

16 October 2018
#EARTOPolicy18

Wifi: visit.brussels
Password: bebrussels

EARTO POLICY EVENT 2018



European Association of Research and Technology Organisations

Towards Horizon Europe: EU Cross-Border Collaborative & Applied Research

EARTO
POLICY EVENT
2018

Frank Treppe

President,
EARTO



RTOs Solve Real-World Problems



**Smart Cranes
for smart
industry**



**Low-allergic
surgical
gloves**



**Test
environment
for road
safety**



**Fast-charging
electric bus
system**



**Innovative
treatment for
muscle
rehabilitation**



**Eco-friendly
and fire-proof
rubber**



**Cheaper &
more efficient
LED lamps**



**Innovative
treatment for
lung and skin
infections**

EARTO Moto: **Impact Delivered!**

EARTO Vision: **Technology for a Better World**



Future EU R&I Programme Horizon Europe: What Target?

Multiple challenges

- Brexit
- Demographic change
- Trade conflicts
- Impact of
- Making citizens
- EU to-GDP-ratio
- Slow innovations

Achieve Impact Through Research

- of EU economic growth derives from RD&I
- EU's innovation performance growth is catching up with US and Canada
- Invaluable role of RTOs in Technology Transfer

EARTO Inputs Towards Post-2020

Three EARTO Positions for HEU

Recommendations for HEU

Analysis of EC HEU Regulation Proposal

Analysis of EC Specific Programme Proposal




EARTO Recommendations on EC Proposal for a Horizon Europe Programme with High Impact

25 June 2018

The crucial role of Research, Development, and Innovation (RDI) activities to support and boost industrial leadership is now at the heart of the renewed European Industrial Policy Strategy with the ultimate goals to benefit society, Europe's future competitiveness and the sustainability of the European social model largely depend on RDI: two-thirds of economic growth in Europe derives today from RDI. RDI investments are the key drivers of the technological developments at the basis of many impactful innovations for society. Today, European Leaders and Policy Makers have the chance to define Europe's future: Delivering on our key societal challenges, boosting job creation and growth in Europe, strengthening our competitiveness for Europe to remain a strong player on the global scale. To achieve such goals, our technological capabilities are the decisive strategic factor: investing in Research, Development & Innovation (RDI) makes the difference. Accordingly, EARTO and its members put forward a key set of recommendations to support the elaboration of what needs to be recognised as one of the key European policy of the future: Horizon Europe Programme (HEU).

EARTO and its members very much welcome the European Commission (EC)'s proposal for Horizon Europe and congratulate the EC services for the extensive work performed to set up such proposal. The EC proposal is in continuity with Horizon 2020 and builds on the successes of the previous Framework Programmes (FPs). To strengthen the EC proposal, EARTO calls on the European Parliament and the Council to:

- **Scale-up Horizon Europe's overall budget to at least €120bn**, which is the bare minimum amount needed to ensure continuity, build on the successes of Horizon 2020 and scale up previous investments, whilst at the same time covering new activities such as a mission-oriented approach, the funding of the new Key Enabling Technologies, the creation of new Public Private Partnerships in crucial sectors, or the extra R&I activities in the food and agriculture cluster (i.e. budget cuts in the Common Agriculture Policy).
- **Reinforce excellent cross-border multi-disciplinary collaborative applied RDI by strengthening the budget share of HEU Pillar II to 60% of the total HEU budget.** The strongest aspect of the EU Framework Programme is its focus on excellence and cross-border multi-disciplinary collaboration across a variety of RDI actors. It is an indispensable element to build long-term trust-based partnerships between RDI actors, having impact on job creation and economic growth.
- **Promote European Industries' competitiveness as key objective for HEU, especially in the clusters of Pillar II.** HEU needs to maximise the participation of industries of all sizes to strengthen Europe's RDI ecosystem and value chains allowing our industries to 1) better absorb and scale up mature technologies into new solutions, products and services, maximising impact for society as well as 2) better face today's challenges in terms of digitalisation, sustainability, etc.
- **Strengthen and secure the role of Key Enabling Technologies (KETs) under Pillar II by ring-fencing their budget.** Supporting the development of such technologies at the forefront of RDI is crucial for Europe to be able to keep on top of the innovation race with third countries and safeguard our economic growth and employment.
- **Support the continuity of public private partnerships, as efficient instruments for excellent industry-led collaborative research in Europe.** If Europe wants to continue building on the previous investments made both by the public and private sector, evolution is needed rather than revolution.
- **Preserve continuity in FPs' rules for participation, while continuing the efforts towards simplification,** with the aim of continuously improving the management and efficiency of the FP.
- **Foster a more balanced approach between Open Science and Intellectual Property (IP)'s policies:** IP's play a key role in innovation and fostering knowledge transfer.
- **Welcome the EIC Pathfinder instrument** as a supporting instrument for European deep-tech start-ups.
- **Welcome the efforts undertaken to foster the synergy of funds between programmes.** In the EC regulation proposal for the ERDF & Cohesion Funds, the provision, which enables Member States to transfer up to 5% of their financial allocations from any of the funds to any other fund under shared management or to any instrument under direct or indirect management (such as HEU), is a key advancement in joint programming and synergy of funds (Article 23).



