

European Research Council



Strengthening Europe's Science Base

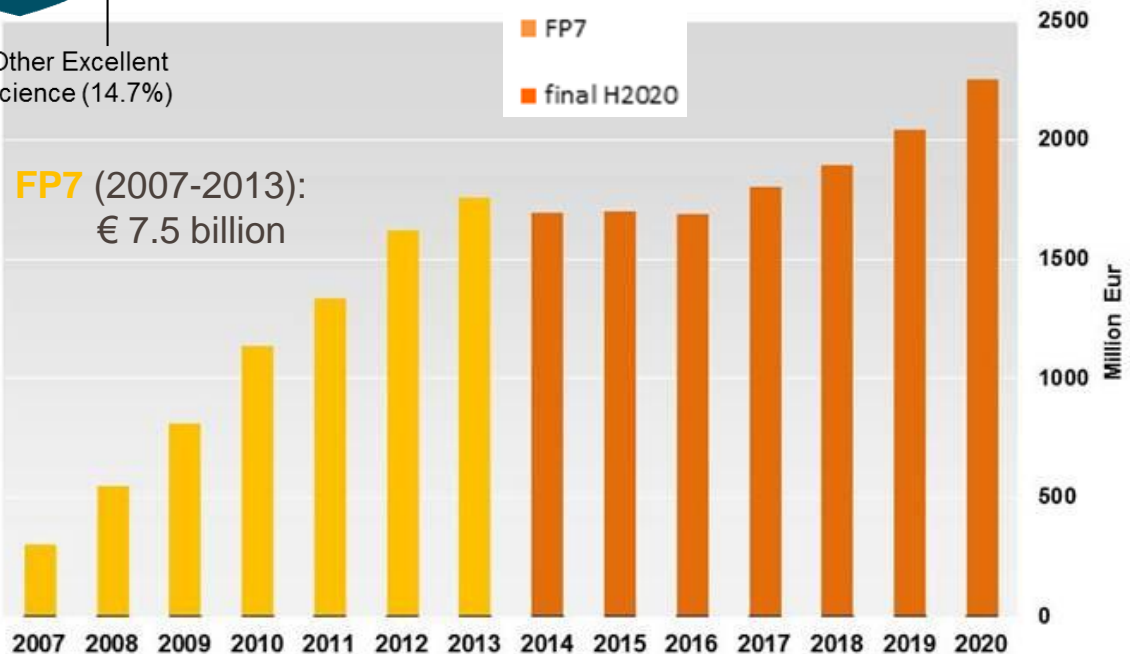
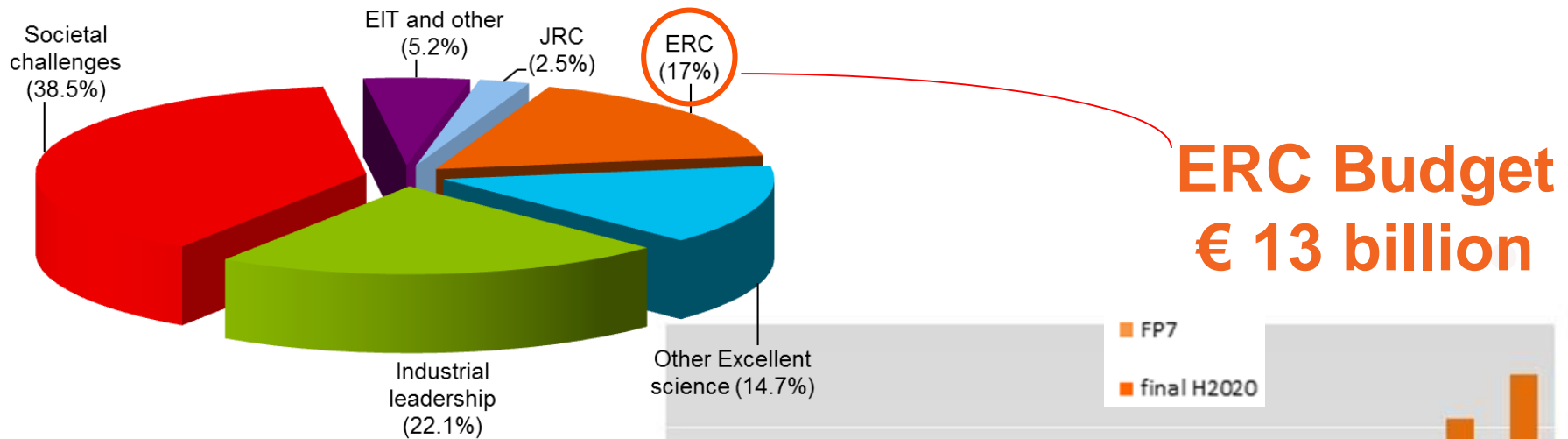
Prof. Eva Kondorosi
Vice President of ERC

and Chair of the Working Group
on Widening European Participation

COST Info Day

23 March 2018, Belgrade

ERC H2020 Budget



ERC Mission

- “ERC's mission is to encourage the highest quality research in Europe
- through competitive funding and
- to support investigator-driven „bottom-up” frontier research
- across all fields, on the basis of scientific excellence.”

(quoted from the ERC website: <https://erc.europa.eu/about-erc/mission>)

ERC: a Radical Step Forward for Europe

Mission: To raise the level, dynamism and creativity of the whole European research system by:

- **Supporting the emergence of research leaders**
- **Improving the career prospects of early stage researchers**
- **Providing a benchmark for all of Europe's national research authorities and individual institutions** encouraging further efforts, reforms and investments, thereby **sustaining structural reforms across Europe.**

What are the main ERC principles?

1 Principal Investigator (PI)

Independent researchers from anywhere in the world,
of any age and career stage can apply

1 Research project

Applications can be made in any field of research, Life Sciences, Physical Sciences and Engineering and Social Sciences and Humanities

1 Host Institution

No consortia, no networks, no co-financing

Host institutions in one of the EU Member States or Associated countries

Grants are portable: Grantee can **move within Europe** with the grant

1 selection criteria: Excellence

ERC Core Grant Schemes

Starting Grants

starters
(2-7 years after PhD)
€ 1.5 Mio
(up to € 2.0 Mio)
for 5 years

Consolidator Grants

consolidators
(7-12 years after PhD)
€ 2.0 Mio
(up to € 2.75 Mio)
for 5 years

Advanced Grants

track-record of
significant research
achievements in the
last 10 years
€ 2.5 Mio
(up to € 3.5 Mio)
for 5 years

Proof-of-Concept

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

2018- New scheme



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SYNERGY GRANTS: 2-4 PIs

€ 10.0 Mio

(up to € 14.00 Mio)

ERC offers: Creative Freedom to Individual Grantee

independence, recognition & visibility

- **topic of own choice,**
- **a team of own choice**
- **financial autonomy** for 5 years
- to negotiate with the host institution the **best conditions** of work
- to attract additional funding and gain recognition;

After 10 Years, a Success Story



Over **7,500**
top researchers funded since
the ERC's creation in 2007



Over **90,000**
articles from ERC projects published
in prestigious scientific journals



