



RESEARCH AND INNOVATION BUREAU

# **EU R&I FUNDING FOR DEFENCE AND SECURITY**

**Home Land Security Conference  
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# How to succeed and how we can help?

## How to succeed:

- Start well in advance (at least six month) - think ahead!
- Identify and collaborate with the most innovative and excellent partners
- Participate in European networks
- Apply for EUopSTART
- Clear proposal with a strong but simple narrative that is clearly aligned with the topic text
- Incorporate EU policies
- Who will benefit? Demonstrate impact!

## We can help:

- Strategic planning and engagement
- Proposal preparation and management
- Help build your international networks and consortia amongst successful institutions
- Establish relations to the EU - both politicians and officials
- Provide advice on EU policies and impact



# Agenda



Horizon 2020



Purpose and funding



Frontrunners



PADR



Purpose and funding

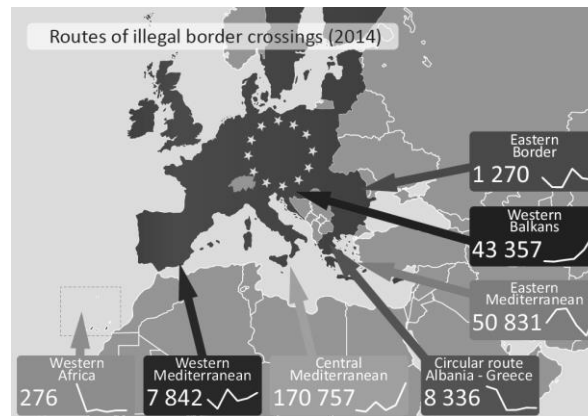


Frontrunners



# HORIZON 2020

# Horizon 2020 as policy



# Horizon 2020 structure

## Excellent science

- The European Research Council (ERC)
- Future and Emerging Technologies (FET's)
- Marie Curie Actions
- European research infrastructures

EUR 24,4 b.

## Industrial Leadership

- Leadership in enabling and industrial technologies
- Access to risk finance
- Innovation in SME's

EUR 17 b.

## Societal Challenges

- Health, demographic change and wellbeing
- European Bioeconomy Challenges
- Secure, clean and efficient energy
- Smart, green and integrated transport
- Climate action, resource efficiency including raw materials
- Europe in a changing world - Inclusive, innovative and reflective societies
- Secure societies

EUR 29,7 b.

## TODAY

Secure societies - Protecting freedom and security of Europe and its citizens.

EUR 1,5 b. budget

# Horizon 2020: Secure societies - Protecting freedom and security of Europe and its citizens

- Disaster-resiliences
- Fight against crime and Terrorism
- Border Security and External Security
- Digital Security

**2014-2015 (closed)**

Budget: Eur 396 mill.

- Disaster-resiliences
- Fight against crime and Terrorism
- Border Security and External Security
- Digital Security

**2016-2017 (closed)**

Budget: EUR 390 mill.

- Disaster-Resilient Societies
- Fight against Crime and Terrorism
- Border and External Security
- Digital Security

**2018-2020 (still open)**

Budget: EUR 716 mill.

# Horizon 2020 evaluation

- Excellence**
- Clarity and pertinence of the objectives
  - Credibility of the proposed approach
  - Soundness of concept
  - Extent that proposed work is ambitious and beyond the state of the art
- Impact**
- The expected impacts listed in the Work Programmes under the relevant topic
  - Enhancing innovation capacity and integration of new knowledge
  - Strengthening the competitiveness and growth of companies by developing innovations meeting the needs of European and global markets
  - environmental and socially important impacts
  - Effectiveness of the proposed measures to exploit and disseminate the project results
- Implementation**
- Coherence and effectiveness of the work plan
  - Complementarity of the participants within the consortium

**Close to 20.000 external experts (41% women and 59% men) evaluate the 165.000 proposals submitted so far.**



# Most relevant funding types

## **Collaborative project**

Consortia (min. Three countries represented) to secure EU's global competitiveness. Project must address societal challenges. SME's are wanted! 0-20 EUR mill. 100% funding (usually) + 25% overhead. 2-5 years. Written application. Success rate 10-20%.