EARTO Analysis of EC Regulation Proposal: Establishing Horizon Europe & its Rules for Participation

25 June 2018

EARTO and its members welcome the European Commission's proposal for Horizon Europe, which is in continuity with Horizon 2020 and builds on the successes of the previous Framework Programmes. To strengthen such proposal even further, EARTO has hereby made a detailed analysis of the European Commission's proposal for the Regulation establishing Horizon Europe and its Rules for Participation.


Such analysis is organised in three distinctive parts:

- **General aspects**
- **Financial aspects**
- **Legal aspects**

Please also note that EARTO has made a detailed analysis of the all HEU Basic Acts as proposed by the European Commission. For more information, please see the following documents:

- [EARTO Key Recommendations on Establishing Horizon Europe](#)
- [EARTO Analysis of EC Proposal - Specific Programme Implementing Horizon Europe](#)

Regulation on HEU Rules for Participation – General Aspects			
Topic	HEU Article	Analysis	Text Changes for HEU
Budget	Article 9 – Budget 1. The financial envelope for the implementation of the Framework Programme for the period 2021 – 2027 shall be EUR 54 100 000 000 in current prices for the specific programme referred to in Article 1(3)(a) and, in addition, the amount for the specific programme referred to in Article 1(3)(b), as laid down in Regulation... establishing the European Defence Fund. 2. The indicative distribution of the amount referred to in paragraph 1, first half sentence, shall be: (...)	S1 EARTO and its member strongly encourage the EU co-legislators to scale-up Horizon Europe's overall budget to at least €120bn , which is the bare minimum amount needed to ensure continuity, build on the successes of Horizon 2020 and scale up previous investments, while at the same time covering new activities such as a mission-oriented approach, the funding of the new Key Enabling Technologies of the future, the creation of new Public Private Partnerships in crucial sectors, or the extra R&I activities in the food and agriculture cluster due to the budget cuts in the Common Agriculture Policy. S2 EARTO members also support a reinforcement of excellent cross-border multi-disciplinary collaborative applied RDI by strengthening the budget share of HEU Pillar II to 60% . The strongest aspect of the EU Framework Programme is its focus on excellence and cross-border multi-disciplinary collaboration across a variety of RDI actors. It is an indispensable element to build long-term trust-based partnerships between all RDI actors which have real impact on job creation and economic growth. Within the EIC, the budget allocation should also be set in favour of the	



EARTO Analysis of EC Decision Proposal: Horizon Europe Specific Programme

25 June 2018

Views on Explanatory Memorandum

EARTO very much welcomes the EC legislative proposal establishing the specific programme implementing Horizon Europe and hereby would like to congratulate the EC for a well-rounded introduction in its explanatory memorandum.

Especially, EARTO would like to **highlight the importance of the key statement** stating that "The proposal is framed by the premise that research and innovation (R&I) delivers on citizens' priorities, **boosts the Union's productivity and competitiveness**" (page 1). EU industrial competitiveness has always been a key element of the EU R&I Framework Programmes and should remain a strong element of the programme next to excellence in science and innovation.

