European Commission

# Horizon 2020

## Funding Opportunities for Cybersecurity

**Digital Security Stakeholders Conference 2018**
**Nicosia**

**25 January 2018**


**Lina Tsoumpanou**

**H2020 National Contact Point**

**Secure Societies & Legal and Financial**
**Research Promotion Foundation**


HORIZON 2020

# H2020
# The Role of the Research Promotion Foundation

- **Coordinating** the activities concerning the participation of Cyprus in Horizon 2020

- Hosting the **NCP Network** for Cyprus and coordinating Cypriot representation in the **Programme Committees**

- Collecting and processing **data** regarding Cypriot participation

# The Role of NCPs

Mailing Lists, Websites, Info-days, Training Seminars, Direct Communication

Proposal Pre-screening, Assisting with Partner Search, Resolving Queries

Based on proposers' needs

(IPR Issues, Consortium Agreements, Grant Agreements, Project Management etc.)

**Disseminating Information** **Assisting with Proposal Preparation** **Customised Support**

Direct Helpline for Horizon 2020:

**22 205050**

Help Desk Email Address:

**horizon2020@research.org.cy**

Social Media:

**https://www.facebook.com/horizon2020cyprus**

**http://horizon2020cyprus.blogspot.com/**

# H2020 in a Nutshell

Projects are funded through ***competitive Calls-for-Proposals***

Policy Background: ***Europe 2020 and 7 Flagship Initiatives*** (Digital Agenda, Innovation Union, Youth on the Move, Agenda for New Skills and Jobs etc.)



EU's largest legal Instrument

- Funding *Research & Innovation*
- ≈80 billion (2014-2020)

Simplified Access

- For *companies, universities, young people*
- Entities in EU and beyond

Three Pillars

- Targeting *Excellent Science, Industrial Leadership, Societal Challenges*

# Types of Actions

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## Research and Innovation Actions

100%

- New Knowledge
- New/Improved Technology, Product, Process, Solution
- Limited Demonstration/Pilot Activities
- Small-scale Prototype

≥ 3 legal entities from 3 MS/AC

## Innovation Actions

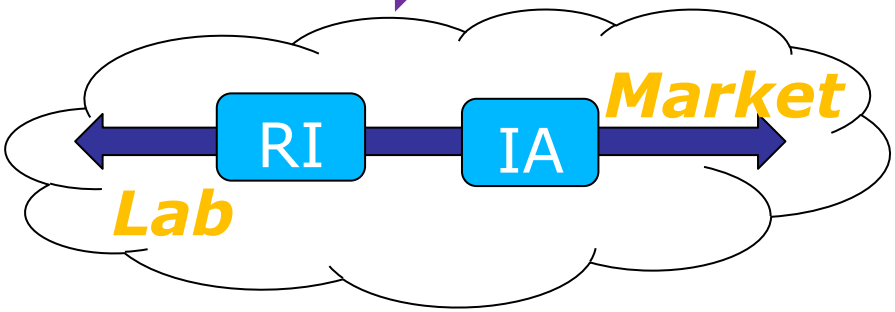
100%

- Close to Market
- Demonstration or Pilot to validate in an operational environment (industrial or other).
- Market replication to support the first application in the market

≥ 3 legal entities from 3 MS/AC

## The Market

70%




## Coordination and Support Actions

1 legal entity from MS/AC

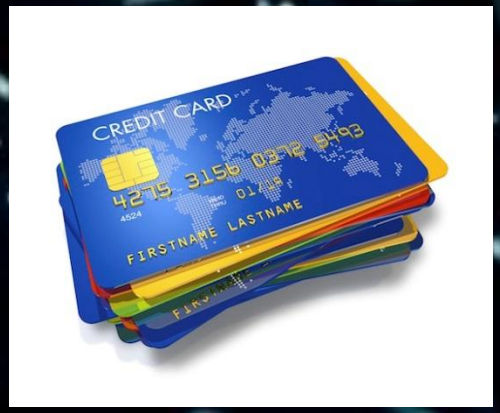
100%

## SME Instrument

1 SME from MS/AC

**Lump Sum**
**70% (Ph-II)**

# What is Cybercrime?



# Stock of the cybercrime research projects

- ***35*** *Cybercrime related projects between 2007 – 2016*
  - **24 FP7 projects**
  - **11 H2020 projects**

- ***EC contribution of more than 130M€***

# EU Cyber Security policies

- CIIP Directive (2012) Critical information infrastructure protection: towards global cyber-security
- The Cybersecurity Strategy for the European Union (2013) and the European Agenda on Security (2015) provide the overall strategic framework for the EU initiatives on cybersecurity/cybercrime.
- eIDAS Regulation (2014) on electronic identification and trust services for e-transactions in the internal market.
- cPPP Initiative 2015 ensures that Europe will have a dynamic, efficient market in cybersecurity products / services.
- Directive (EU) 2016/1148 (NIS) sets obligations: national strategies, CSIRT, requirements for operators, national competent authorities.