Over **50,000**
researchers and other professionals
employed in ERC research teams



745 research institutions
hosting ERC grantees – universities,
public or private research centres in
the EU or associated countries



€ 13 billion

ERC budget for 2014-2020 under
Horizon 2020



73
nationalities of
grant holders

Host Institution must be in the EU or Associated Countries



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Associated Countries

Iceland □ Norway □ Albania □ Bosnia and Herzegovina □ the former Yugoslav Republic of Macedonia □ Montenegro □ Serbia □ Turkey □ Israel □ Moldova □ Switzerland □ Faroe Islands □ Ukraine □ Tunisia □ Georgia □ Armenia

Grantee must spend at least 50% of the work time in the HI ...
but can keep affiliation with home institute outside Europe

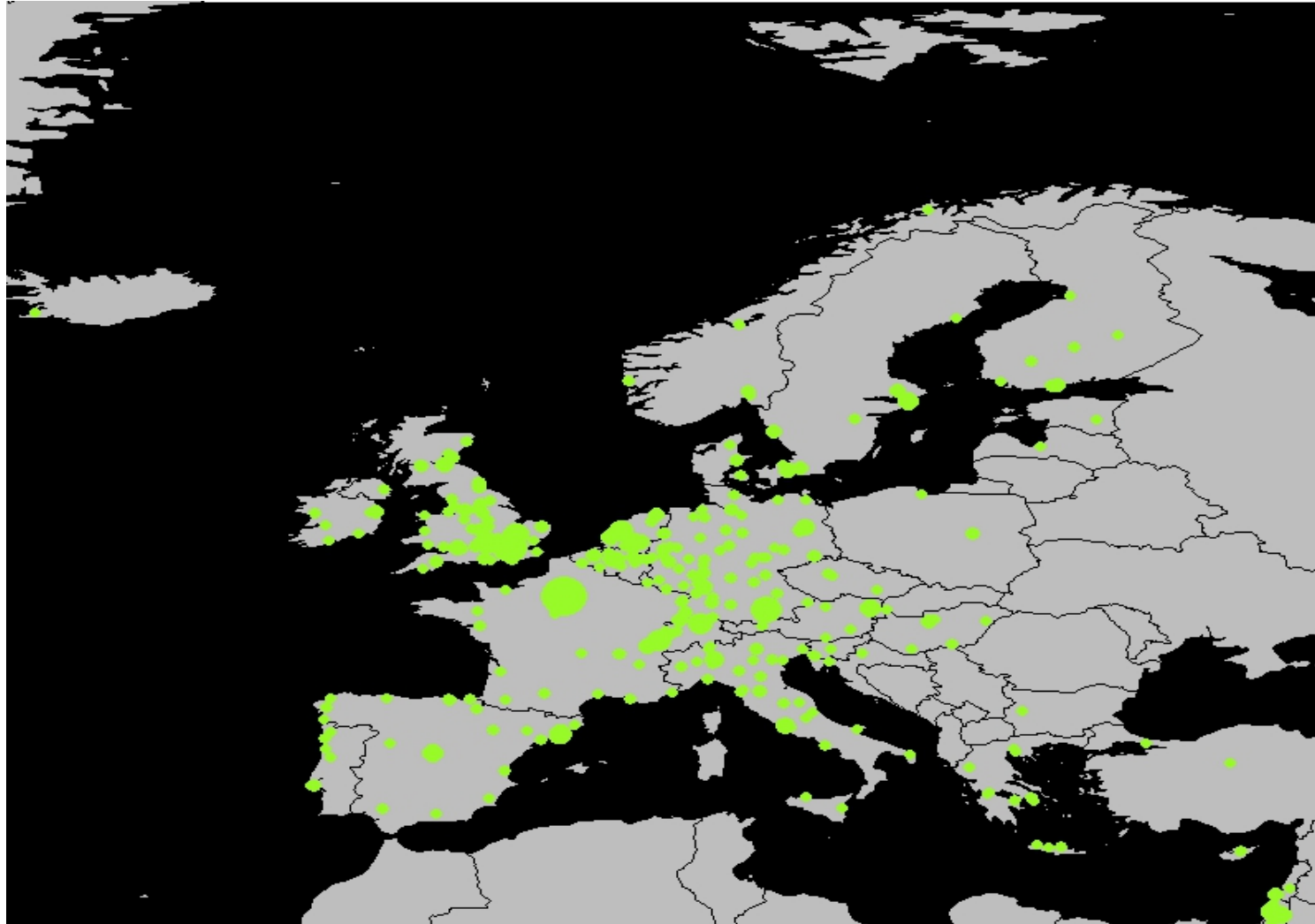
Geographical Location of Grants:



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Altogether
ERC grants
at **745**
different
host
institutions
in **33**
countries