In addition, EARTO would like to point **some issues linked to budget and missions**. Indeed, the proposal notes that "*there will not be a separate budget for mission*" (page 3). However, **should Europe launch missions of real importance, Horizon Europe budget should go up to a minimum of 120 Billion Euro to cover such new major instrument such as the missions proposed today**. The European Parliament should restate its commitment to have at least a 120 Billion Euro budget for Horizon Europe in its negotiation with the Council.

Finally, the HEU Programme should be implemented in full respect of the international and EU framework of intellectual property protection and enforcement. The effective protection of intellectual property plays a key role in innovation and thus is necessary for the effective implementation of the Programme.

Please also note that EARTO has made a detailed analysis of all HEU Basic Acts as proposed by the European Commission. For more information please see the following documents:

- [EARTO Key Recommendations on Establishing Horizon Europe](#)
- [EARTO Analysis of EC Proposal - Regulation establishing Horizon Europe & its Rules for Participation](#)

EARTO Recommendations for HEU

1. Scale-up Horizon Europe's **budget to at least €120bn**
2. Reinforce excellent cross-border multi-disciplinary **collaborative applied RD&I**
3. Promote **European Industries' competitiveness**
4. Strengthen and secure the **role of KETs under Pillar II**
5. Support the continuity of **public private partnerships**
6. Preserve **continuity** in FPs' rules for participation
7. Foster a more **balanced approach** between **Open Science** and Intellectual Property's policies
8. Welcome the **EIC Pathfinder** instrument
9. Welcome the efforts undertaken to foster the **synergy** of funds between programmes



Pillar 1
Open Science

- European Research Council
- Marie Skłodowska-Curie Actions
- Research Infrastructures

Pillar 2
Global Challenges and Industrial Competitiveness

- Clusters**
 - Health
 - Inclusive and Secure Society
 - Digital and Industry
 - Climate, Energy and Mobility
 - Food and natural resources
- Joint Research Centre

Pillar 3
Open Innovation

- European Innovation Council
- European innovation ecosystems
- European Institute of Innovation and Technology

Strengthening the European Research Area

- Sharing excellence
- Reforming and Enhancing the European R&I system

[illegible]

Implementation to be designed and evaluated

Technology Infrastructures

- Industry relies on Competence Centres like RTOs to access excellent technology infrastructures, as they very often cannot afford the investment needed to such infrastructure

- Technology Infrastructures like RTOs require skilled

Crucial EARTO very much welcomes future EU Action Plan on Technology Infrastructures, this plan will be crucial to:

1. Ensuring long term sustainability of those infrastructures
 2. Creating a long-term EU strategy, to support EU's innovation performance growth and speed-up innovations up-take
- Low investment costs and the risks of R&I



EARTO looking transversally

Analysis of Cohesion Policy Proposal

Analysis of Space Programme Proposal

[illegible]

- Space Hubs
- EGNOS
- Galileo
- Copernicus

Synergies with Horizon Europe

Impact

EC Proposals

Horizon Europe

Missions

Clusters

Proposals

Collaborative Research

KETS

EU Added Value

Industrial Value Chains

Ecosystems

Technology Infrastructures



Introduction: Mr Carlos Moedas

- **Member of the Portuguese Parliament – 2011**
- **Secretary of State to the Prime Minister of Portugal – 2011-2014**
- **Commissioner for Research, Science and Innovation – 2014-Present**



Carlos Moedas

European Commissioner
for Research, Science and Innovation

Introduction: Mr Manuel Heitor

- **Secretary of State for Science, Technology and Higher Education – 2005-2011**
- **Minister of Science, Technology and Higher Education – 2015-Present**



