



# HORIZON 2020

**The EU Framework  
Programme for Research and  
Innovation**

**2014-2020**

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# Content of the presentation

Overview of Horizon 2020

U.S. Focus

Practical Information



# What is Horizon 2020?



**The EU's programme  
for research & innovation  
2014-20**

**€77 billion over 7 years**

- Respond to economic crisis to invest in future jobs & growth
- Address people's concerns -livelihood, safety, environment
- Strengthening the EU's global position in research, innovation and technology

# H2020 Strategy & Approach

**Aligned with EU policy priorities**

**Innovation & Industry focus**

**Partnership with Member States**

**Cross-cutting issues**

**Two-year work programmes**

**Open to the world**

- ✓ **General**
- ✓ **Specific targeting of topics for partner countries**



# Three Priorities



# Priority 1. Excellent Science

€24 billion, 2014-2020

<b><i>European Research Council (ERC)</i></b>	<b>13.10</b>
<b><i>Future and Emerging Technologies</i></b>	<b>2.59</b>
<b><i>Marie Skłodowska-Curie actions (MSCA)</i></b>	<b>6.16</b>
<b><i>Research Infrastructures including e-infrastructures</i></b>	<b>2.39</b>

# European Research Council

## Starting Grants

starters (2-7 years after PhD)  
up to € 2.0m for 5 years

€ 485m 2016  
Deadline: 17 Nov 2015

## Consolidator Grants

consolidators (7-12 years after PhD)  
up to € 2.75m for 5 years

€ 605m 2016  
Deadline: 1 Jul 2016

## Advanced Grants

significant research achievements in the last 10 years  
up to € 3.5m for 5 years

€ 540m 2016  
Deadline: 1 Sept 2016

## Proof-of-Concept

bridging gap between research - earliest stage of marketable innovation  
up to €150,000 for ERC grant holders for 18 months

€ 20m 2014 Deadline: 16 Feb/26 May/4 Oct 2016

# Marie Skłodowska-Curie actions (MSCA)

- **Innovative Training Networks (ITN)**

2016/ 2017: € 370 / 430 mio. deadlines 12 Jan/ 10 Jan

- Doctoral and initial training of researchers proposed by international networks of organisations from public and private sectors

- **Individual Fellowships (IF)**

2016/ 2017: € 218.5 / 248 mio. deadlines 14 Sep / 14 Sep

- Individual fellowships for most promising experienced researchers to develop their skills through international or inter-sector mobility

- **R&I Staff Exchange (RISE)**

2016/ 2017: € 80 / 80 mio. deadlines 28 Apr / 05 Apr

- International and inter-sector cooperation through the exchange of research and innovation staff



## Priority 2. Industrial Leadership

€17 billion, 2014-2020

<p><b><i>Leadership in enabling and industrial technologies (LEITs)</i></b> ICT, nanotechnologies, materials, biotechnology, manufacturing, space</p>	<p><b>13.04</b></p>
<p><b><i>Access to risk finance</i></b> Leveraging private finance and venture capital for research and innovation</p>	<p><b>2.84</b></p>
<p><b><i>Innovation in SMEs</i></b> Fostering all forms of innovation in all types of SMEs</p>	<p><b>0.62</b> + 20% Societal Challenges + LEITs budget</p>

## Priority 3. Societal Challenges

€29.7 billion, 2014-2020

<b><i>Health, demographic change and wellbeing</i></b>	<b>7.26</b>
<b><i>Food security, sustainable agriculture, marine and maritime research &amp; the bioeconomy</i></b>	<b>3.71</b>
<b><i>Secure, clean and efficient energy</i></b>	<b>5.69</b>
<b><i>Smart, green and integrated transport</i></b>	<b>6.15</b>
<b><i>Climate action, resource efficiency and raw materials</i></b>	<b>2.96</b>
<b><i>Inclusive and reflective societies</i></b>	<b>1.26</b>
<b><i>Secure societies</i></b>	<b>1.61</b>

# Type of Actions under *Industrial Leadership and Societal Challenges* priorities & *FET*

- Main Type - **Collaborative**
  - Large multipartner, transnational, interdisciplinary projects
- Other Types:
  - Coordination & Support Actions (no R&D costs covered)
  - SME instrument: 3-phase - feasibility, innovation project, indirect support for commercialisation
  - Cofund