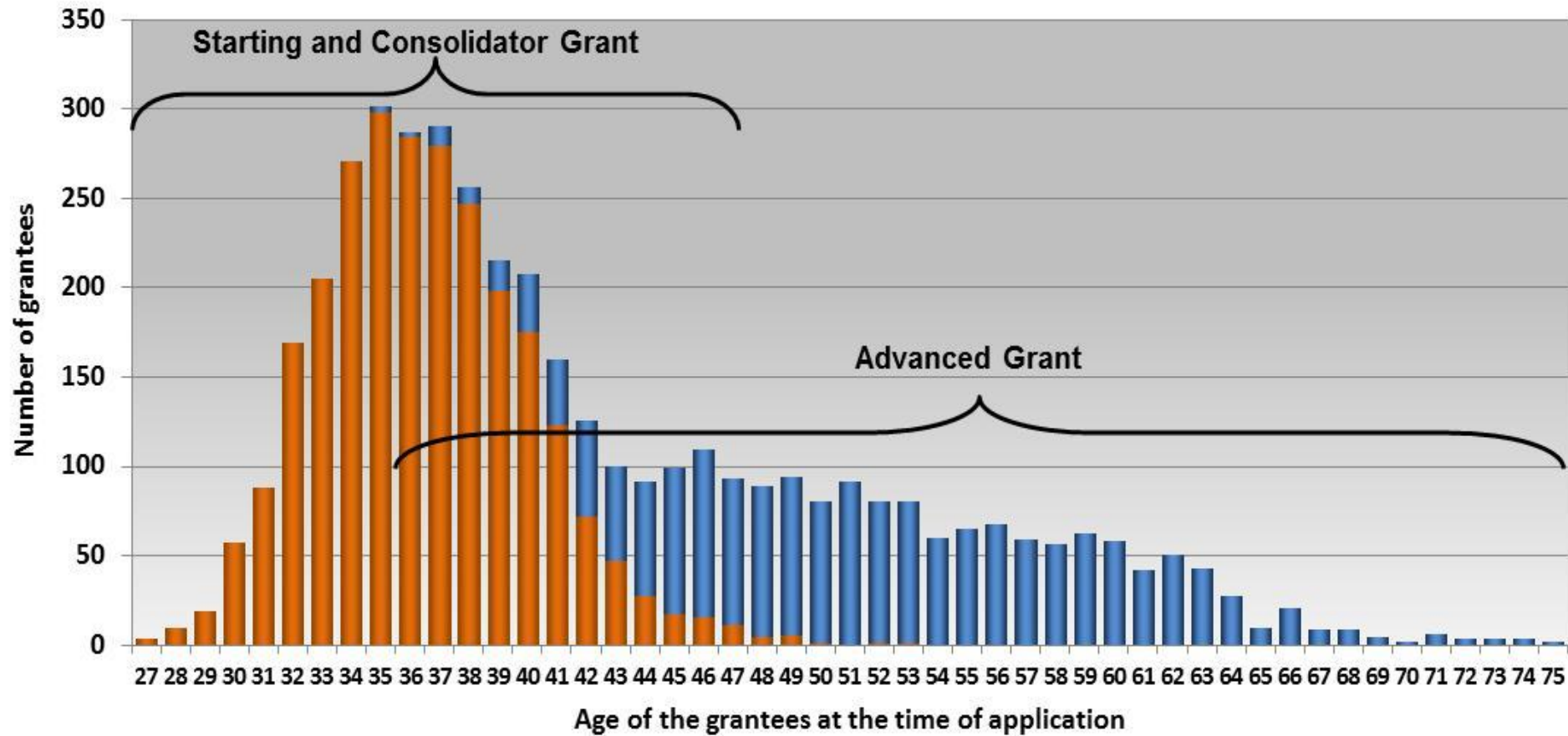


Principal Investigator Priority to Young Scientists



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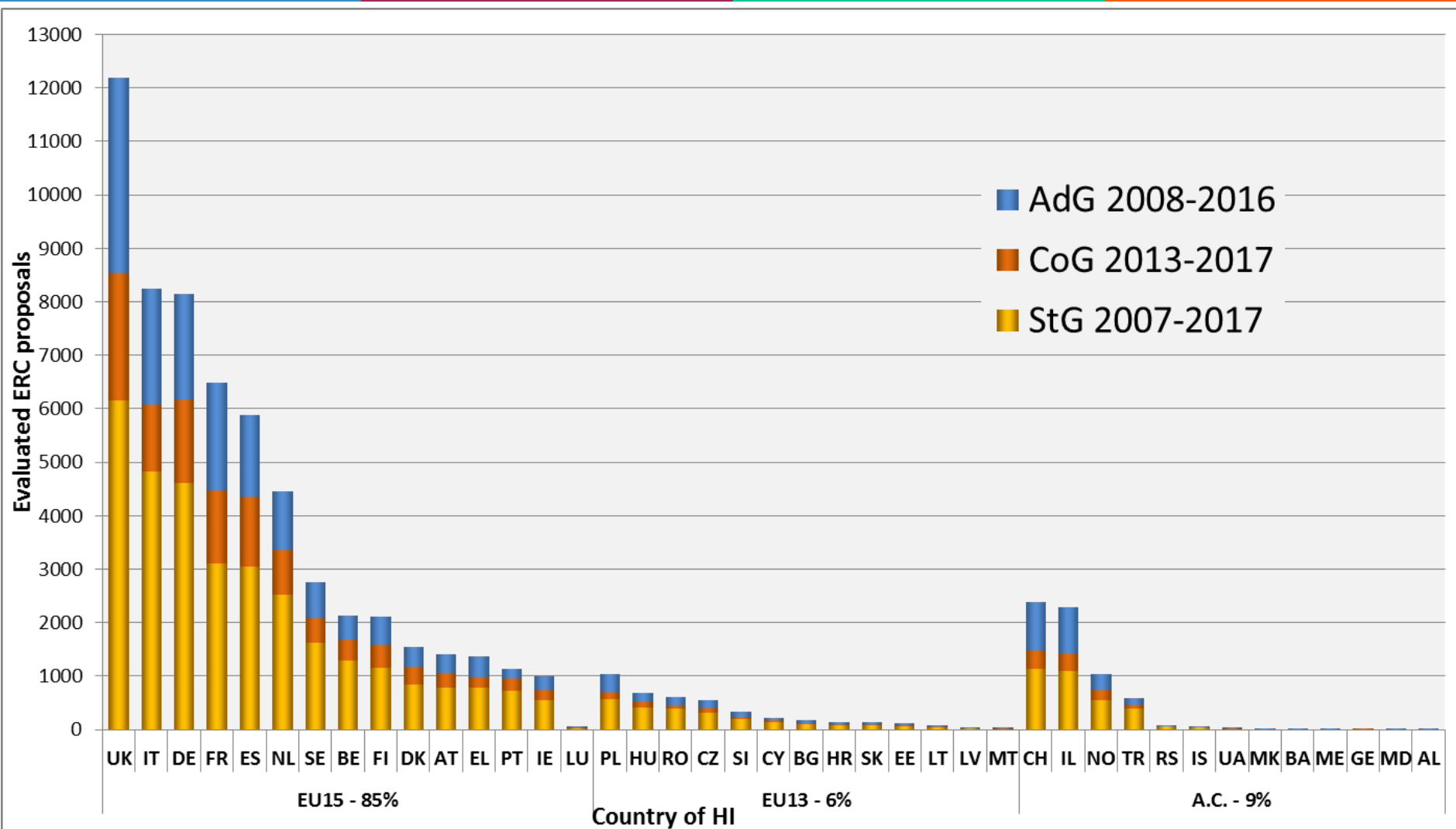
ERC 2007-2013