Manuel Heitor

Minister of Science, Technology and Higher Education
of Portugal

RTOs' Technology Infrastructures

Pia Sandvik

CEO, RISE Research Institutes of Sweden

Pia Sandvik

CEO of RISE, Research Institutes of Sweden

pia.sandvik@ri.se



Technology infrastructure to accelerate innovation





A backbone for European competitiveness

- Can include testing facilities, laboratory set up, development environments under real life conditions and innovation hubs
- Are open environments which ties together all parts of the innovation system: industry, academia, business development support, investors, SMEs and public organizations
- Gives SMEs access to large companies and broader value chains
- Are instrumental to regional specialization
- Reduce risk
- Cut time to market



Growing interest among member states – national initiatives initiated

- Testbed Sweden
- Nordic collaboration
- Bilateral agreements, Sweden-Germany, Sweden - France



The difference between research and technology infrastructure

- ESFRI – Research infrastructure for basic research
- Technology infrastructure for applied research and industrial development



Europe needs a strategy to utilize the full potential of European technology infrastructure

- Better channel resources and competences
- Avoid unnecessary overlaps
- Increase the knowledge transfer between technology infrastructures transnationally
- Improve the rolling out of knowledge, technologies and research results to SMEs
- Give access to regions which do not have technology infrastructure for SMEs

A European strategy for technology infrastructure needs to address:

- Need for a comprehensive strategy for European technology infrastructures including ongoing EU initiatives
- Structure, prioritization process and investments for cross border collaboration, which builds on ESFRI experiences
- Building on a comprehensive mapping of existing technology infrastructure
- Coherent European support for access to infrastructure, in particular for SMEs
- Encourage public sector to open up as technology infrastructure and develop framework to increase trust, e.g. IP and data handling
- Development of new business models to finance technology infrastructure
- Horizon Europe funding in parity with funding for research infrastructure

