



Funding opportunities in H2020 relevant calls

Daniela Mercurio
APRE

ECSEL Italy Day
Turin, March 1st 2018

Italian non-profit organisation
(PRIVATE)

1989 - created as a “Task Force” of
the Ministry of Education, University and
Research

MISSION

- Promoting and supporting **Italian participation** to the EU Research and Innovation programmes (R&I)
- Improve the “**Quality**” of the Italian participation in European programmes for R&I.
- Supporting and spreading the culture of Innovation

WHAT IS APRE?

More than 25 years of
experience



APRE's services



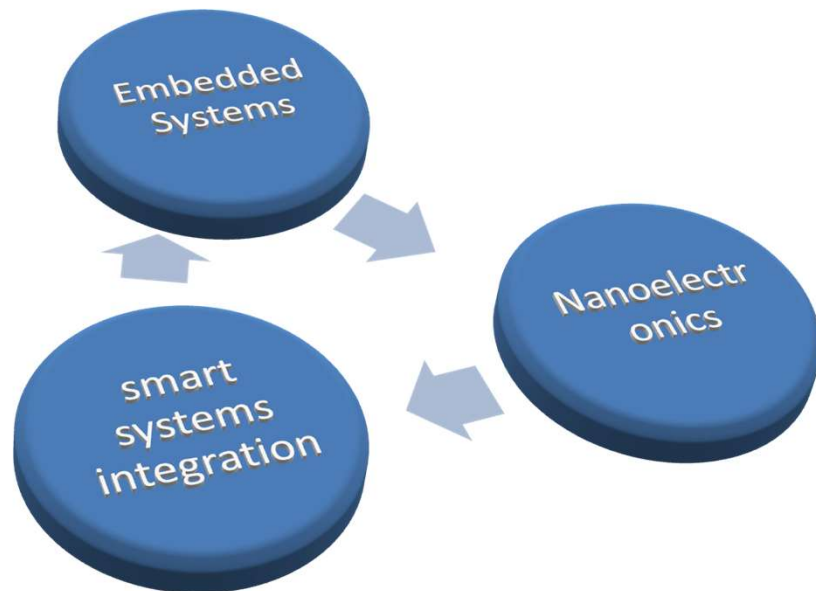
NCP (National Contact Points)

APRE hosts all Italian National Contact Points "NCPs" for the EU Framework Programme for R&I.

NCP are appointed by the Italian Ministry for Higher Education and Research.



Electronic Components & Systems



Electronic systems and components, such as semiconductors and computer chips, are essential to all digital products and services.

Cars, planes, trains, medical and health equipment, home appliances, energy networks and security systems will all benefit from the advanced European capability and capacity to design and manufacture state of the art electronic components and systems*

Not just a single discipline!

It is reflected in a wide distribution in H2020 parts

Relevant calls in Horizon 2020

Excellent Science

- **European Research Council**
 - Frontier research by the best individual teams
- **Future and Emerging Technologies**
 - Collaborative research to open new fields of innovation
- **Marie Skłodowska Curie actions**
 - Opportunities for training and career development
- **Research infrastructures** (including e-infrastructure)
 - Ensuring access to world-class facilities

Industrial Leadership

- **Leadership in enabling and industrial technologies**
ICT, nanotechnologies, materials, biotechnology, manufacturing, space
- **Access to risk finance**
 - Leveraging private finance and venture capital for research and innovation
- **Innovation in SMEs**
 - Fostering all forms of innovation in all types of SMEs

**SME Instrument/
Fast track to innovation**

Societal Challenges

- Health, demographic change and wellbeing
- Food security, sustainable agriculture, marine and maritime research & the bioeconomy
- Secure, clean and efficient energy
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European Institute of Innovation and Technology (EIT)

Spreading Excellence and Widening Participation

Science with and for society

Joint Research Center (JRC)

EURATOM

Relevant calls in Horizon 2020 – Excellent Science

FET - Future and Emerging Technologies

- **FET Open**
 - Still open to all radically new technologies in all areas
 - **Breakthrough technological target**, proof of concept
 - Ambitious **interdisciplinary** research
- **FET Proactive**
 - a. Artificial organs, tissues, cells and sub-cellular structures
 - b. Time, c. Living technologies, d. Socially interactive technologies
 - e. Disruptive micro-energy and storage technologies
 - f. Topological matter
 - Community building in Neuromorphic Computing
 - ERA-NET Cofund