Evaluated ERC Proposals by HI Country

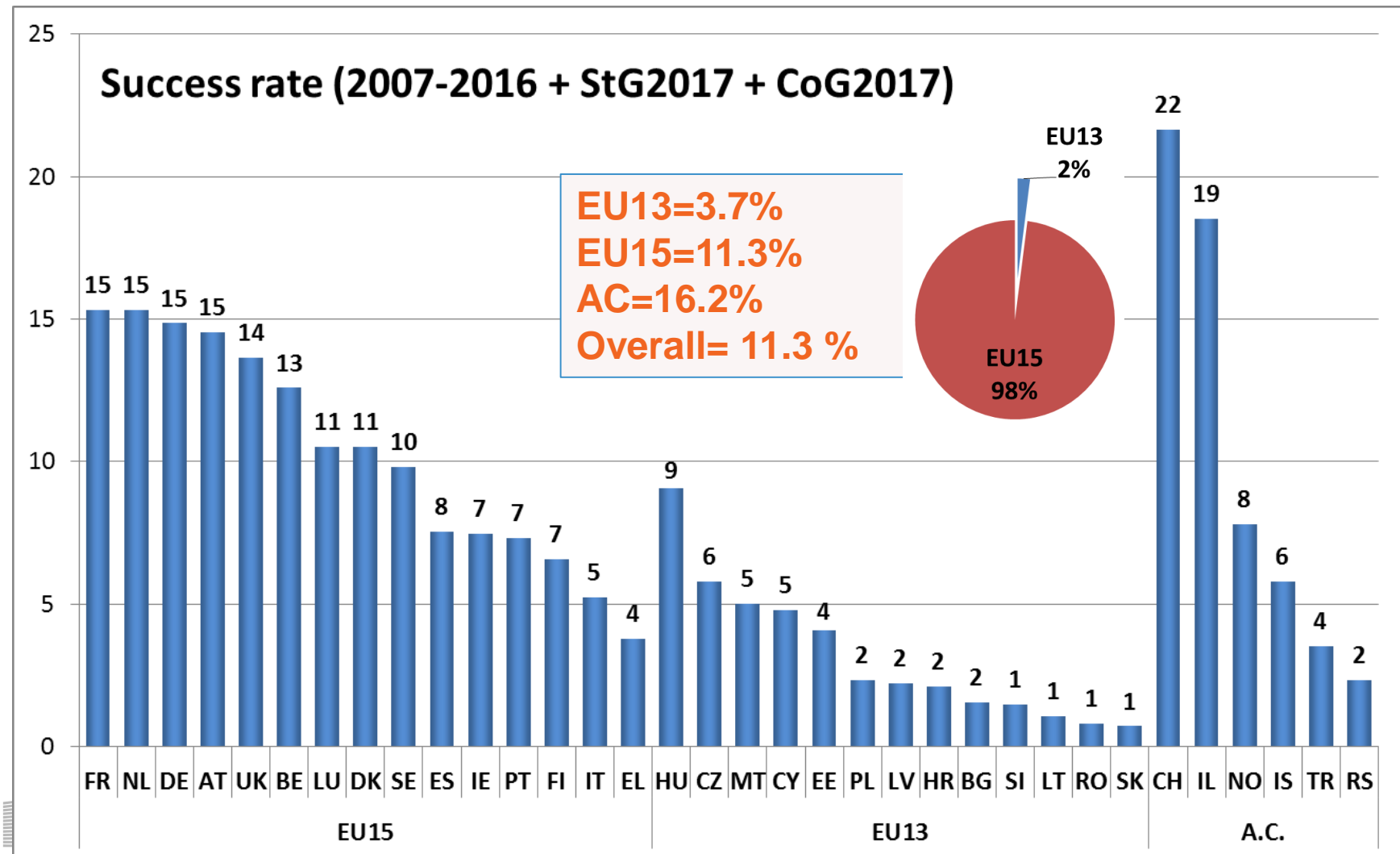


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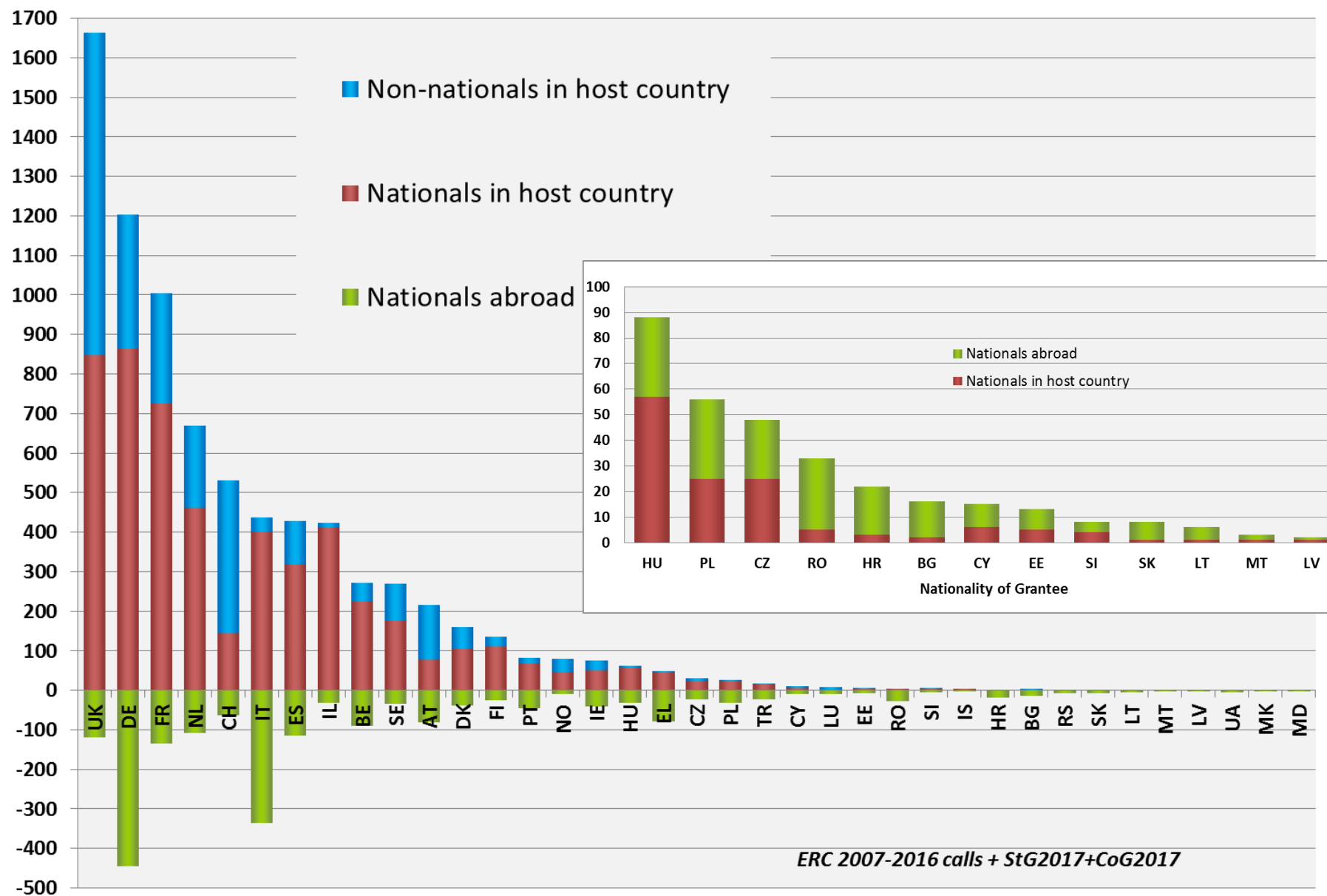
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Success Rate by Country of HI



ERC Grantees at Home and Abroad



ERC ScC Working Group on Widening European Participation



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Mission: to capitalize on the full potential of talents for frontier research in Europe without departing from the ERC's principle of excellence.

Identify the barriers and propose possible actions that could be taken to support the best scientists from weak participating European countries (EU13 and new ACs)

ERC grants in the underperforming countries have much higher impact on the scientific landscape of the country than in the case of successful ones.

Tasks to be solved



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- **How to increase the number of excellent applications to ERC in the widening countries?**
- **What can be done on national level to better support promising scientists in applying to ERC?**
- **What can be done on institutional level?**
- **How can ERC help?**

Identified barriers for applicants from widening countries

ERC WG WEP survey
2014



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- **Low levels of research investment:**
- **Inadequate research funding systems:**
Not appropriate for ambitious internationally competitive research
- **Lack of mobility and international scientific atmosphere**
- **Not being able to pay internationally competitive salaries**
- **Brain Drain**

Report of STOA (EP's science and technology options assessment) panel

15 March 2018



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After 20 years the EU13 countries are still lagging behind the EU15.