Pia Sandvik

CEO of RISE, Research Institutes of Sweden

pia.sandvik@ri.se

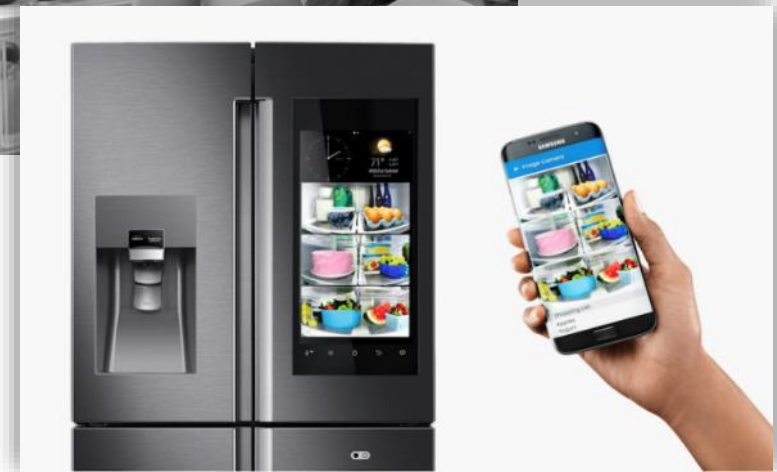
EARTO
POLICY EVENT
2018

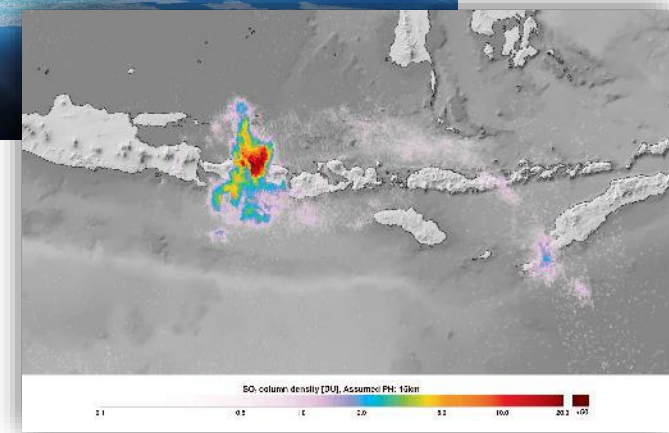
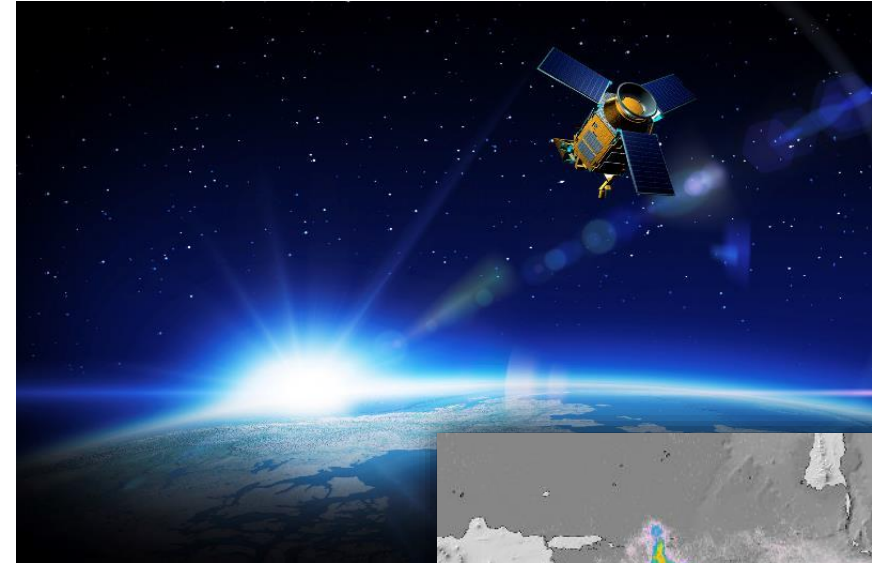
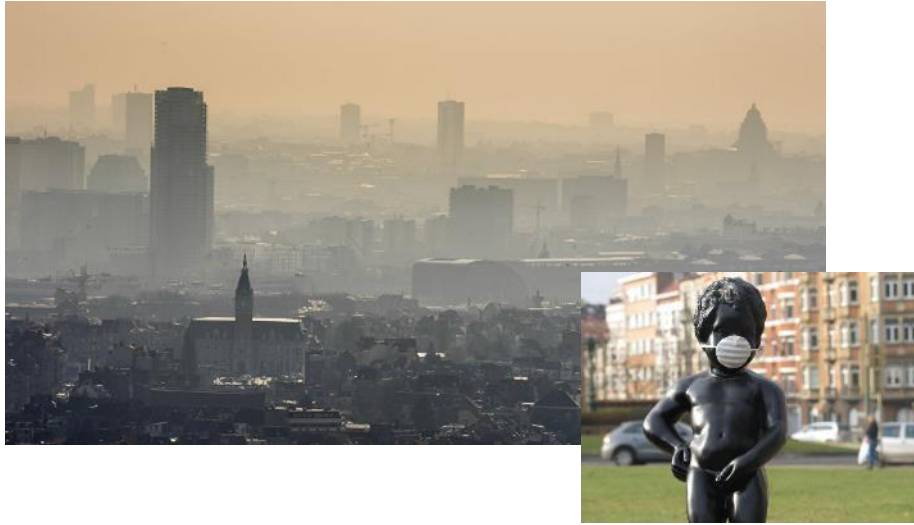
Towards Horizon Europe - Next Steps