# Horizon 2020 the first two years (2014 - 2015)

2014-15 Work Programme € 15 billion

45,236 eligible proposals

12,000 evaluators

5,800 retained for funding

5,306 grant agreements € 9.6 billion from EU (end Oct'15)

# U.S. Participation Possibilities



- **ERC grantees**
- **Marie Skłodowska-Curie Actions**
- As fellows / associated partners / hosts
- **Collaborative projects**
- Full partner / third party / subcontractor in all areas of H2020
- **Funding**
- Not available, as a rule, to participants from non-European industrialized countries
- **Exceptions:**
  - Health Research
  - Research Infrastructure Integrating Activities
  - *Ad hoc* exceptions
  - Subcontractors

# U.S. Participation in H2020 some data



## ERC grantees:

- 2014 - 2015: **59** US nationals  
**4** US institutes receive funds
- 2014 - 2015: **39** US residents at time of application

## Marie Skłodowska-Curie Actions:

Fellows, Partners & Hosts

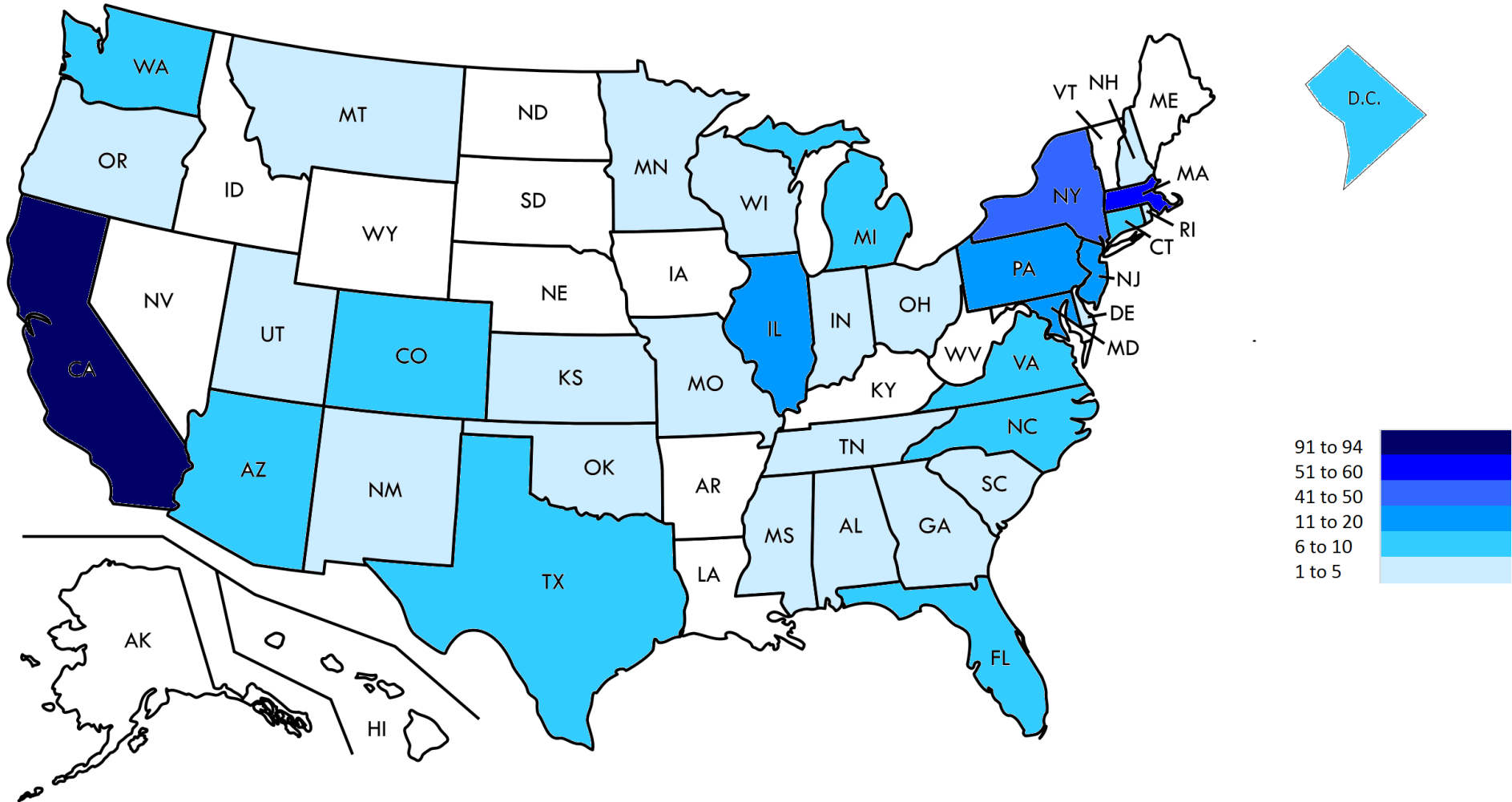
- 2014 - 2015: **366** US participations incl. non-university  
**174** IF incoming to Europe from US