RIA, deadline 22.03.18

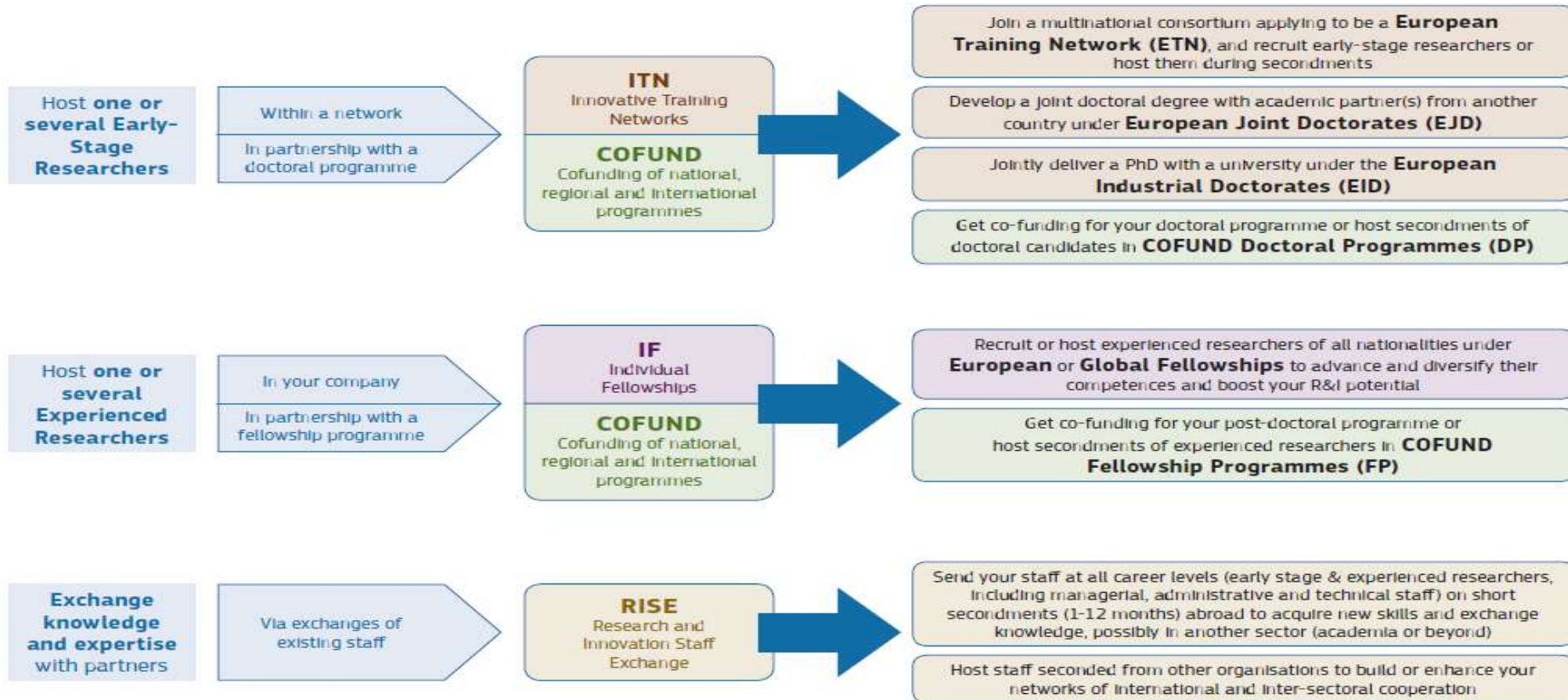
Relevant calls in Horizon 2020 – Excellent Science

Skłodowska-Curie actions



With a budget of over EUR 6.1 billion for 2014-2020, the MSCA provide opportunities for businesses of all sizes, from SMEs to large corporations.

Which Marie Skłodowska-Curie action is best for you?



Relevant calls in Horizon 2020 – Industrial Leadership

Industrial Leadership

▪ Leadership in enabling and industrial technologies

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▪ Access to risk finance

▪ Leveraging private finance and venture capital for research and innovation

▪ Innovation in SMEs

▪ Fostering all forms of innovation in all types of SMEs

SME Instrument/

Fast track to innovation

Information and Communication Technologies (ICT) Work Programme:

“The ECSEL Joint Undertaking on electronic components and systems and the contractual PPPs will continue to be cornerstones for this strategy.”