EU 13:

- Lower number and quality of proposals.
- Weakness in national research and innovation systems and lower quality of science.
- Limited in-house internal skill in drafting proposals or managing projects.
- Wage gap, slow professional career growth, inadequate evaluation system, lack of internationalisation.
- It is vital to create or develop pockets of excellence.

ERC's contribution in facilitating inclusiveness



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ERC EVALUATION PROCEDURE GUARANTEES

„transparency, fairness and impartiality in the treatment of proposals.“

ERC Work Programme 2018

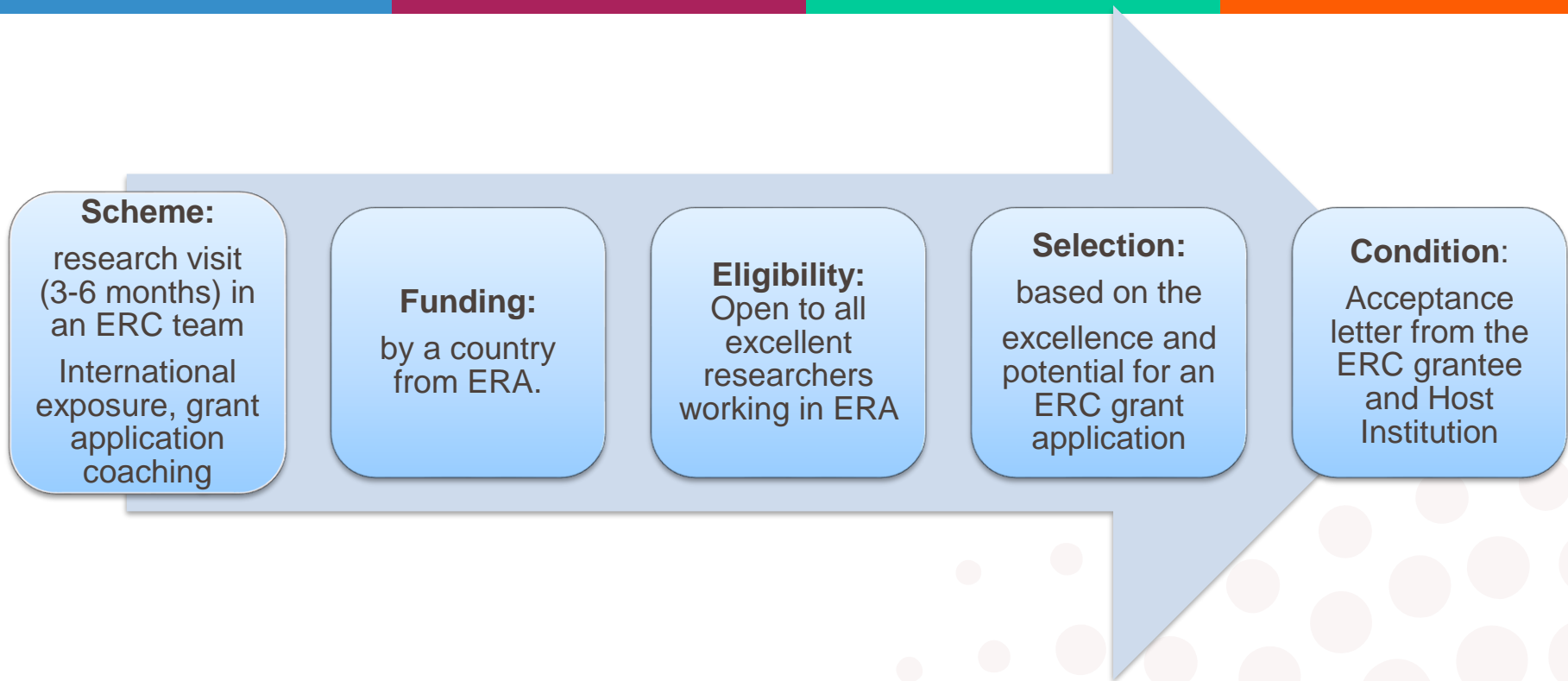
ERC's contribution in facilitating inclusiveness



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PROMOTION OF VISITING RESEARCH FELLOWSHIPS TO ERC GRANTEES



Successful applicants must sign a letter of commitment to apply for an ERC grant no later than one/two year(s) after the end of the visit.

Fellowship to visit ERC grantee – Results of the first two calls



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Participating countries/regions:

- Czech Republic
- Hungary
- Estonia
- Poland
- Slovenia
- Belgium (Flanders region)
- Croatia
- Slovak Republic

1st call in 2016: Positive response from 724 (26%) PIs, with good and balanced geographic (29 countries) and thematic (all ERC panels) coverage.

2nd call in 2017: Positive response from 616 (21%) PIs from 26 countries and good thematic (all ERC panels) coverage.

3rd call in May 2018 for programs in 2018/2019. Georgia will be included.

ERC's contribution in facilitating inclusiveness



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RAISE AWARENESS AND DEVELOP POLICY RECOMMENDATIONS

Organisation of regional ERC widening participation events:
open forum with all relevant national stakeholders
to identify actions/strategies for higher success rate in ERC calls.

- The ERC has set the benchmark of competitive funding of basic research
- New funding schemes have been launched in EU Member States
- 17 countries have introduced initiatives to finance their best unfunded applicants

What can be done at national level?

Education: key importance; universities have pivotal role in developing talents

Mobility: Erasmus, Marie Skłodowska Curie Actions, EMBO fellowships, involvement of COST networks, Fellowship to visit ERC grantee,...

High quality research:

- Attract/invite top scientists for mentoring, stimulating more ambitious top level science, use the help of diaspora, members of Academia Europaea
- Increase research investment (primarily for blue sky research)

Identify talents early, prepare them for ERC grant application; improve their CVs by giving prizes, help them to have an independent publication from the PhD supervisor, international mobility is essential

Help to improve the quality of ERC grant applications; critical comments are crucial, prepare them for the interviews.

Bring back your talents from abroad ; competitive salaries, ERC grants require only 50% work time in the HI.

More EU funding not enough to plug Europe's research gap

Science|Business Bulletin No. 55413 March 2018

Facts and recommendations

- **Boost national R&D budget and use the EU structural funds.**
- Research and innovation are among the priorities but not the main priorities and the **research budget is not growing sufficiently.**
- **Investment of research infrastructure** is crucial to encouraging more researchers to come back to their home countries as well as to welcome foreign researchers. **Attract more top scientists.** Attract more international faculty.
- **Critical mass of excellent researchers is required.**
- Competing for EU research grant is global and **salaries should be global** too. (Life is not much cheaper in the EU13 countries)
- Collaborations: mostly with peers from UK and US. Pooling resources with neighbouring countries and looking for collaborations with them could be more cost effective and more beneficial.