## Collaborative projects:

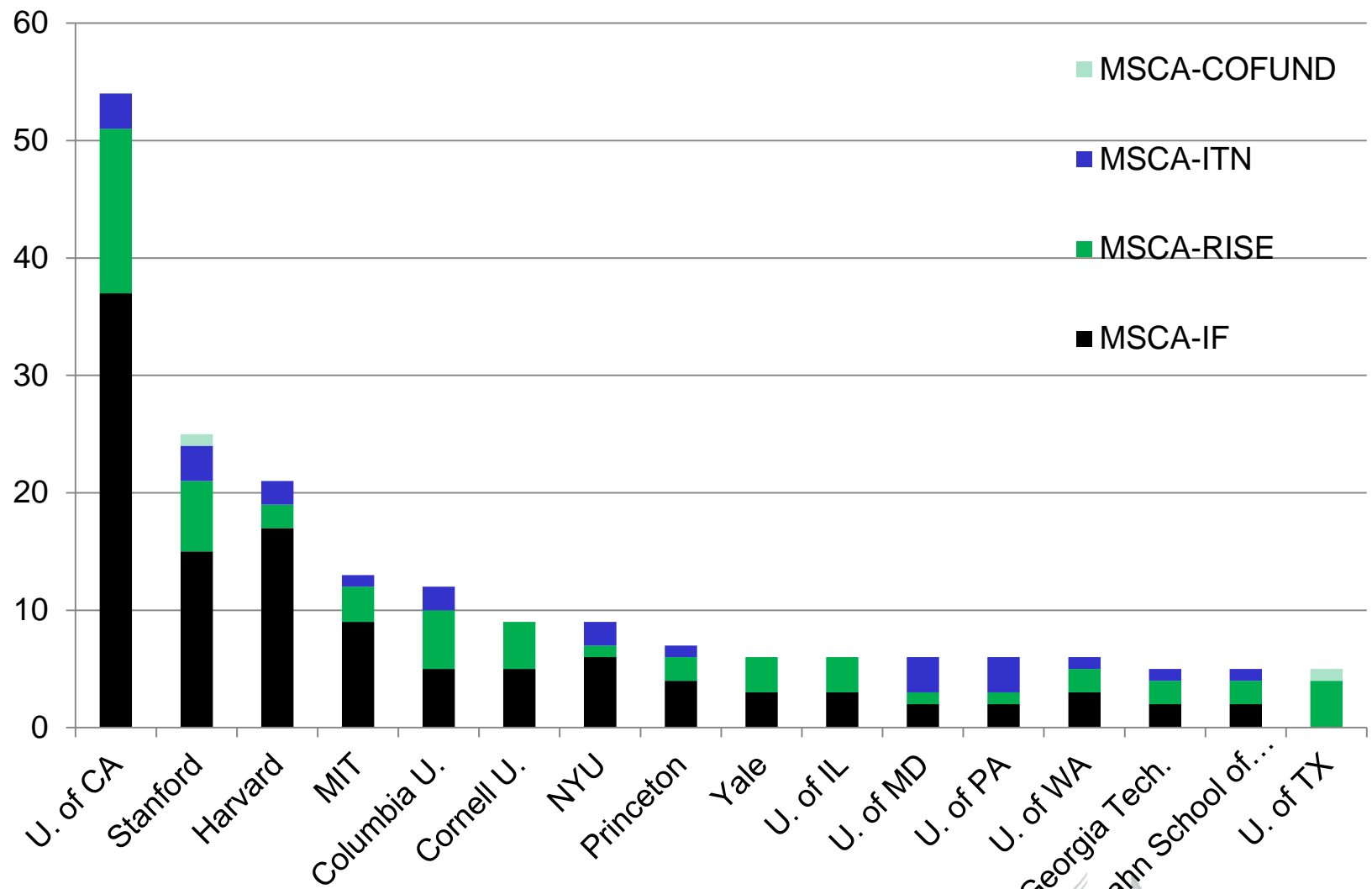
Full partner / third party / subcontractor in all areas of H2020