## **SME Instrument**

Single SME applicant. Demonstration, market replication, piloting, development of prototypes, scaling up and preparing product for investors. Up to 2,5 mill. EUR for up to two years. 70% funding + 25% overhead. Written application + interview. Success rate <10%.

## **EuroStars**

Cross boarder SME targed R&I programme (min. two). Development of new product, service or improvement of process in business in an innovative manner. Max. 300.000 EUR for DK participants. 50% funding rate. Up to three years. Written application. 20-30%

## **EUopSTART**

Danish prefund programme for proposal prepatation (salary, travel or consultants). Up to 75.000 DKK. Written application. 80-100% success rate.

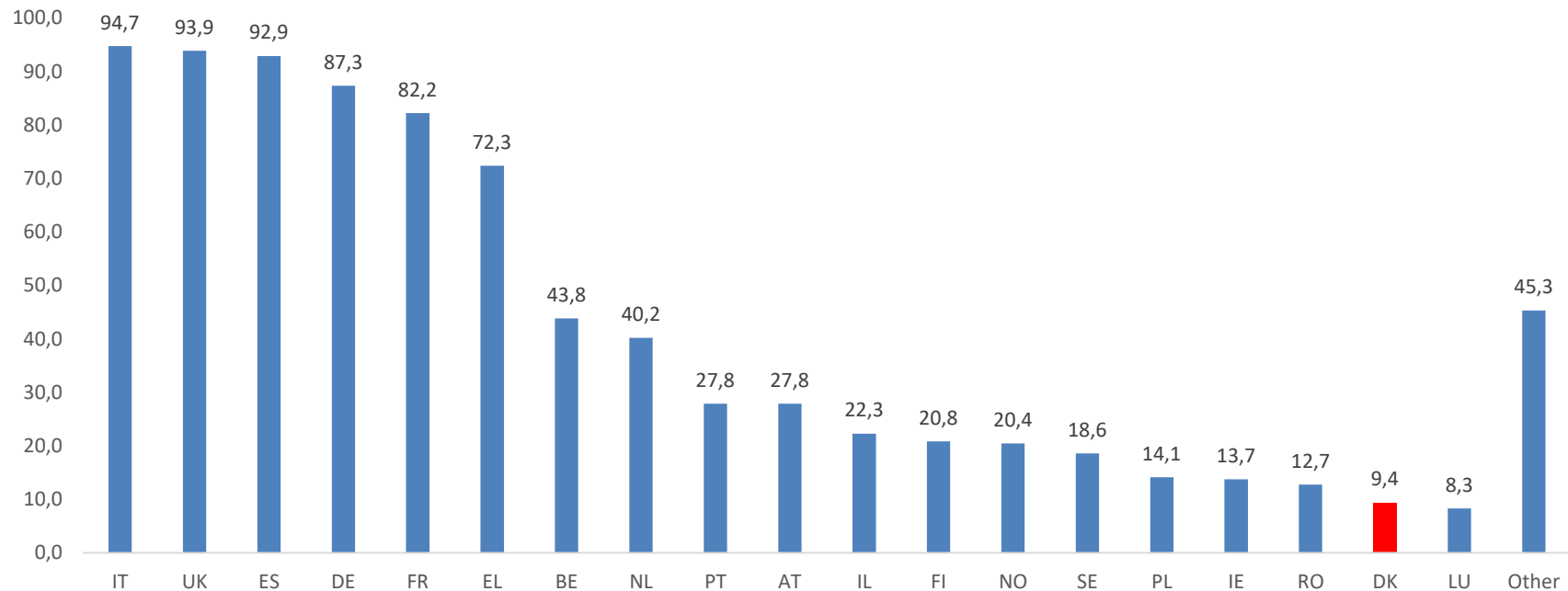
# Frontrunners

So far EUR 848,6 mill. funded 287 projects.

1524 organisations have been funded.