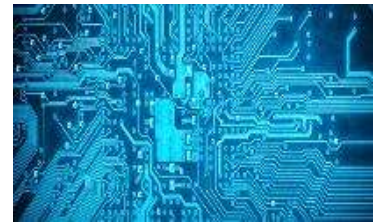
SME Instrument and Fast track to innovation: *fully bottom up*

Relevant calls in Horizon 2020 – Industrial Leadership – ICT (1)

RIA, IA, CSA –
deadline 17.04.18

Technologies for Digitising Europe an Industry 2018

- Cover wide range of ICT technologies including micro-electronics, cyberphysical systems, photonics and robotics. Systemic integration from smart integrated components to cyber-physical systems
- Complementary to the JTI Electronic Components and Systems (ECSEL)
- Organised in four topics in **2018**:
 - ICT-02: Flexible and Wearable Electronics
 - **ICT-03: Photonics Manufacturing Pilot Lines for Photonic Components and devices**
 - ICT-04: Photonics based manufacturing , access to photonics, datacom photonics and connected lighting
 - **ICT-07: Electronic Smart Systems**
- and four topics in **2019**
 - **ICT-01: Computing technologies and engineering methods for cyber-physical systems of systems**
 - ICT-03: Photonics Manufacturing Pilot Lines for Photonic Components and devices
 - ICT-05: Application driven Photonics components
 - **ICT-06: Unconventional Nanoelectronics**
 - ICT-08: Security and resilience for collaborative manufacturing environments
 - ICT-09: Robotics in Application Areas
 - ICT-10: Robotics Core Technology



Relevant calls in Horizon 2020 – Industrial Leadership – ICT (2)

Next Generation Internet

- Next generation technologies for the internet in 10-15 years based on European values such as openness, neutrality, cooperation, inclusion, transparency and protection of data and privacy.
- Organised in seven topics (2018-2020):
 - ICT-24: Next generation Internet – An open Internet Initiative
 - ICT-25: Interactive technologies
 - **ICT-26: Artificial Intelligence**
 - **ICT-27: Internet of Things**
 - ICT-28: Future Hyper-connected Sociality
 - ICT-29: A multilingual Next Generation Internet
 - ICT-30: An empowering, inclusive Next Generation Internet
 - ICT-31: EU-US collaboration on NGI



Relevant calls in Horizon 2020 – Industrial Leadership – ICT (3)

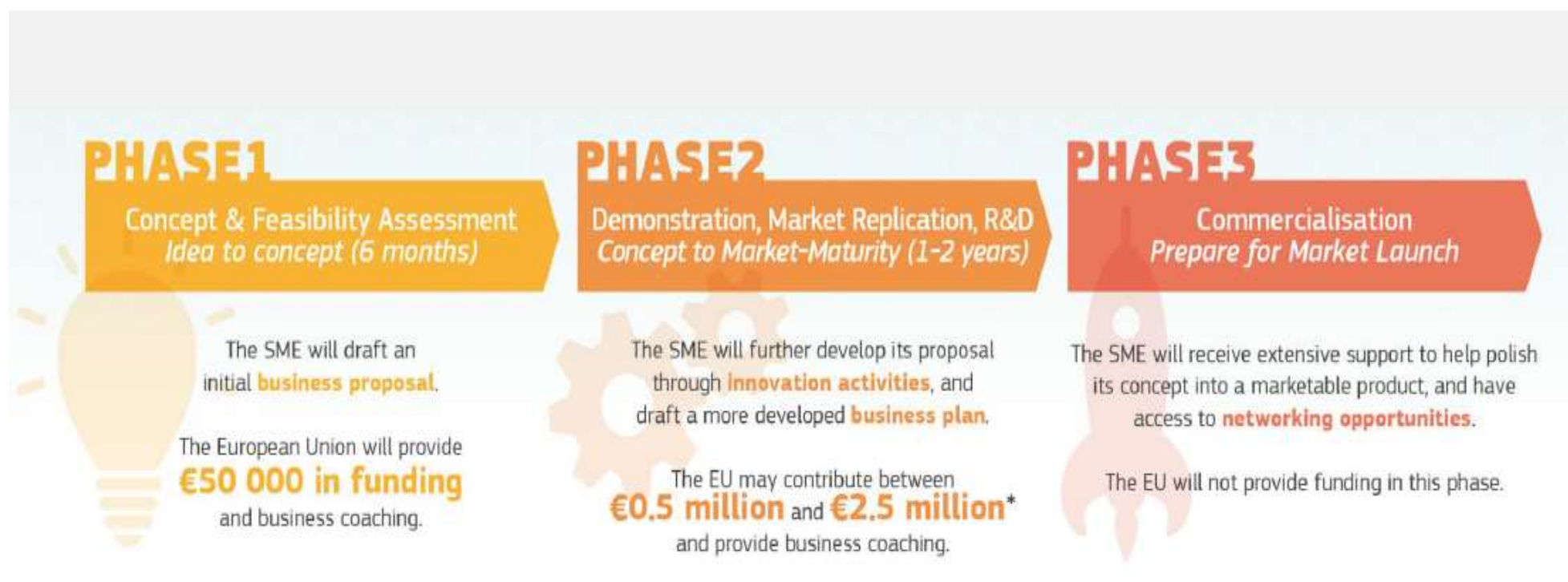
Call - Digitising and transforming European industry and services: digital innovation hubs and platforms

- Focus area implemented mainly through:
 - Digital innovation hubs
 - Cross-sectorial and integrated digital platforms

Topics of main interest:

- DT-ICT-01-2019: Smart Anything Everywhere
- DT-ICT-07-2018-2019: Digital Manufacturing Platforms for Connected Smart Factories
- DT-ICT-08-2019: Agricultural digital integration platforms
- DT-ICT-10-2018-19: Interoperable and smart homes and grids
- DT-ICT-13-2019: Digital Platforms/Pilots Horizontal Activities

Relevant calls in Horizon 2020 – Industrial Leadership – SME Instrument



Relevant calls in Horizon 2020 – Industrial Leadership – **Fast Track to Innovation (FTI)**

*"The Fast Track to Innovation (FTI) is a **fully-bottom-up measure** in Horizon 2020 to promote close-to-the-market innovation activities, and open to all types of participants."*

How FTI works?

- Follows bottom-up logic (no topic).
 - Open common call, 3 cut-offs per year.
 - Time-to-grant 6 months maximum.
 - Funds innovation actions (70%).
 - Grant up to €3 Million.
 - Consortia of 3 to 5 members (different legal entities, independent of each other)
 - Mandatory industry involvement.
-
- Budget: **€300 Million for 2018/2019/2020 (100 per year)**
ca. 150 projects with average EU contribution of €2 million.

Societal Challenges

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A challenge-based approach will **bring together resources and knowledge across different fields, technologies and disciplines**, including social sciences and the humanities. This will cover activities from research to market with a new focus on innovation-related activities.



Interdisciplinary is a relevant aspect!

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Digital transformation in Health and Care



Trusted Big Data solutions and Cybersecurity for Health and Care



Digital transformation in Health and Care

AIM:

- Better access to healthcare and sustainability of health and care systems
- To empower the participation of citizens and facilitate the transformation of health and care services to more digitised, person-centred and community-based care models
- eHealth and mHealth
- ICT for Active and Healthy Ageing

IMPACT: to maximise the potential of the digital economy in the health and care sectors



Digital transformation in Health and Care

Topics in 2018 - 2019

2018 topics RIA,
deadline 24.04.18

- DTH-03-2018: Adaptive smart working and living environments supporting active and healthy ageing
- DTH-07-2018: Exploiting the full potential of in-silico medicine research for personalised diagnostics and therapies in cloud-based environments
- DTH-08-2018: Prototyping a European interoperable Electronic Health Record (EHR) exchange
- DTH-01-2019: Big data and Artificial Intelligence for monitoring health status and quality of life after the cancer treatment
- DTH-05-2019: Large scale implementation of digital innovation for health and care in an ageing society
- DTH-09-2019: Scaling up the univocal Identification of Medicinal Products
- DTH-10-2019: Digital health and care services
- DTH-11-2019: Large Scale pilots of personalised & outcome based integrated care
- HCC-05-2018: Support to a Digital Health and Care Innovation initiative in the context of Digital Single Market strategy (CSA) deadline 24.04.18
 - Specific reference to ECSEL into the topic's description.