- 2014 - 2015: **63** U.S. organisations have signed G.A.s  
**52/74** participations funded [€ 13 million]

# Distribution of 366 H2020 MSCA U.S. participations 2014- 2015

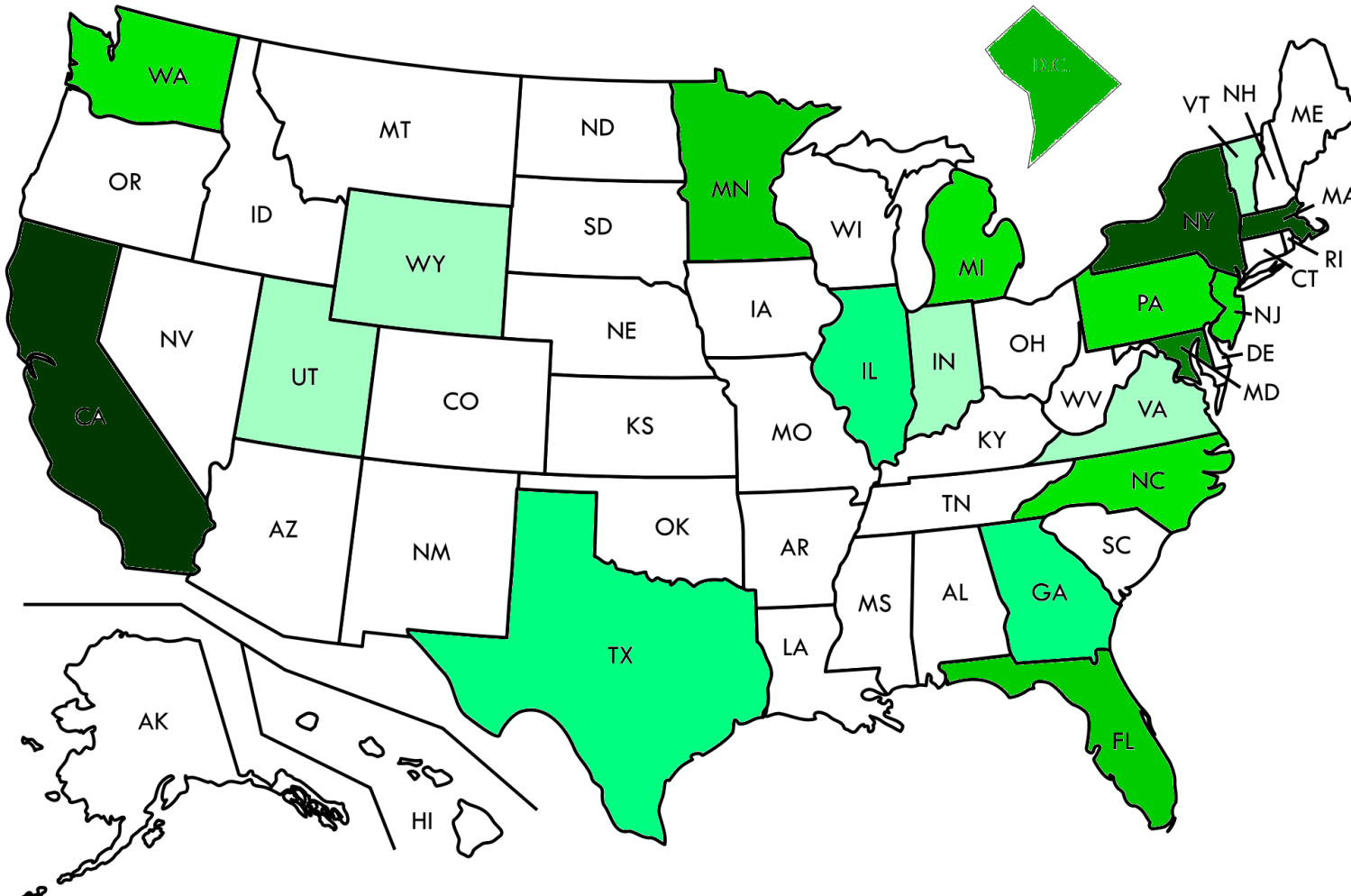


# Top US Universities participating in MSCA





# Distribution of 74 H2O2 Collaborative R&D U.S. participations 2014- 2015



California	10
Massachusetts	9
New York	9
Maryland	7
District of Columbia	5
Florida	4
Minnesota	4
Michigan	3
New Jersey	3
North Carolina	3
Pennsylvania	3
Washington	3
Georgia	2
Illinois	2
Texas	2
Indiana	1
Utah	1
Vermont	1
Virginia	1
Wyoming	1

# Florida-based H2020 Collaborative project participants to date

Project	Acronym	ΣEC - €	#Participants	US Participant	EC - €
Deep-sea Sponge Grounds Ecosystems of the North Atlantic: an integrated approach towards their preservation and sustainable exploitation	SponGES	10M	18	Florida Atlantic University	0
Virus discovery and epidemic tracing from high throughput metagenomic sequencing	VIROGENESIS	3M	8	University of Florida	234k
ICT Policy, Research and Innovation for a Smart Society: towards new avenues in EU-US ICT collaboration	PICASSO	1.2M	10	Florida International University	0
BILAT USA 4.0	BILAT USA 4.0	2M	16	Florida International University	36K

€ 16 BILLION

63 calls

600 topics



# 2016-2017 Work Programme



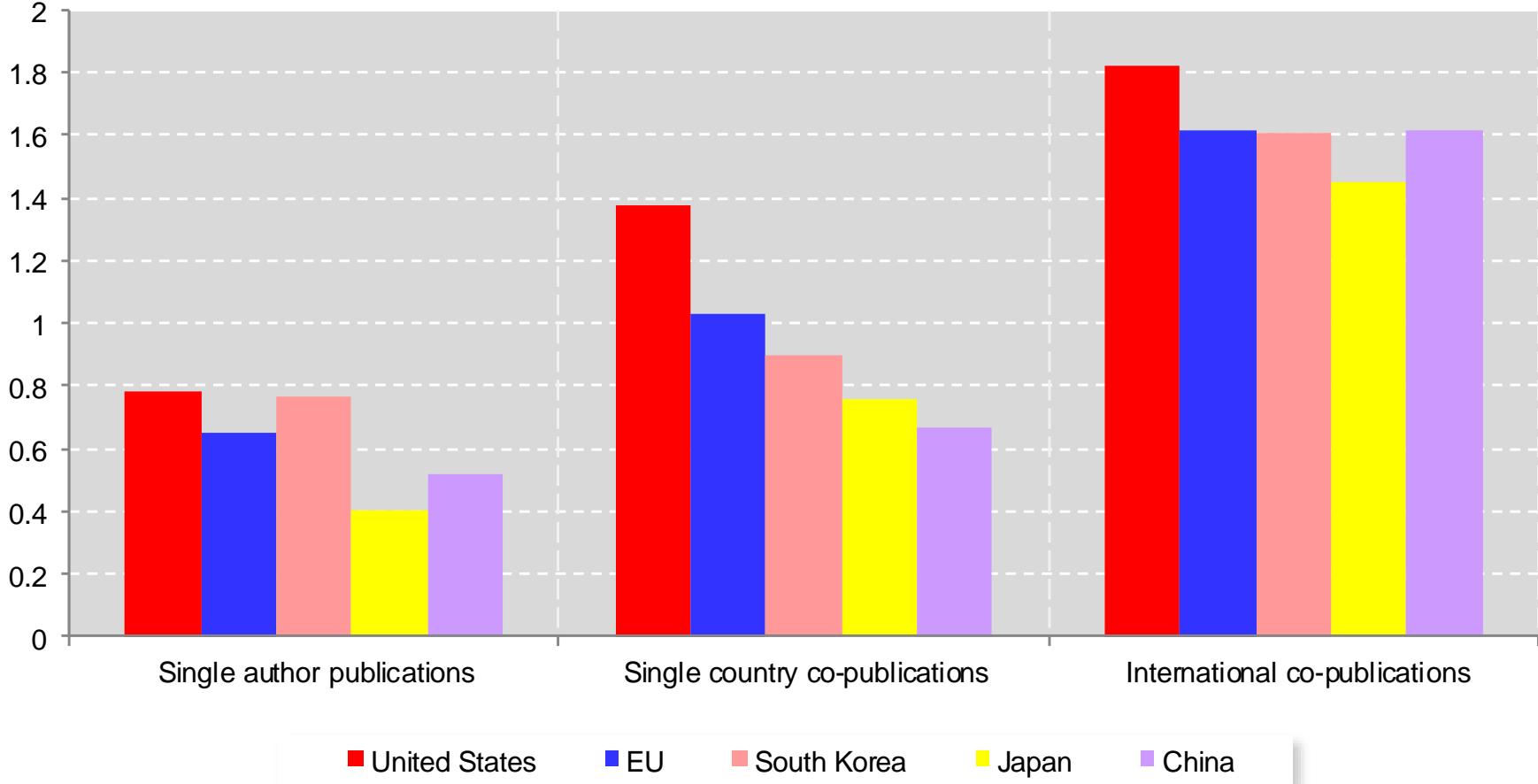