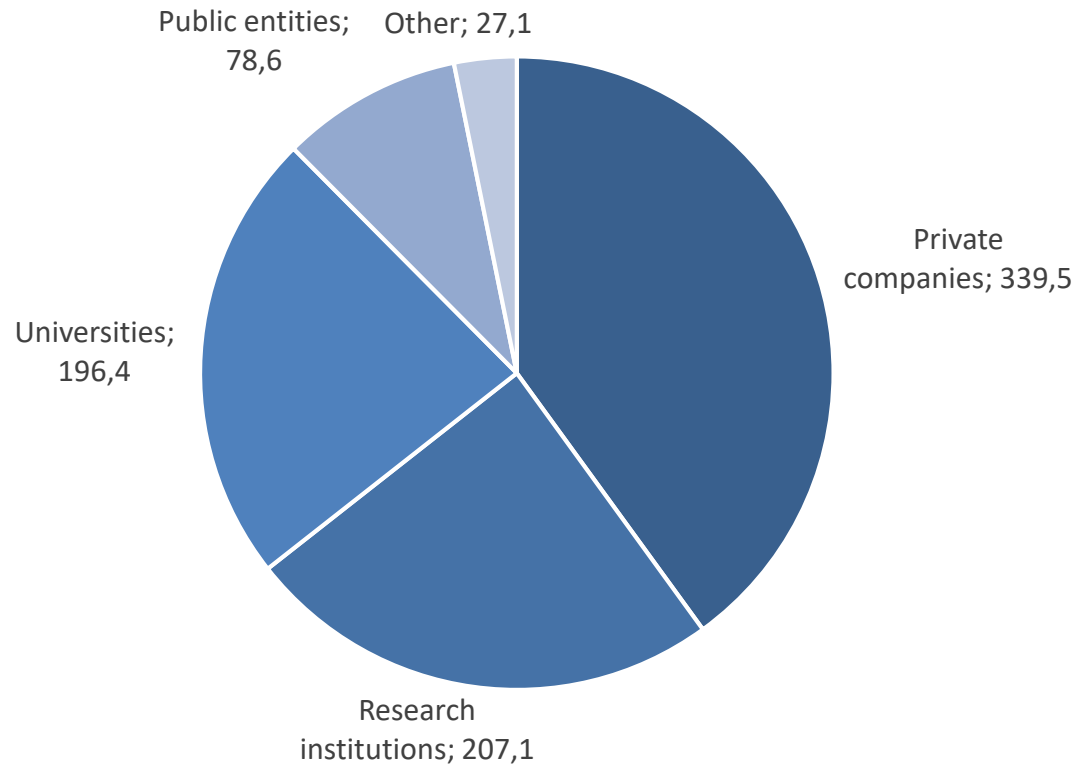
# Frontrunners

Italy, UK and Spain are the most successful countries in obtaining funding. Denmark is nr. 19 – a poor position for DK in H2020 (overall nr. 10)



# Frontrunners

The largest share for the funding (40,0%) went to 700 private companies that received EUR 339,5 mill.



# Danish institutions funded so far

Rank (in DK)	Name	Project participations	EU contribution (EUR mill.)
1	MYDEFENCE COMMUNICATION APS	2	1,31
2	CARDLAB INNOVATION APS	2	0,96
3	MILESTONE SYSTEM AS	1	0,92
4	DANSK BRAND- OG SIKRINGSTEKNISK INSTITUT FORENING	2	0,87
5	QUARDLOCK APS	2	0,71
6	FREDERIKSBORG BRAND OG REDNING	2	0,54
7	IBM DANMARK APS	1	0,53
8	ALEXANDRA INSTITUTTET A/S	1	0,53
9	AALBORG UNIVERSITET	1	0,43
10	LEGIND TECHNOLOGIES AS	1	0,38
11	CLOUDPARTNERS A/S	1	0,34
12	SUNDHED.DK IS	1	0,30
13	KOBENHAVNS UNIVERSITET	1	0,29
14	DANMARKS TEKNISKE UNIVERSITET	1	0,29
15	FORSVARET OG FORSVARSMINISTERIETS STYRELSER	2	0,24
16	VEJLE KOMMUNE	1	0,18
17	ROSKILDE UNIVERSITET	2	0,17
18	MEDCOM	1	0,16
19	DANSK INSTITUT FOR INTERNATIONALE STUDIER	1	0,13
20	D MANAGEMENT APS	1	0,05
21	INTEGRATED GAS TECHNOLOGY APS	1	0,05
22	INTERNATIONAL ASSOCIATION OF IT LAWYERS (IAITL) FORENING	1	0,00
	<b>Total</b>	<b>29</b>	<b>9,38</b>

# Frontrunners

Top 10 funded institutions. See full list of 1524 institutions on [www.groenbruun.eu](http://www.groenbruun.eu)

Rank (in DK)	Name	Project participations	EU contribution (EUR mill.)	Country
1	KENTRO MELETON ASFALEIAS	26	20,61	EL
2	FRAUNHOFER GESELLSCHAFT ZUR FOERDERUNG DER ANGEWANDTEN FORSCHUNG E.V.	36	19,47	DE
3	ATOS SPAIN SA	25	10,62	ES
4	COMMISSARIAT A L ENERGIE ATOMIQUE ET AUX ENERGIES ALTERNATIVES	12	9,31	FR
5	ETHNIKO KENTRO EREVNAS KAI TECHNOLOGIKIS ANAPTYXIS	17	9,12	EL
6	A.S.T.R.I.D. SA	1	8,64	BE
7	AIT AUSTRIAN INSTITUTE OF TECHNOLOGY GMBH	13	8,50	AT
8	ENGINEERING - INGEGNERIA INFORMATICA SPA	13	7,76	IT
9	NEDERLANDSE ORGANISATIE VOOR TOEGEPAST NATUURWETENSCHAPPELIJK ONDERZOEK TNO	16	7,15	NL
10	TOTALFORSVARETS FORSKNINGSINSTITUT	8	6,23	SE
	<b>Total (top 10)</b>	<b>167</b>	<b>107,41</b>	
	<b>Total all</b>	<b>2593</b>	<b>848,6</b>	



# Purpose

## Main challenge in Europe in defence

- Fragmentation and lack of cooperation
- Lack of capabilities
- Lack of R&I

## Defence expenditure:

- EU-28: EURO 227 b.
- US: EURO 545 b.

## Security Threats:

- Russia
- Middle East
- Shaky relations with the US
- New weapons and weapon system fragmentation ( EU-28: 178 weapon systems vs. US 30 weapon systems)

**The Preparatory Action on Defence Research (PADR) is a concrete step aimed at assessing and demonstrating the added-value of EU supported defence research and technology (R&T).**

- The EU has earmarked 90 M€ for PADR until 2020 (Expected post 2020 budget: 500 M€)



# PADR Projects: Rules and principles

<b>Purpose</b>	Capability-driven and focus on critical defence technologies as well as exploratory and disruptive research with the potential to strengthen the technological leadership of the European defence industry
<b>Funding rate</b>	100% + 25% of eligible direct costs
<b>Amount</b>	Up to M€ 35
<b>Duration</b>	3-4 years
<b>Criteria</b>	Minimum 3 participants from 3 EU countries (or Norway)
<b>TRL</b>	4-9 (specified in the work programme)
<b>Evaluation</b>	Excellence Impact Implementaion
<b>Proposal</b>	70 pages

# Expected PADR topics in 2019

## Critical Defence Technologies

- Key enabling sensor components technologies for military applications in radar, communications and electronic protection/warfare
- Use of active electronic scanned arrays for electronic warfare applications
- Cognitive radar platform
- Radiofrequency machine learning systems
- Dynamic range-enhanced electronics and materials
- Rapid array development

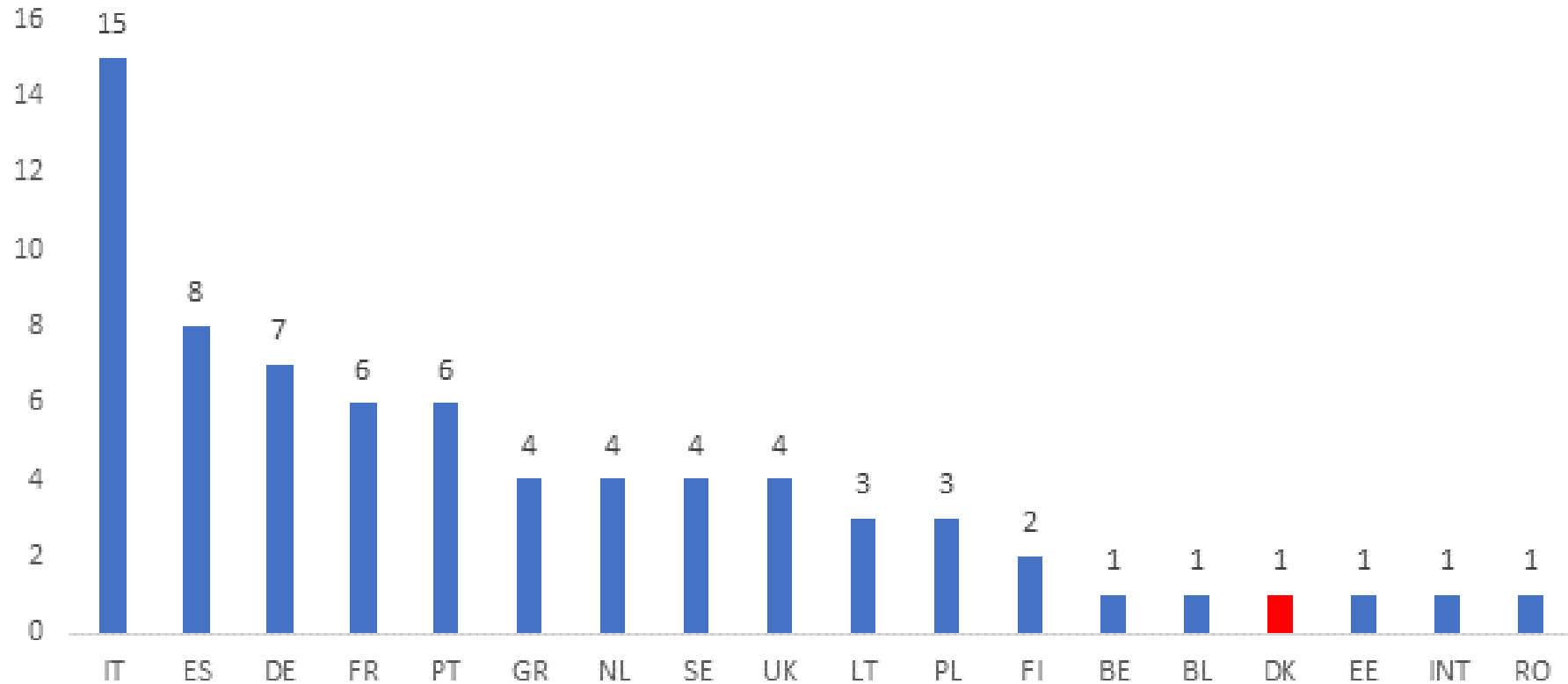
## Future and Disruptive Technologies

- Autonomous positioning, navigation and timing
- AI enabled cyber defence
- Quantum computing with military cyber implications
- Towards a trustable quantum web

## Standardisation and Interoperability

- Interoperability for unmanned systems
- Standards in Information Security and Cyber Defence

# Country Distribution



# Funded already

## Organisations with more than one grant:

- TNO, NL
- CITEVE, PT
- SAAB, SE
- Safran Electronics and Defence, FR
- Fraunhofer, DE

## Other companies include:

- Leonardo
- Indra

Danish institutions funded so far



# Security networks in Europe

- **The European Network of Defence-related Regions (ENDR)** brings together regional authorities and clusters to share experiences and best practices in building defence-related strategies and accessing EU funding, particularly to the benefit of SMEs. Members are regions and cluster organisations.
- **The European Cyber Security Organisation (ECSO)** represents the industry-led contractual counterpart to the European Commission for the implementation of the Cyber Security contractual Public-Private Partnership (cPPP). ECSO members include a wide variety of stakeholders such as large companies.
- **The European Organisation for Security (EOS)** is the voice of the European security industry and research community. Operating in 15 different countries, EOS Members provide security research, solutions and services across many security domains, including border, cyber, transport and crisis management. Members include private enterprises, clusters and academic institutions.

# Thank you and contact

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**Advance your fundraising capacity**  
**Better outreach and communication**  
**Release your international R&I potential**

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