Trusted Big Data solutions and Cybersecurity for Health and Care

- Multidisciplinary technologies and solutions in health and care with a focus on cybersecurity
- Secure and user-driven ICT-based solutions in early risk detection and interventions
- Aggregation of a variety of new and existing data sources

Relevant topics

- SU-TDS-02-2018: Toolkit for assessing and reducing cyber risks in hospitals and care centres to protect privacy/data/infrastructures (RIA, deadline 24.04.18)
- SU-TDS-03-2018: Raising awareness and developing training schemes on cybersecurity in hospitals
- DT-TDS-01-2019: Smart and healthy living at home

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Sustainable food security

Dynamic & innovative food and farming sectors

Resource & climate-smart eco-healthy food production and consumption

SFS-31-2019: ERANETs in agri-food
A.[2019] ICT-enabled agri-food systems

ERANET, deadline 23.01.19

Blue Growth

Productive, healthy, resilient seas and oceans
Sustainable aquatic resources for food and bio-based value chains
Strong blue economy

DT-BG-04-2018-2019:
Sustainable European aquaculture 4.0: nutrition and breeding

IA, deadline 23.01.19

Rural Renaissance

Sustainable growth based on circularity and connectedness
Enhanced innovation systems
Strong & attractive rural areas

RUR-15-2018-2019-2020:
Thematic networks compiling knowledge ready for practice

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BUILDING A LOW-CARBON, CLIMATE RESILIENT FUTURE: SECURE, CLEAN AND EFFICIENT ENERGY


2018 topics: IA,
deadline 5.4.18


LC-SC3-ES-3-2018-2020: Integrated local energy systems (Energy islands)

LC-SC3-ES-5-2018-2020: TSO – DSO – Consumer: Large-scale demonstrations of innovative grid services through demand response, storage and small-scale (RES) generation

LC-SC3-ES-6-2019: Research on advanced tools and technological development

LC-SC3-EE-4-2019-2020: Upgrading smartness of existing buildings through innovations for legacy equipment

 **Smart citizen-centred energy system**

 **Energy efficiency**

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Mobility for Growth

LC-MG-1-7-2019: Future propulsion and integration: towards a hybrid/electric aircraft

LC-MG-1-9-2019: Upgrading transport infrastructure in order to monitor noise and emissions

MG-2-6-2019: Moving freight by Water: Sustainable Infrastructure and Innovative Vessels

MG-4-5-2019: An inclusive digitally interconnected transport system meeting citizens' needs

2018 topic: RIA, IA,
CSA, deadline
4.4.18

Digitising and Transforming European Industry and Services: Automated Road Transport

DT-ART-01-2018: Testing, validation and certification procedures for highly automated driving functions under various traffic scenarios based on pilot test data

DT-ART-02-2018: Support for networking activities and impact assessment for road automation

DT-ART-03-2019: Human centred design for the new driver role in highly automated vehicles

DT-ART-04-2019: Developing and testing shared, connected and cooperative automated

vehicle fleets in urban areas for the mobility of all

Building a low-carbon, climate resilient future: Green Vehicles

LC-GV-01-2018: Integrated, brand-independent architectures, components and systems for next generation electrified vehicles optimised for the infrastructure

LC-GV-02-2018: Virtual product development and production of all types of electrified vehicles and components

LC-GV-03-2019: User centric charging infrastructure

LC-GV-04-2019: Low-emissions propulsion for long-distance trucks and coaches

LC-GV-05-2019: InCo flagship on "Urban mobility and sustainable electrification in large urban areas in developing and emerging economies"

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Call "Greening the economy in line with the Sustainable Development Goals (SDGs)"

SC5-09-2018-2019: New solutions for the sustainable production of raw materials

b) Digital mine (2019): Actions should develop an Industrial Internet of Things (IIoT) platform to significantly enhance the efficiency of mining operations by connecting cyber and physical systems and devices to extract valuable insights from their data, in order to improve the decision-making process, better address customer requirements, and to address health and safety aspects, environmental performance, increased automation, predictive maintenance, resource efficiency and real-time coordination of operations. Usage scenarios for mining operations should be presented to demonstrate the viability of the proposed IIoT approach. Actions should promote the adoption of IIoT platforms in the mining sector at EU level.

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INFRA Protecting Infrastructure Call

**SU-INFRA02-2019:
Security for smart and
safe cities, including for
public spaces**

SEC Security Call

**SU-DRS02-2018-
2019-2020:
Technologies for first
responders**

2018 topic: RIA,
IA, deadline
23.08.18

DS Digital Security Call

**SU-DS04-2018-2020:
Cybersecurity in the
Electrical Power and
Energy System (EPES): an
armour against cyber and
privacy attacks and data
breaches**

**SU-DS01-2018:
Cybersecurity
preparedness - cyber
range, simulation and
economics**

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Tel. (+39) 06-48939993

GRAZIE DELL'ATTENZIONE!

Daniela Mercurio