# H2020 Work Programme 2016-17

- ✓ Published 14 Oct 2015
- ✓ 30% of topics flagged for **international cooperation**
- > **50 topics specifically relevant to U.S.**
- ✓ **Special focus areas:** € 1040 million

<b><i>Industry 2020 in the Circular Economy</i></b> Pilots, factories of the future, sustainable process industries	<b>353.5</b> (2016) <b>316</b> (2017)
<b><i>Internet of things</i></b>	<b>104</b> (2016) <b>35</b> (2017)
<b><i>Smart and sustainable cities</i></b>	<b>120</b> (2016) <b>111.5</b> (2017)

# Why Participate in Horizon 2020? International Cooperation Increases Impact

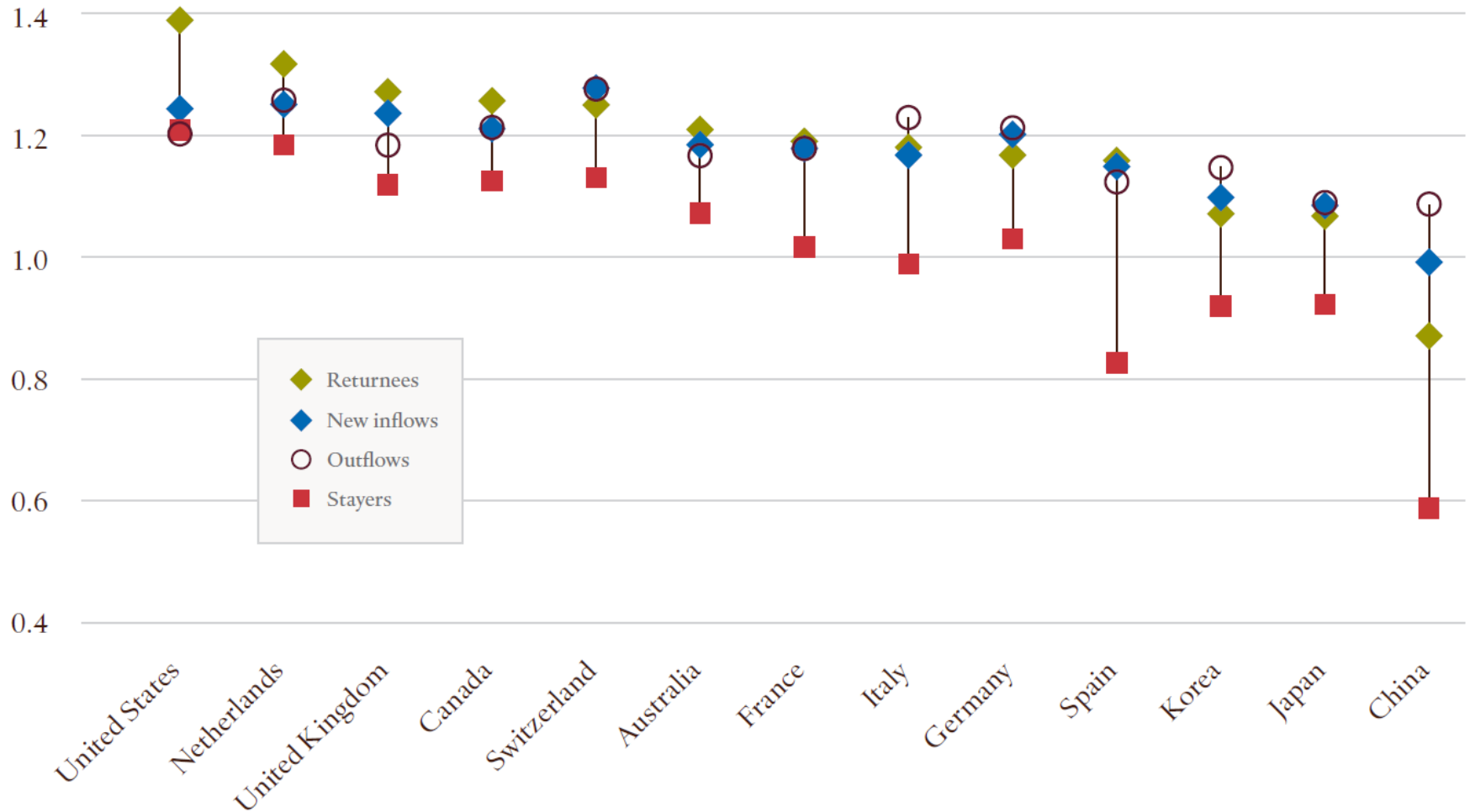
Average Relative Citations (ARC) of publications by type of co-operation, 2010