The European Research Council



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ERC and Serbia

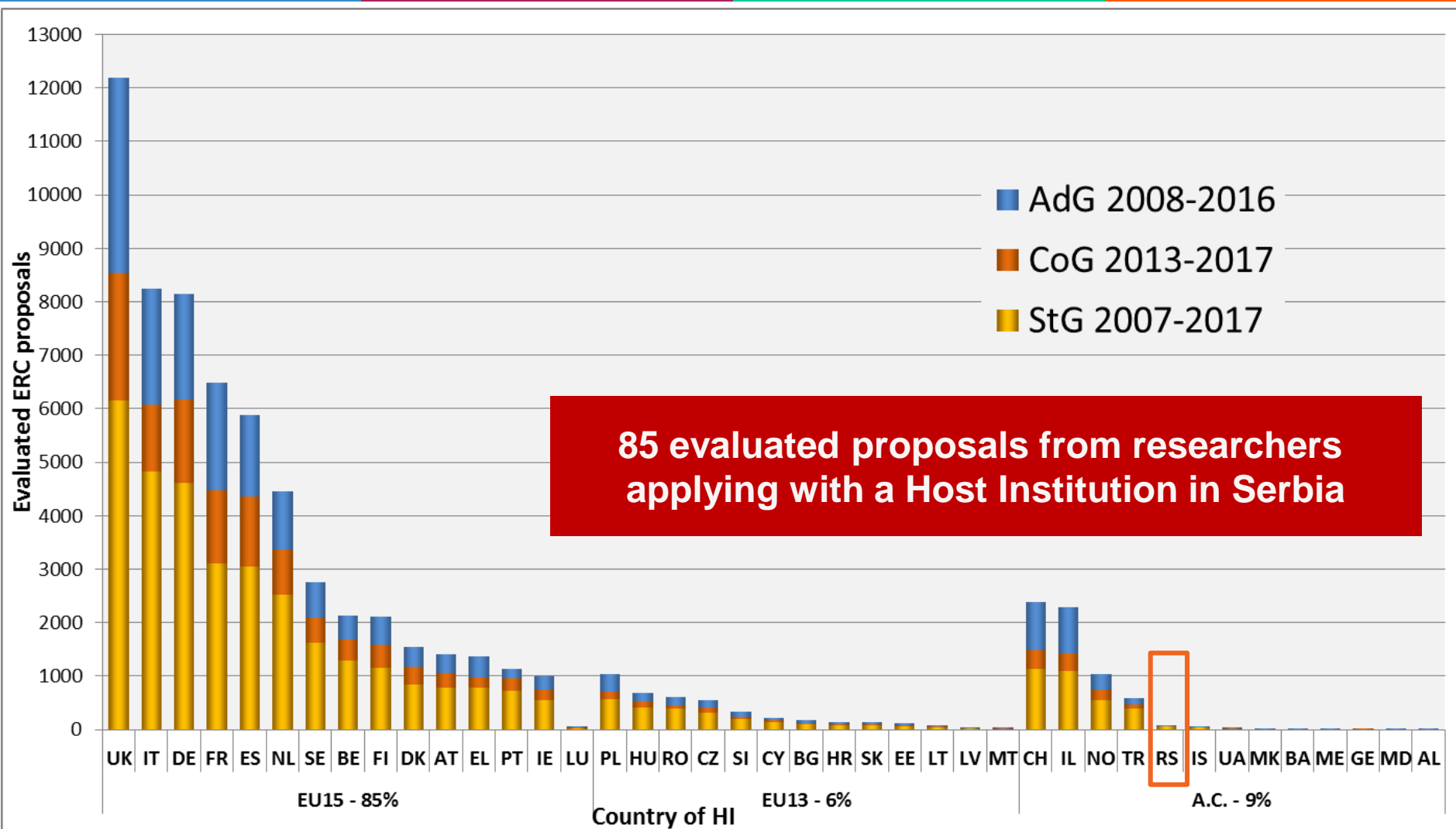


Evaluated ERC Proposals by HI Country



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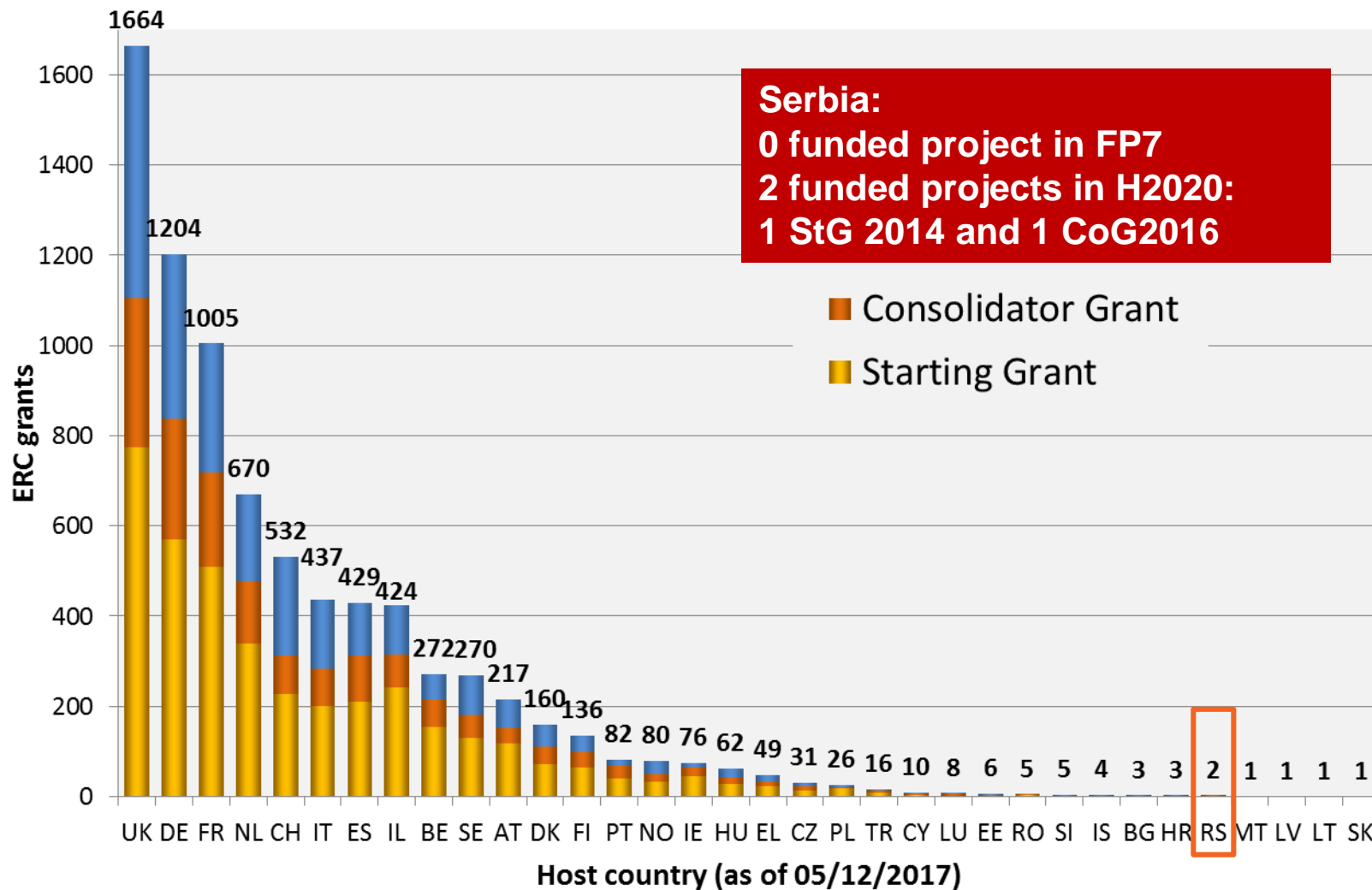


