectronics

2019



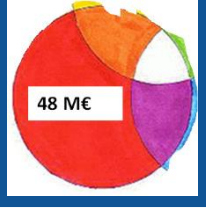
Electronic Smart Systems

2018

Flexible and wearable electronics

2018

Electronic Smart Systems (ESS) ICT-07-2018



Electronic Smart Systems (ESS)
ICT-07-2018

What are you looking for?

The Challenge

- **Develop and validate a new generation of cost-effective ESS technologies**

  Hardware integration of Sensing, actuating, processing, wireless transmission

- **Access to technologies**

The Instruments and €

- Research and Innovation Actions (RIA)	**39 M€**
- Innovation Actions (IA)	**8 M€**
- Coordination and Support Actions (CSA)	**1 M€**

Electronic Smart Systems (ESS)
ICT-07-2018

48 M€

The Scope (RIA)

- **Research and Innovation Actions (RIA)**

TRL 4

a - Technological breakthroughs:
- miniaturisation
- new functionalities
- power consumption, autonomy
- reliability
- secure operation in real environments

Industrial exploitation
Application perspectives

b – Bio-electronics Smart Systems:

Cost effective miniaturisation, manufacturing and demonstration:

TRL 5

- Specificity/sensitivity
- Time to results
- Reliability
- manufacturability

Portability, wearability, biocompatibility, operation in remote & low resource setting.
User needs, markets and business cases

User needs
Market
business case

submission: 17 April 2018

39 M€

Electronic Smart Systems (ESS)
ICT-07-2018

48 M€

The Scope (IA and CSA)

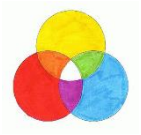
- **Innovation Actions (IA)**

  Access to Nanoelectronics and Electronic Smart Systems

  - Access to advance design and manufacturing (Academia, research institutes, SMEs)
  - Rapid prototyping production for SMEs and market deployment
  - Technical support and training

  8 M€

- **Coordination and Support Actions (CSA)**

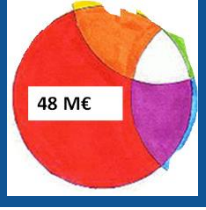


  - Collaboration between projects/experts in

    Nanoelectronics+ Electronic Smart Systems+ Flexible /wearable electronics
  - Increase outreach, International cooperation
  - Technology/development monitoring
  - Roadmapping

  1 M€

submission: 17 April 2018



Electronic Smart Systems (ESS)
ICT-07-2018

The Expected impacts

Tech-R&D

- Build a European Leadership for system performances
  Functionalities, size, reliability, manufacturability, cost…
- Increase cooperation – Promote multi-disciplinary initiatives
- Increased long-term industrial involvement in R&I

New Opportunities (products-sectors)

- New opportunities for digitising in traditional sectors
- New users in industry (SMEs, mid-caps) and academia

Economy-Finances

- Improved ESS manufacturing capabilities in Europe
- Increased market penetration for ESS and bio-electronics systems
- More industrial investments and open innovation marketplace

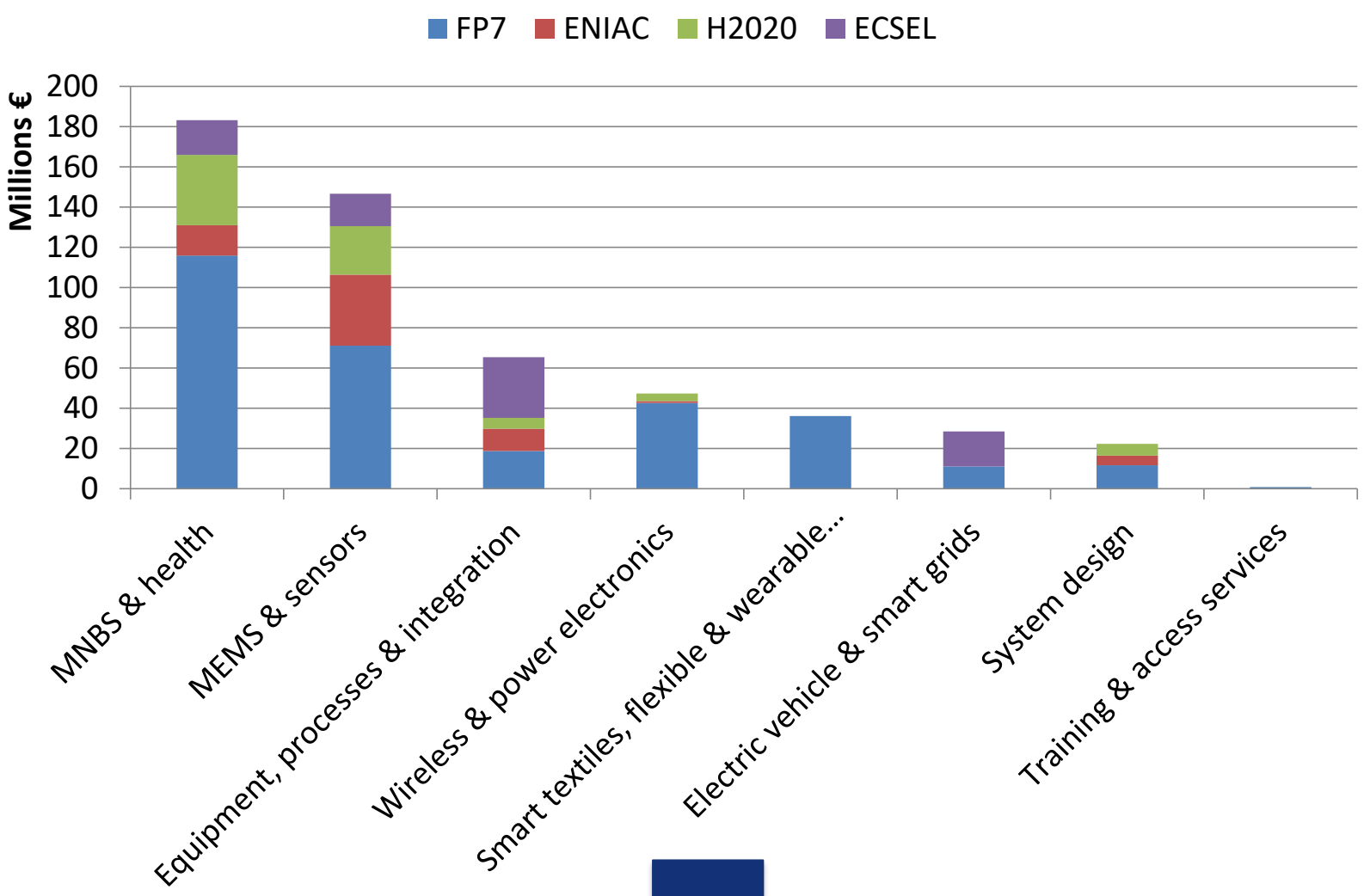
What do you NOT want?

Technologies and integrated systems that do not bring competitive advantages and opportunities to the European Industry.

Big smart systems

Software-only proposals

Topic Evolution and Current Portfolio



Smart Systems
– H2020 Application sectors -

Medical	Water	Food	Telecom	Thermic in SSI	Energy (management /harvesting)

Application specific SSI

PROTEUS
(Water quality monitoring)

SNIFFPHONE
(Health screening from exhaled breath)

MEDILIGHT
(Smart textile and wearable electronics)

SocketMaster
(Sockets for amputees)

BIOCDx
(Photonics diagnostic platfc for reliable cancer diagnosis)

LoveFood2Market
(pathogens in food – Ultra-fast detection

PhasmaFOOD
(photonic miniaturised on-the-spot food quality sensing

Liqbiopsens
biopsy-on-chip -colorectal cancer detection

SMARTDIAGNOS
(sepsis diagnosis)

MADIA
magneto-resistive sensors for diagnostic device)

TIPS
(Thermal management in photonic devices)

TOP HIT
(Micro-transfer printing)

smart-MEMPHIS
(MEMS energy harvester)

M3TERA
(Micromachined TeraHz systems)

Nanonets2Sense
(biosensors, functionalised

STREAMS
(µfluidic active cooling integration)

Key actors

Who are the leading players?

RTOs, Semiconductor Industry, System Integrators, Application developers (medical, food, etc), end-users (demand)

Is there a key group of actors driving this?

ECSEL JU (inc. EPoSS ETP)
MNBS –Wearables sector

additional / background documents

EPoSS SRA Presentation Kit: https://www.smart-systems-integration.org/public/documents/sra-presentation-kit

ECSEL http://www.ecsel-ju.eu/web/index.php

Report on the 10th Annual Concertation and Consultation Workshop on Micro-Nano-Bio-Systems: MNBS 2016, https://ec.europa.eu/digital-single-market/en/news/report-10th-annual-concertation-and-consultation-workshop-micro-nano-bio-systems-mnbs-2016

Future Outlook

Driven by Digital Single Market (DSM), Digitization or European Industry and Societal Challenges (demand side).

Evolution through further integration with core H/W, S/W and networking technologies(e.g. Electronics, Photonics, Low power computing, AI) to deliver fully integrated, miniaturised, multifunctional, connected, cost-efficient new generation of systems & services (IoT, Cloud, Big Data).

Upcoming events / information days

19-20-Oct-2017, Graz

9-10-Nov-2017, Budapest

5-7-Dec-2017, Brussels

https://efecs.eu/

MNBS, 12-13 Dec, Amsterdam
http://www.micronanoconference.org/

13-15-March-2018, München

17 April 2018, Brussels

call submission deadline

Funding decision: around August 2018

Thank you for your attention