Source: DG Research and Innovation - Unit for the Analysis and Monitoring of National Research Policies

Data: Science-Metrix (Canada), based on Scopus database

# U.S. scientists who work/ study abroad and then return achieve the highest of all U.S.-based scientists and of all categories of internationally-mobile scientists across different nationalities (OECD, 2013)



# Why Participate in Horizon 2020?

- **Access to expertise, equipment & facilities**
  - **Economies of scale & scope**
  - **Increased research quality**
  - **Greater impact, efficiency and speed**
  - **Networks & alliances**
  - **Career development**
  - **Business & commercialisation opportunities**
  - **Other ...**
    - New research avenues
    - Exchange possibilities
    - Cross-disciplinary/ cross-border fertilization
- HORIZON 2020
- ...





# Research Infrastructures

## Integrating & Opening RIs of European interest (€ 200 million)

***INFRAIA-01-2016-2017 & INFRAIA-02-2017 - two categories of "integrating activities" requiring Networking, Transnational Access, and Joint Research:***

1. advanced communities 27 areas listed bio & medical sciences, environmental & earth sciences, maths & ICT, physical sciences and SSH – € 88 million in 2016; € 72 million in 2017 - € 10 million per award; and  
Deadline 30 Mar 2016 (single stage)
1. starting communities € 40 million in 2017 awards of €5 million  
Deadlines 30 Mar 2016 & 29 Mar 2017 (two stage)

**€€€ N.B. Participating U.S. entities can be funded \$\$\$**

# Practical Information

# Participant Portal – your one-stop shop

- Topics
- Documents
- Rules for participation
- Online manual
- E-submission

(A-Z) Sitemap About this site Contact Legal Notice English

RESEARCH & INNOVATION  
Participant Portal

European Commission > Research & Innovation > Participant Portal > Home

HOME FUNDING OPPORTUNITIES HOW TO PARTICIPATE EXPERTS SUPPORT

LOGIN REGISTER

## Welcome to the Research and Innovation Participant Portal

**About the Participant Portal:**

The Participant Portal is your entry point for the electronic administration of EU-funded research and innovation projects. It hosts services for managing proposals and projects throughout their lifecycle.

The Participant Portal supports activities funded mainly by the following EU programmes:

- 7th Framework Programme for Research and Technological Development (FP7)
- Competitiveness and Innovation Framework Programme (CIP)

**Using the Participant Portal:**

**As a guest user,** browse the public pages to:

- search for funding opportunities
- download guidance and legal documents
- search for the participant identification code (PIC) of an organisation
- contact the FP7 support services and browse the FAQ for guidance on the Participant Portal tools

**As a registered user,** benefit from personalised services for proposal submission, negotiation, and project management.

WHAT'S NEW FUNDING OPPORTUNITIES HOW TO PARTICIPATE? WORK AS AN EXPERT ACCESS MY PERSONAL AREA INFORMATION AND SUPPORT

<http://ec.europa.eu/research/participants/portal>

HORIZON 2020

<http://ec.europa.eu/research/horizon2020>

# How to Apply?

## Using the Horizon 2020 website:

### 1. Find a call for proposals

### 2. Find partners (where necessary)

- ✓ Use existing contacts with experience of EU funding programs
- ✓ Use Partner Search facility on the Horizon 2020 Participant Portal website:  
[http://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/applying-for-funding/find-partners\\_en.htm](http://ec.europa.eu/research/participants/docs/h2020-funding-guide/grants/applying-for-funding/find-partners_en.htm)
- ✓ Search the CORDIS database for participants similar projects in FP7:  
[http://cordis.europa.eu/projects/home\\_en.html](http://cordis.europa.eu/projects/home_en.html)
- ✓ Use social media (e.g. LinkedIn forums)?