ERC Funded Projects by Country of HI



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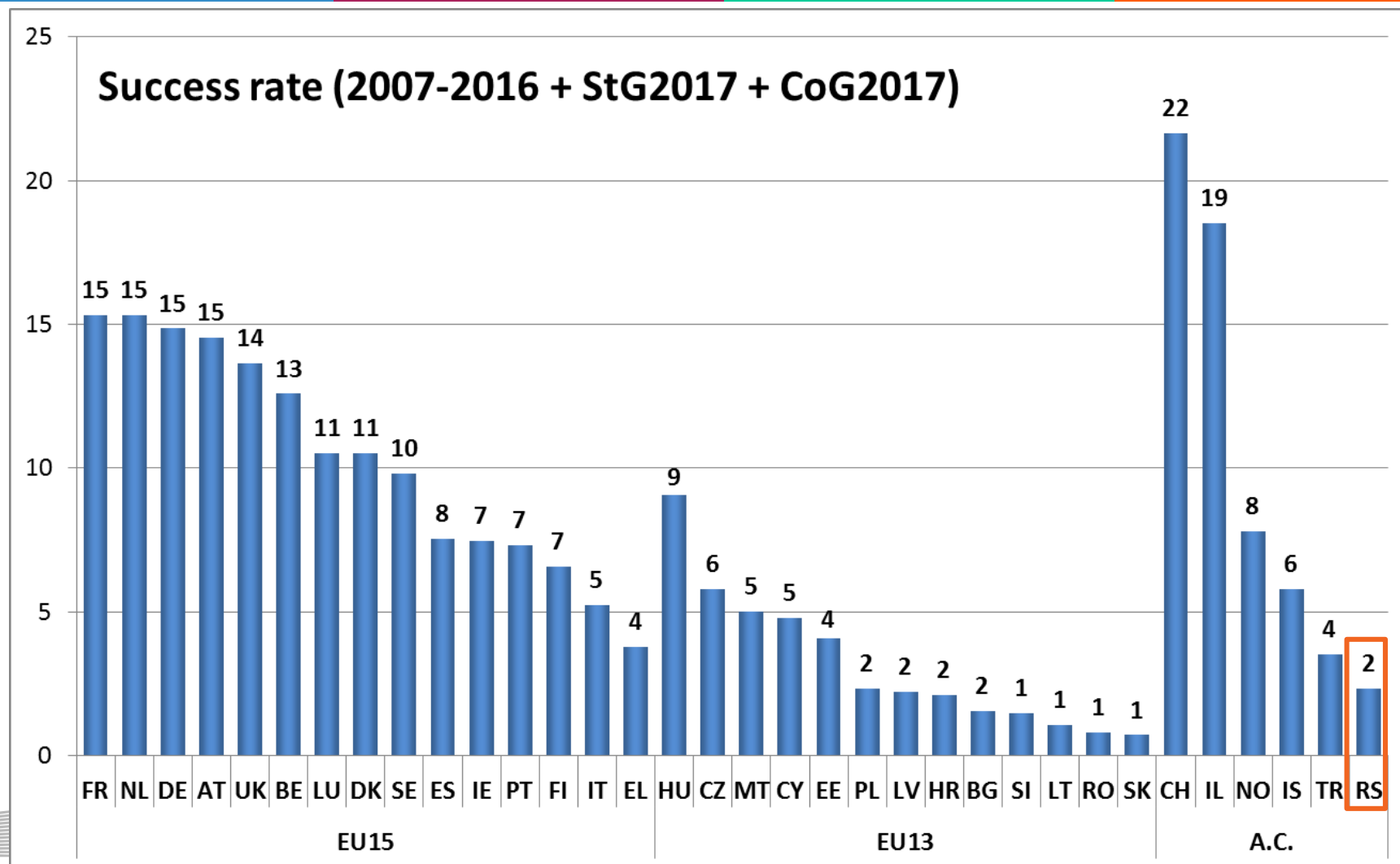