- **Situation:** ICT-driven transformations bring opportunities across many important sectors.

- **Complication**: "Smart", "Connected", "Digital" also introduce vulnerabilities...

- **R&D&I challenge:** Innovative and multidisciplinary actions addressing cyber security, data protection and privacy across individual H2020 pillars and calls.

## Priority 1
## Excellent Science
**(EUR 24,4 billion)**

- European Research Council (EUR 13,1 billion)
- Future and Emerging Technologies (FET) (EUR 2,7 billion)
- Marie Skłodowska - Curie Actions (EUR 6,1 billion)
- Research Infrastructures (Including e-infrastructures) (EUR 2,5 billion)

## Priority 2
## Industrial Leadership
**(EUR 17 billion)**

- Leadership in Enabling and Industrial Technologies:
  - -ICT
  - -Nanotechnologies, Advance Materials, Biotechnology Advanced Manufacturing and Processing
  - -Space

  (EUR 13,6 billion)
- Innovation in SMEs (EUR 2,9 billion)
- Access to Risk Finance (EUR 0,6 billion)

## Priority 3
## Societal Challenges
**(EUR 29,7 billion)**

- Health, Demographic Change and Wellbeing (EUR 7,5 billion)
- Food Security, Sustainable Agriculture, Marine and Maritime and Inland Water Research and the Bioeconomy (EUR 3,9 billion)
- Secure , Clean and Efficient Energy (EUR 5,9 billion)
- Smart, Green and Integrated Transport (EUR 6,3 billion)
- Climate Action, Environment, Resource Efficiency and Raw Materials (EUR 3 billion)
- Inclusive, Innovative and Reflective Societies (EUR 1,3 billion)
- Secure Societies (EUR 1,7 billion)

**Spreading Excellence and Widening Participation (EUR 0,8 billion)**

**Science With and For Society (EUR 0,5 billion)**

**Joint Research Centre (EUR 1,9 billion)**

**European Institute of Innovation and Technology (EUR 2,7 billion)**

**EURATOM (EUR 1,6 billion)**

**Joint Technology Initiatives (EUR 6,4 billion)**

# ICT in WP2018-20

# Focus areas for WP2018-20

- Building a **low-carbon, climate resilient** future (~3360 M€)
- **Digitising and transforming European industry and services** (~1690 M€)
- Connecting economic and environmental gains – the **Circular Economy** (~980 M€)
- Boosting the effectiveness of the **Security Union** (~1090 M€)

# Boosting the effectiveness of the Security Union

- **Support the implementation of the Security Union**
- **Strengthen Europe's cyber resilience and foster a competitive and innovative cybersecurity industry**

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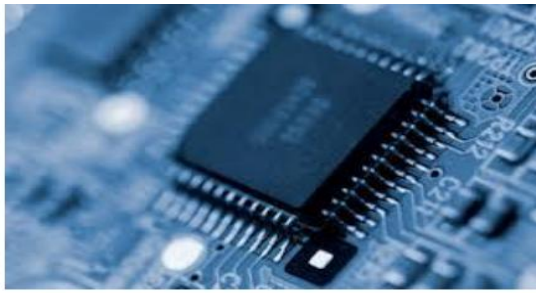
# ICT in Industrial leadership



# Industrial Leadership - ICT

**Call – Information and Communication technologies**

- **Technologies for Digitising European Industry**
- **European Data Infrastructures: HPC, Big data and Cloud technologies**
- **5G**
- **Next Generation Internet (NGI)**
- **Cross-cutting activities**

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

**Call - Cybersecurity**

**Call - EU-Japan**

**Call - EU-Korea**

# Cybersecurity Call in WP-LEIT-ICT 2018-2020

**Topics:**

**SU-ICT-01-2018:** Dynamic countering of cyber-attacks

**SU-ICT-02-2020:** Building blocks for resilience in evolving ICT systems

**SU-ICT-03-2018:** Establishing and operating a pilot for a Cybersecurity Competence Network to develop and implement a common Cybersecurity Research & Innovation Roadmap

**SU-ICT-04-2019:** Quantum Key Distribution testbed

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40 M€

# SU-ICT-01-2018: Dynamic countering of cyber-attacks

***a) Cyber-attacks management - advanced assurance and protection***

***b) Cyber-attacks management – advanced response and recovery***

Deadline: 28 August 2018

***Expected Impact:***

- Enhanced protection against novel advanced threats
- Advanced technologies and services to manage complex cyber-attacks and to reduce the impact of breaches
- Robust, transversal and scalable ICT infrastructures resilient to cyber-attacks that can underpin relevant domain specific ICT systems (e.g. for energy) providing them with sustainable cybersecurity, digital privacy and accountability.

# H2020 – WP2018-2020
# Pilot for a Cybersecurity Competence Network

## SU-ICT-03-2018

# Cybersecurity Call in WP-LEIT-ICT 2018-2020

**Topics:**

**SU-ICT-01-2018: Dynamic countering of cyber-attacks**

**SU-ICT-02-2020: Building blocks for resilience in evolving ICT systems**

**SU-ICT-03-2018: Establishing and operating a pilot for a Cybersecurity Competence Network to develop and implement a common Cybersecurity Research & Innovation Roadmap**

**SU-ICT-04-2019: Quantum Key Distribution testbed**

# H2020 Work Programme 2018-2020

## General Introduction:

"*As recently highlighted, Europe urgently needs to reinforce its cybersecurity technology and industrial capacity. A special effort will therefore go to a* ***pilot action for the development of a European network of cybersecurity Competence Centres.*** *Due to its importance, the preparations for this activity will begin immediately, with a view to being launched* ***as early as possible in 2018***."

# Pilot Project Topic in a nutshell

## Scope

- Propose & test network and central hub's governance model
- Help solve key industrial challenges through R&I activities related to next generation industrial and civilian cybersecurity technologies (including dual-use), applications and services;

## Actors

- Cybersecurity R&D&I centres across Europe
- Consortium of minimum 9 Member States or Associated Countries & 20 partners
- Involvement and close collaboration with industry actors required

## Impact

- Cybersecurity solutions, products or services for the identified critical challenges developed;
- Member States' cybersecurity research and innovation competence and capacities strengthened;
- Possible governance model for the network and the Centre tested through pilot projects

## Instrument & Budget

- Innovation & Research Action
- €50 Mio in total; ~€16 Mio per project


# SU-ICT-03-2018: Establishing and operating a pilot for a Cybersecurity Competence Network to develop and implement a common Cybersecurity Research & Innovation Roadmap

**Type of action:** Research and Innovation Action (RIA)

**Budget:** 50 MEUR

**Opening:** 1 February 2018

**Deadline:** 29 May 2018

**Indicative EU contribution: up to 16 MEUR**

# 2018 – 2020 Work Programme Amendment & Pilot Project

- **December**
  - ISG on Topic Description
- **18 January**
  - MS LEIT Programme Committee
- **End January**
  - Amendment Adoption
- **February**
  - Call for Proposals Launched
- **May**
  - Proposals Submission deadline

**End 2018**

**Projects kick-off**

# Cybersecurity Call - Planning

| Topic | Instrument | Funding (MEUR) | Opening | Deadline |
|---|---|---|---|---|
| SU-ICT-01-2018 | IA | 40.00 | 15 Mar 2018 | 28 Aug 2018 |
| SU-ICT-02-2020 | RIA | 47.00 | 25 July 2019 | 19 Nov 2019 |
| SU-ICT-03-2018 | RIA | 50.00 | 1 Feb 2018 | 29 May 2018 |
| SU-ICT-04-2019 | IA | 15.00 | 26 July 2018 | 14 Nov 2018 |

# OnlineSecurityPrize-01-2017 Inducement prize: Online security - Seamless personal authentication

*Expected Impact:*

*An ICT solution that enables citizens to seamless authenticate themselves across a wide range of applications and devices. The solution should be easy to use, reliable, robust against cyber-attacks, privacy-friendly and compatible as well as affordable and open. It should be ready to benefit a wide range of the EU population, from healthy to impaired citizens of all ages.*

- **The contest will be open to any legal entity (including individuals) or groups of legal entities from Member States and countries associated to Horizon 2020.**
- **The solution must be developed by the contestant(s). The solution proposed by the contestant must be demonstrated, including at least a system prototype running in an operational environment.**
- **Budget: 4m**

Deadline: 27 September 2018

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# ICT in Societal challenges