### 3. Create an account and register your organization

### 4. Submit a proposal

# Understanding the call topics e.g. ...

## **NMBP-26-2016** (What is the topic?)

*Analytical techniques and tools in support of nanomaterial risk assessment*

## **Specific Challenge** (What is the problem?)

*Lack of suitable analytical techniques & instruments*

## **Scope** (what the focus should be for the solution)

*New/ improved techniques to characterise ensembles of shapes, sizes, surface areas chemistry & their fate in complex matrices*

*TRL 5-6; € 5-7 million*

## **Expected Impact**

*Cost reduction; confidence in nonosafety studies; applications in QC, tracing, labelling, counterfeiting*

## **Type of Action**

*research, innovation, coordination*

# Rules of Participation

## Minimum Conditions:

- **For standard (collaborative) research projects:**

- 3 participants from different Member States or associated countries

In addition, participants from any other country in the world can also be included

- **For actions aimed at individuals, like European Research Council or Marie Skłodowska-Curie:**

- 1 researcher
- 1 host institution
- 1 project



# Evaluation criteria



- ✓ **ERC** frontier Research actions >> only EXCELLENCE
- ✓ **Innovation actions** >> higher weighting for "IMPACT"

**Proposal evaluated by the experts "as it is"  
and not as "what could be" = no need for negotiation**

# For further information

- **Participant Portal**

<http://ec.europa.eu/research/participants/portal/desktop/en/home.html>

- **Helpdesk**

<http://ec.europa.eu/research/enquiries>

- **Expert evaluators needed!**

<http://ec.europa.eu/research/participants/portal/desktop/en/experts/index.html>

- **Learn more about Horizon 2020**

<http://ec.europa.eu/horizon2020>

\* \* \* **END** \* \* \*



# Examples of H2020 Projects with **non-EU-Funded U.S. participants**

**FASTNET [2015-19] Fast Nuclear Emergency Tools**

**21 partners from 17 countries €4.6m**

**U.S. Nuclear Regulatory Commission € 100k / € 0 from EU**

**NANORESTART [2015-18] Nanomaterials for the restoration of works of art**

**26 partners from 12 countries €9.2m**

**Art Institute of Chicago € 115k / € 0 from EU**

**\*BRIDGES [2015-20] Breast cancer risk after diagnostic gene sequencing**

**17 partners from 10 countries €6.46m**

**U.Utah & Mayo Clinic € 51.25k each / € 0 from EU**

**WiSHFUL [2015-18] Wireless Software & Hardware for flexible & unified radio & network control**

**8 partners from 7 countries €5.37m**

**Rutgers € 113.25k / € 0 from EU**

**\*B-CAST [2015-20] Breast cancer stratification**

**12 partners from 9 countries €6.12m**

**Harvard € 62.5k / € 0 from EU**

**AtlantOS [2015-20] Integrated Atlantic Ocean observing system**

**62 partners from 18 countries €20.6m**

**WHOI € 0 from EU (also NOAA)**

**HORIZON 2020**



# Examples of H2020 Projects with EU-Funded U.S. participants

**EU-ToxRisk [2016-21] Toxicity testing and risk assessment for 21<sup>st</sup> Century**  
39 partners from 13 countries €30.1m  
JHU € 515.76k / € 515.76 from EU

**FRESHAIR[2015-18] Free respiratory evaluation & smoke-exposure reduction by ...**  
14 partners from 9 countries €3m  
U.Washington € 271.625k / € 271.625k from EU

**BIOCAPAN [2015-19] Bioactive implantable capluse for pancreatic islets immunosuppression free therapy**  
9 partners from 6 countries €8m  
Wake Forest U. Health Sciences € 764.9k / € 764.9k from EU

**IF-EBOLa[2014-16] Control of the Ebol outbreak by both innovative ultrasensitive ..**  
8 partners from 6 countries €2m  
Metabiota Inc € 237k / € 237k from EU ; Orion Integrated Biosciences Inc € 135k / € 135k from EU

**EUNCL [2015-19]European Nanomedicine Characterization Laboratory**  
9 partners from 8 countries €5.6 m  
Leidos Biomedical Research Inc. (NCI) € 348.7k / € 348.7k from EU