Success Rate by Country of HI

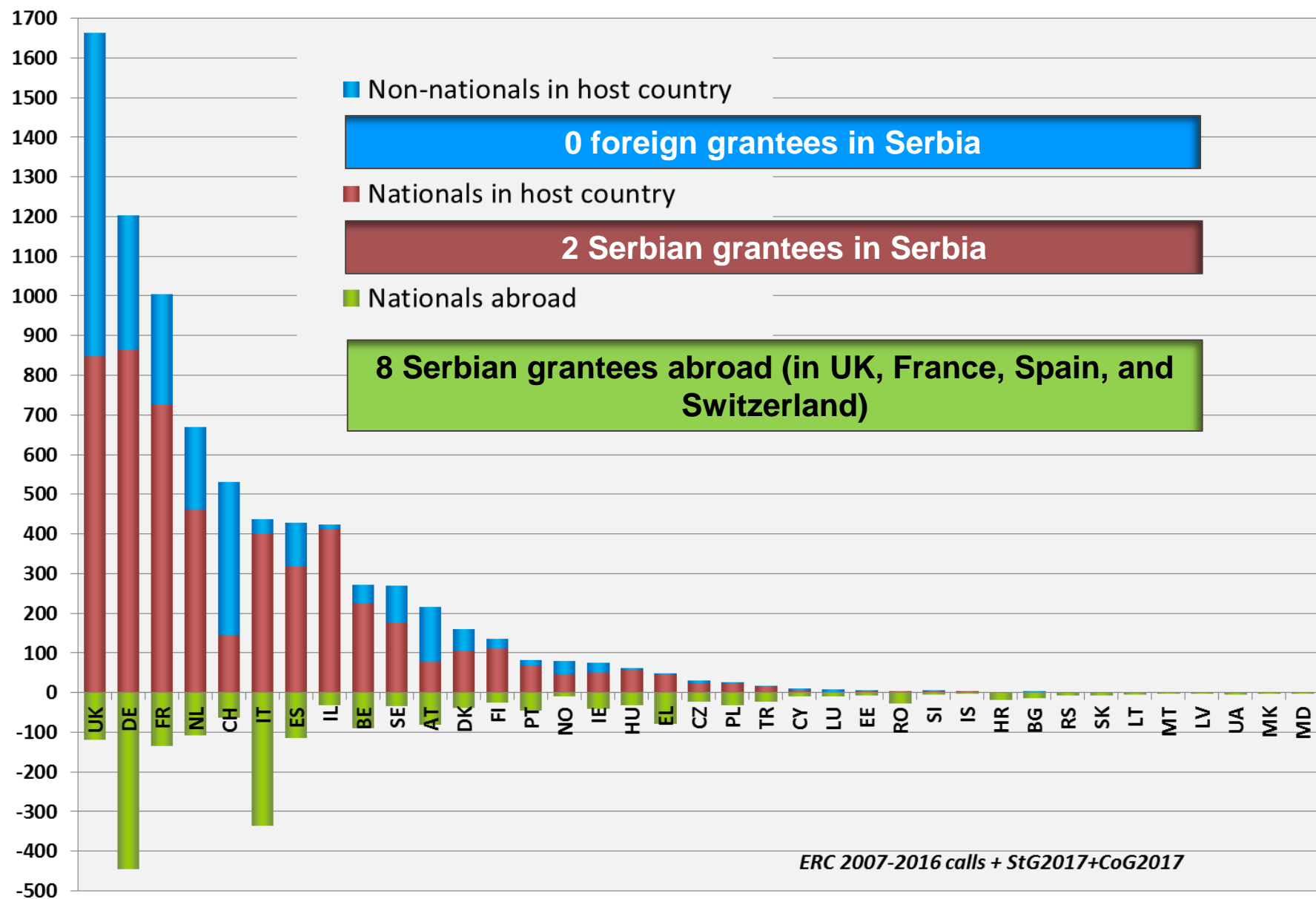


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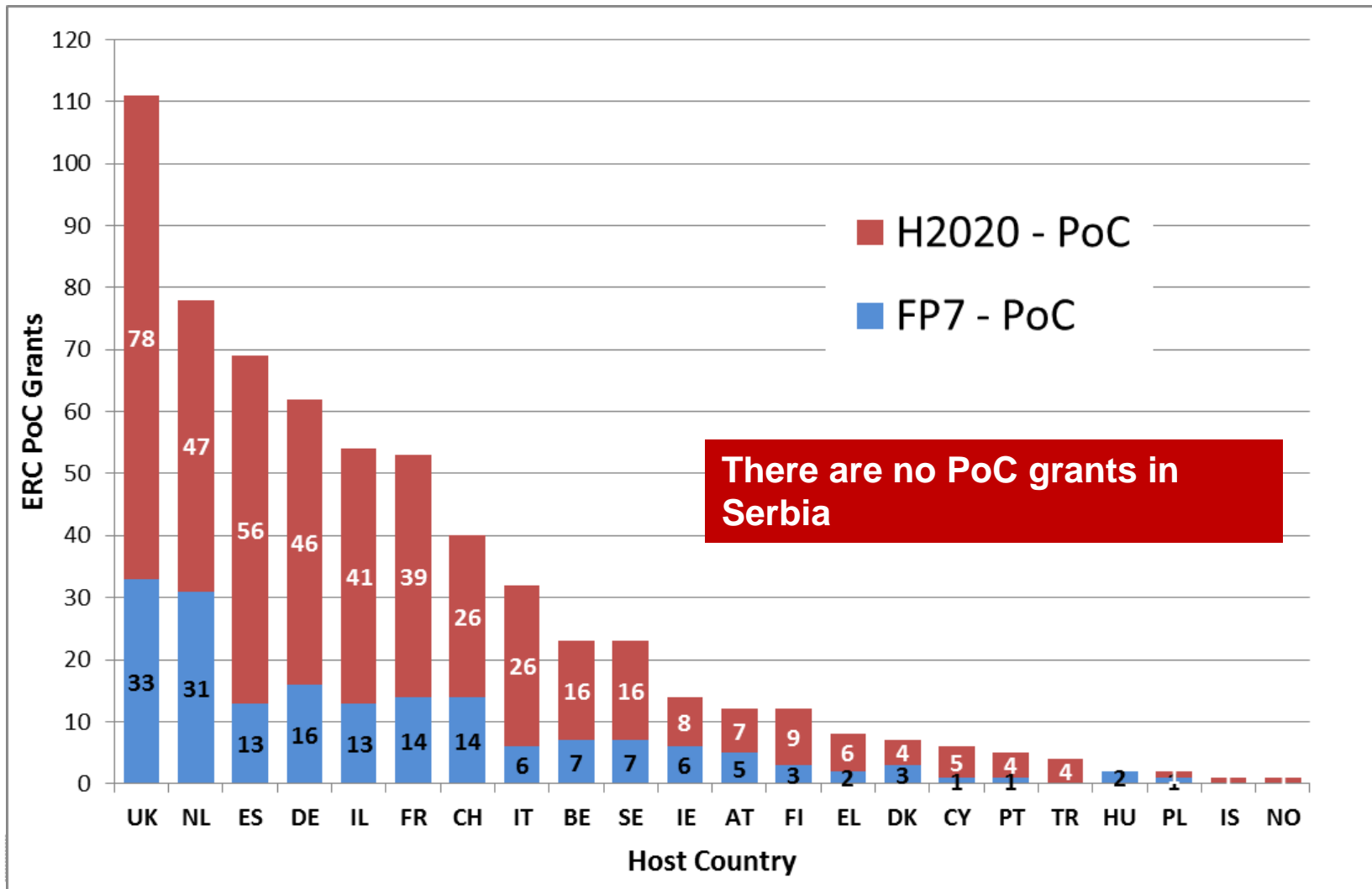
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Grantees at Home and Abroad



ERC Proof of Concept 2011-2016



ERC BIRTH – Births, mothers and babies: prehistoric fertility in the Balkans between 10000-5000 cal BC

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Sofija Stefanovic,
Biosense Institute, Novi Sad
StG2014, SH06 : The Study of the Human Past
EC Contribution EUR 1.7 mil.



A holistic approach in understanding fertility and skeletal, nutritive and cultural factors influencing birth rates.

The main objectives of the BIRTH project are:

1. To establish the number of pregnancies prehistoric mothers had, the size of their pelvises and the size of babies.
2. To determine the ways in which Neolithic changes in dietary practices influenced food quality and the duration of breastfeeding.
3. To establish the chronology of Neolithic Demographic Transition in the Balkans.
4. To understand the attitudes towards pregnancy, birthing and babies in prehistory.

Understanding the properties of Quark-Gluon Plasma



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Magdalena Djordjevic

Institute of Physics Belgrade

CoG2016, PE02: Fundamental Constituents of Matter

EC Contribution EUR 1.4 mil.

EDUCATION

Diploma, [Faculty of Physics](#), U. of Belgrade

PhD, [Department of Physics](#), Columbia U.

Postdoc, [Department of Physics](#), The Ohio State U.

EXTERNAL FUNDING

[European Research Council \(ERC\)](#) 2016 Consolidator Grant, 2017-2022

[Swiss National Science Foundation](#) SCOPES project, 2014-2017

[FP7 Marie Curie International Reintegration grant](#), 2011-2016



Field: Theoretical high energy and nuclear physics, in particular on quark-gluon plasma (QGP) a primordial state of matter, which existed immediately after the Big Bang, and is today created at extreme energy densities.

ERC CoG: To understand the QGP properties, and to challenge the perfect fluid paradigm.

Success in ERC grant applications is achievable



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Wishing you all the best and much success!

Thank you for your attention.

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