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# Health, demographic change and wellbeing
## 2018-2020

- **Three calls**
  - **Better Health and care, economic growth and sustainable health systems**
    - Personalised medicine
    - Innovative health and care industry
    - Infectious diseases and improving global health
    - Innovative health and care systems - Integration of care
    - Decoding the role of the environment, including climate change, for health and well-being
  - **Digital transformation in Health and Care**
  - **Trusted digital solutions and Cybersecurity in Health and Care**

# Health, demographic change and wellbeing
## 2018-2020

- **Trusted digital solutions and Cybersecurity in Health and Care** (36M€ in 2018 / 60M€ in 2019)
  - Smart and healthy living at home
  - Toolkit for assessing and reducing cyber risks in hospitals and care centres to protect privacy/data/infrastructures
  - Raising awareness and developing training schemes on cybersecurity in hospitals

Deadline: 24 April 2018

# Security
## 2018-2020

- **Focus area 'Boosting the effectiveness of the Security Union'**
  - **with contributions from LEIT-ICT, SC1 and SC3 on cybersecurity topics**
- **Integration of physical and cyber-security activities in a joint call**
- **Implementation of Cybersecurity cPPP**

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# Security
## 2018-2020

- **Three calls**
  - **Protecting the infrastructure of Europe and the people in the European smart cities**
    - Prevention, detection, response and mitigation of combined physical and cyber threats to critical infrastructure in Europe (46M€)
    - Security for smart and safe cities and public spaces in smart and safe cities (16M€)
  - **Security**
    - Technologies for first responders
    - Technologies to enhance the fight against crime and terrorism (49M€)
    - Information and data stream management to fight against (cyber)crime and terrorism (16M€)
    - Technologies / solutions to enhance border and external security (2 topics - 62M€)
  - **Digital Security**

# WP 2018-2020: Protecting Infrastructure

- Topic 1: **Combined physical & cyber threats to infrastructure**
  - (similar to CIP-01 in 2016-2017)
  - Types of infrastructure identified in the text
  - Aim is to cover the largest range of infrastructures
  - "Practitioner" = operator of infrastructure; at least 2 required
- Topic 2: **Security for smart cities, including for public spaces** (2019)
  - "Practitioner" = city government; at least 2 required

Deadline:23 August 2018

# Security
## 2018-2020

Deadlines
Topics 2018: 23 August 2018
Topics 2019: 22 August 2019

- **Three calls**
  - **Protecting the infrastructure of Europe and the people in the European smart cities**
  - **Security**
  - **Digital Security**

2018
- Cybersecurity preparedness - cyber range, simulation and economics (16M€)

2019
- Digital Security and privacy for citizens and Small and Medium Enterprises and Micro Enterprises (18M€)

2018
- Cybersecurity in the Electrical Power and Energy System (EPES): an armour against cyber and privacy attacks and data breaches (20M€ - joint topic with SC3)

2018 - 2019
- Digital security, privacy, data protection and accountability in critical sectors (28,5M€)


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# Detailed structure: 7 main thematic priority areas

- 1 European Ecosystem for the Cybersecurity
  - Cyber Range and simulation
  - Education and training
  - Certification and standardisation
  - Dedicated support to SMEs
- **2 Demonstrations for the society, economy, industry and vital services**
  - Industry 4.0
  - Energy
  - Smart Buildings & Smart Cities
  - Transportation
  - Healthcare
  - E-services for public sector, finance, and telco
- **3 Collaborative intelligence to manage cyber threats and risks**
  - GRC: Security Assessment and Risk Management
  - PROTECT: High-assurance prevention and protection
  - DETECT: Information Sharing, Security Analytics, and Cyber-threat Detection
  - RESPONSE and RECOVERY: Cyber threat management: response and recovery
- **4 Remove trust barriers for data-driven applications and services**
  - Data security and privacy
  - ID and Distributed trust management (including DLT)
  - User centric security and privacy
- **5 Maintain a secure and trusted infrastructure in the long-term**
  - ICT protection
  - Quantum resistant crypto
- **6 Intelligent approaches to eliminate security vulnerabilities in systems, services and applications**
  - Trusted supply chain for resilient systems
  - Security and privacy by-design
- **7 From security components to security services**

ECSO SRIA input to

- LEIT ICT WP 2018-2020 (Cybersecurity and more)
- Secure Societies – Protecting freedom and security of Europe and its citizens

# Where else to find cybersecurity and privacy R&D&I in H2020?

# Everywhere!

## change of mindset


# Ευχαριστώ!

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