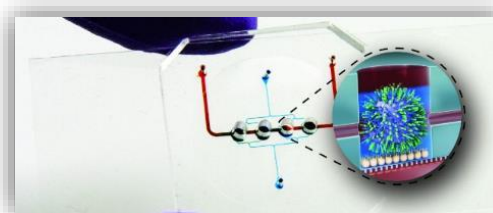
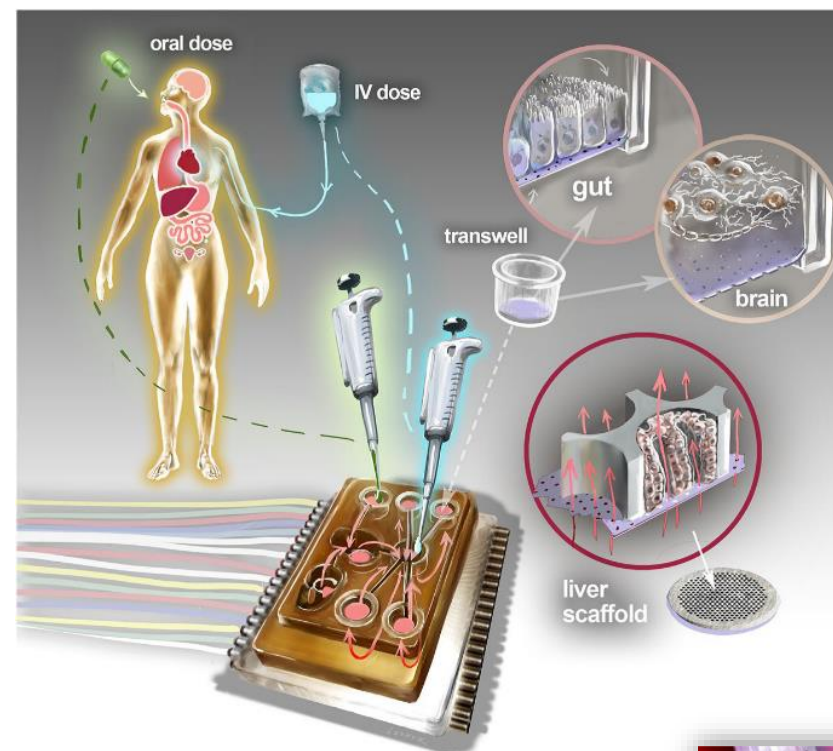
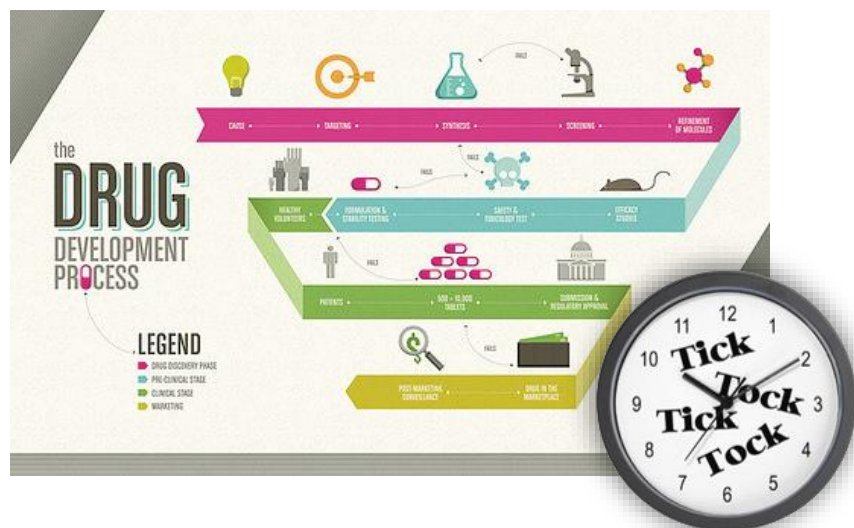


Muriel Attané

Secretary General,
EARTO







Retina-on-a-chip



Heart-on-a-chip

EARTO Innovation Awards Ceremony 2018



**Mimicking humans'
sense of smell**



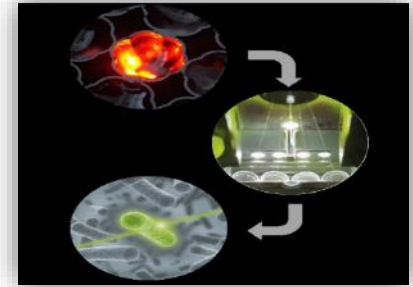
**Providing the most
accurate daily picture of
global air quality**



**Transforming the way
electronics are integrated
into everyday life**



**Unlocking medical
innovation with multi-
organ chip system**



**Unlocking nature's
potential to drive the
new bioeconomy**



**Powering the fuel of the
future with low-cost, high-
quality production innovation**

EARTO Annual Conference 2019

19-20 March 2019 in Espoo, Finland

Hosted by:

