

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](#)

Topic	HEU Article (Text & Number)	Analysis	Text Changes for HEU (if needed)
HEU Specific Programme			
Operational objectives	<p>Article 2 The Specific Programme has the following operational objectives:</p> <p>(a) reinforcing and spreading excellence;</p> <p>(b) increasing collaboration across sectors and disciplines;</p> <p>(c) connecting and developing research infrastructures across the European research area;</p> <p>(d) strengthening international cooperation;</p> <p>(e) attracting, training and retaining researchers and innovators in the European Research Area, including through mobility of researchers;</p> <p>(f) fostering open science and ensuring visibility to the public and open access to results;</p> <p>(g) actively disseminating and exploiting results, in particular for policy development;</p> <p>(h) supporting the implementation of Union policy priorities;</p> <p>(i) reinforcing the link between research and innovation and other policies, including Sustainable Development Goals;</p> <p>(j) delivering, through R&I missions, on ambitious goals within a set timeframe;</p> <p>(k) involving citizens and end-users in co-design and co-creation processes;</p> <p>(l) improving science communication.</p> <p>(m) accelerating industrial transformation;</p> <p>(n) improving skills for innovation;</p> <p>(o) stimulating the creation and scale-up of innovative companies, in particular SMEs;</p> <p>(p) improving access to risk finance, in particular where the market does not provide viable financing.</p>	<p>(f) Regarding open science policy & open access to data: please see our many comments in the regulation. There is confusion here between public open access to <u>information</u> on results and public access to results. Apart from open access to publications and eventually data (when relevant and according to the “as open as possible, as closed as necessary” principle), what has been defined by the EC for FP projects is related to public open access to information on FPs projects’ results. Open access to results has never been neither discussed, nor defined, nor written in any document. Moreover, open access to results would be contradictory to other part of the Programme highlighting the need to protect Intellectual property rights and the aim of optimal exploitation of knowledge.</p> <p>(m) There is very little regarding “real” impact among these operational objectives. The list should be more focused and give a stronger place to industrial competitiveness and impact in terms of productivity improvements and job creation in Europe. Links to industrial policy are not mentioned.</p> <p>In the Specific Programme (Page 1) objectives are clear: operational objectives should have a clearer link to those. Article 3 of the HEU Regulation establishes the Programme objectives as:</p> <p><i>1. The Programme’s general objective is to deliver scientific, economic and societal impact from the Union’s investments in research and innovation so as to strengthen the scientific and technological bases of the Union and foster its competitiveness, including in its industry, deliver on the Union strategic priorities, and contribute to tackling global challenges, including the Sustainable Development Goals.</i></p> <p><i>2. The Programme has the following specific objectives:</i></p> <p><i>(a) to support the creation and diffusion of high-quality new knowledge, skills, technologies and solutions to global challenges;</i></p> <p><i>(b) to strengthen the impact of research and innovation in developing, supporting and implementing Union policies, and support the uptake of innovative</i></p>	<p>At minimum:</p> <ul style="list-style-type: none"> • add (f) fostering open science and ensuring visibility to the public and open access to <u>information on</u> results; • add text on industrial competitiveness in point (m): Reflecting the EU Industrial Policy Strategy Objectives to unlock the potential of Europe’s strategic sectors like Key Enabling Technologies, the Specific Programme’s action should provide important contributions in tackling these objectives. <p>At best, the Operation Objectives are re-written re-using the text available in the Specific Programme taking impact in terms of job creation, growth facilitation, fostering EU competitiveness, including in its industry, fostering innovative ecosystems where each organization type has its key role, along with scientific excellence.</p>

		<p><i>solutions in industry and society to address global challenges;</i></p> <p><i>(c) to foster all forms of innovation, including breakthrough innovation, and strengthen market deployment of innovative solutions;</i></p> <p><i>(d) to optimise the Programme's delivery for increased impact within a strengthened European Research Area.</i></p>	
Missions	<p>Article 5 (1) For each mission, a mission board may be established. It shall be composed of around 15 high level individuals including relevant end-users representatives.</p>	<p>The criteria given for mission board members are vague enough that all seems possible. Criteria should include how and how long the Mission board members will be appointed and under what procedure. It should be comparable to the ERC procedures, see article 7. Mission Board members should also include members from industry, including SMEs.</p>	<p>Add text to Article 5 (1) (text based on article 7 (1) on ERC Scientific Council): <u>The mission boards shall be composed of public researchers, entrepreneurs, representatives of end-users and industry, including from SMEs, all of the highest reputation and with appropriate expertise, acting in their personal capacity, independent of extraneous interests. The boards will have a fair distribution between gender and geographical parts of the Union.</u> <u>The members of the mission boards shall be appointed by the Commission, following an independent and transparent procedure for their identification agreed with by the European Parliament and the Council, including an open call for expressions of interest and a clear set of criteria for each mission area.</u> <u>The term of office shall be limited to four years, renewable once</u></p>
	<p>Article 5 (2) Specific provisions to enable an efficient and flexible portfolio approach may be set out in the work programme provided for in Article 11.</p>	<p>The criteria given for missions are vague enough that all seems possible, this article leave the EC all the leeway to implement a new instrument without much discussion on how missions should be implemented in reality. From the very beginning missions should have a clear directionality (linked to specific societal challenges and/or industry transformation) and intentionality: they should have specific and well-articulated targets, goals, schedules, and budgets.</p>	<p>Here reference and coordination needed with the articles in the regulation on the same topic, see our document on the regulation.</p>
	<p>Add new articles 5(3) and 5(4)</p>	<p>The missions should be implemented through calls that fall within the work programmes of the Clusters to ensure that missions:</p> <ul style="list-style-type: none"> • build on the work done in the Clusters and, • will not drain the budget of specific Cluster to fund missions unrelated to that Cluster. <p>Proposals submitted under these calls should contribute to the mission based on the areas of intervention of the</p>	<p>Add two sub articles in Article 5: <u>5(3) Missions shall be implemented through open calls within the work programmes of the relevant Clusters. The calls will call for proposals for projects which are contributing to the mission and which are situated in one or more of the intervention areas of</u></p>

		Cluster. Each call should give a maximum of the funding that will come from the specific Cluster to finance the mission project. However, the evaluation of the mission proposals can very well be done by an overarching evaluation committee that evaluates the proposals from all Clusters.	the Cluster. 5(4) The proposals will be evaluated by the evaluation committee for the mission, which will evaluate all proposals submitted under the different work programmes as one portfolio.
ERC	Article 6 (5) The activities of the ERC shall support research carried out across all fields by individual and transnational teams in competition at the European level.	The various ERC instruments could very much profit of such article, especially it would be very welcome to open the ERF proof of concept to multi-disciplinary consortia and oblige the ERC granted to open up to other parties such as RTOs and industry to support them in further exploitation of their research.	Add text reference to the ERF Proof of concept opening to non-ERC grantees.
Work programmes	Article 11 (page 14, paragraph 1) The Programme shall be implemented by work programmes referred to in Article 110 of Financial Regulation. They shall be prepared following a strategic planning process as described in Annex I to this Decision. Work programmes shall set out, where applicable, the overall amount reserved for blending operations.	Concerning the strategic planning for 2021, it would be very important to promote a smooth transition between H2020 and HEU. This will mean to design the work programmes so that a significant number of calls for proposals will take place the first 3 month of 2021.	
Legislative Financial Statement	1.6 Management node(s) planned	PPPs and JTIs have proven to be efficient instrument to promote innovation at EU scale, leveraging industrial innovation investment in Europe and strengthening Industrial involvement in a context of EU collaborative research. It is important to reinforce this statement in parallel to the need of rationalisation of instruments. See How Joint Undertakings Boost RTOs-Industry Collaboration & Leverage Private RD&I Investments in Europe - EARTO Contribution to EC Consultation on Joint Undertakings - 10 March 2017 - link	
HEU Annexes to Specific Programme			
Strategic Planning	Page 1: It will include extensive consultations and exchanges with Member States, the European Parliament as appropriate, and with various stakeholders about priorities, including missions, under the 'Global Challenges and Industrial Competitiveness' pillar, and the suitable types of action to use, in particular European partnerships.	Very vague text, we would appreciate some clarifications on how the various stakeholders would effectively be consulted.	
Working Methodologies for Evaluation	Page 4: Exceptionally, when justified by the requirement to appoint the best available experts and/or by the limited size of the pool of qualified experts, independent experts assisting or being members of the evaluation committee may evaluate	This formulation opens the possibility of choosing any kind of expert who marked a potential interest. It should be clarified that these kinds of experts should have at least a qualification with relevance to the required topic.	Add text on page 4: Exceptionally, when justified by the requirement to appoint the best available experts and/or by the limited size of the pool of qualified experts, independent experts assisting or being members of the

	specific proposals for which they declare a potential interest.		evaluation committee may evaluate specific proposals for which they declare a potential interest <i>and possesses at least a qualification with relevance to the specific proposals.</i>
ESFRI - Opening, Integrating and Interconnecting Research Infrastructures	Page 16 - 3.2.2: Integrated networks of research infrastructures for development and implementation of a common strategy/roadmap for technological development required to improve their services through partnership with industry; as well as high-tech components in areas such as scientific instrumentation; and for fostering the use of research infrastructures by industry, e.g. as experimental test facilities.	ESFRI infrastructures not hosted by RTOs would gain to be linked to RTOs who are used to manage relations with industry and could support ESFRI infrastructures opening towards industry. Specific attention could be paid to organise such connections. In addition, EARTO very much welcomes and strongly support the EC proposal approach to further develop a clear policy and supporting instrument to industrially-oriented research infrastructures within HEU Pillar II. Those infrastructures are not covered by current ESFRI activities and require an adapted policy and related instrument (see regulation text).	
Pillar II	Keys Enabling Technologies (KETs) Page 17: Clusters will develop and apply digital, key enabling and emerging technologies as part of a common strategy to promote the EU's industrial leadership.	EARTO very much welcomes and strongly support the EC proposal approach to the KETs, also within the Cluster Digital & Industry (see page 30). The current budget proposed for the Cluster Digital & Industry will be the minimum necessary to cover the exploitation of the H2020 KETs and newly defined KETs for HEU. It is also important to make sure that the KETs and digital technologies will be an integral part of all five clusters as cross cutting enabler.	
	Industrially-oriented infrastructures Page 31: Developing technologies alone will not suffice. Industrially-oriented infrastructures, including pilot lines, will help set up EU businesses and in particular SMEs deploy these technologies and improve their innovation performance. Page 33: An EU innovation ecosystem of technology infrastructures, identified and prioritised in agreement with Member States, which provide services to accelerate technological transformation and uptake by EU industry, notably by SMEs; this will cover all key technologies necessary to enable innovations in the field of materials;	EARTO very much welcomes and strongly support the EC proposal approach to further develop a clear policy and supporting instrument to industrially-oriented infrastructures within HEU. Those infrastructures are not covered by current ESFRI activities and require an adopted policy and instrument. Industrially oriented infrastructures will be found supporting all clusters and a strategy on this specific type of infrastructures will have to take this into account.	
Pillar II – JRC	EC Capabilities on Technology Transfer & IPRs Page 53 – 6.2.1 Strengthening the knowledge base for policy making: Areas of intervention - Knowledge & Competences centres. Page 56 - 6.2.3 Innovation, economic development & competitiveness - Broad Lines: Management of intellectual property rights Page 56 – 6.2.4. Scientific Excellence: The JRC shall pursue excellence in research and extensive	EARTO very much welcomes the efforts done by the JRC to bring a balance approach within the EC on open access to data and IPRS within the various EC policies. EARTO would welcome the establishment by the JRC of a competence centre on technology transfer using the expertise available by RTOs and other research centres within the TTO Circle managed by the JRC. EARTO believes expand the EC knowledge on such topic is much needed.	

	collaboration with top level research institutions worldwide. It will carry out research in emerging fields of science and technology and promote open science and open data as well as knowledge transfer.	See JRC report on IPR, Technology Transfer and Open Science.	
	JRC Own Infrastructures Page 56 – 6.2.4. Scientific Excellence - Broad Lines: Access to JRC research infrastructures.	EARTO would like to bring a word of caution on the opening of JRC infrastructures that could bring unfair competition to RTOs especially if geared to industry.	
Pillar III - EIC	Pathfinder Page 62 – 1.1.1. The Pathfinder for Advanced Research: To that end, the <i>Pathfinder</i> will initially support the earliest stages of scientific and technological research and development, including proof of concept and prototypes for technology validation... The <i>Pathfinder's Transition activities</i> will be implemented to help innovators develop the pathway to commercial development, such as demonstration activities and feasibility studies to assess potential business cases, and support the creation of spin offs and startups. These <i>Pathfinder's Transition activities</i> may also consist of complementary grants to top-up or enlarge the scope of previous and on-going actions, to bring in new partners, to enable collaboration within the portfolio and to develop its multidisciplinary community. The <i>Pathfinder</i> will be open to all types of innovators, from individuals to universities, research organisations and companies, in particular startups and SMEs, and from single beneficiaries to multi-disciplinary consortia.	EARTO very much support the efforts made by the EC to insert within the new EIC instrument the efforts done by EU RTOs regarding the set up of deep-tech start-ups. See EARTO Paper How to Exploit the Untapped Potential of RTOs' Deep-Tech Start-ups in Europe - 12 April 2017 - link	See our comments made on the EIC under the regulation that should be linked to the specific programme.
	Pathfinder Page 62 - In the case of single beneficiary projects, larger companies will not be permitted.	Not for profit participant should be permitted as a single participant. This will encourage collaboration between RTOs and SMEs to ensure a more efficient development of deep-tech start-ups since we know that their collaboration with RTOs strengthens their survival rate. However, the participation of SMEs in the pathfinder should be encouraged in order to ensure the connection to the accelerator.	Change Text page 62: In the case of single beneficiary projects, larger companies for profit entities will not be permitted. <u>The participation of SME is encouraged, 25% of the projects shall include at least one SME.</u>
	Pathfinder Page 63 – 1.1.2. The Accelerator: For innovations with high technological risks ('deep tech') the support will always include a grant component covering the innovation activities. Where the various risks are reduced (technological, market, regulatory, etc.), the relative importance of the reimbursable advance component is expected to increase.	EARTO very much welcome the EC recognition that also in the accelerator instrument of the EIC, grants will also be necessary. EARTO has expressed some concerns with the repayable advances as tested in some Member States to date: See EARTO Background Note on Repayable Advances - 20 February 2018 - link	See comments made on the EIC under the regulation that should be linked to the specific programme.
	Accelerator Page 6 - For innovations with high technological risks ('deep tech') the support will always include a grant component covering the innovation activities.	It should be clear that the collaboration between public research organisations and new innovative companies should not stop as soon as the company moves to the Accelerator. Including explicitly that public research organisations can be subcontracted using EIC	Add Text in page 6: For innovations with high technological risks ('deep tech') the support will always include a grant component covering the innovation activities. <u>These innovation</u>

		Accelerator grant money, will create clarity and legal certainty for participants on this.	<u>activities may be implemented in collaboration with public research organisations, for example through subcontracting, to ensure that the beneficiary can have optimal access to technical and business expertise. This will allow the beneficiary to develop with a strong foundation in the existing knowledge, expertise and ecosystems across Europe.</u>
Reforming and Enhancing the EU research & Innovation System	Open Science Page 77: Accelerating the transition towards open science, by monitoring, analysing and supporting the development and uptake of open science policies and practices at the level of Member States, regions, institutions and researchers, in a way that maximises synergies and coherence at EU level;	See: <ul style="list-style-type: none"> • EARTO Background Note - The US Open Science Data Cloud - 7 July 2017 - link • EARTO Background Note - US Federal Agencies Data Sharing Policies - 5 December 2016 - link • EARTO Paper on Open X - 18 November 2015 - link 	See the various comments made on many legal related articles the regulation that should be linked to the specific programme.

EARTO and its experts remain of course ready to further discuss these recommendations with the European Institutions’ representatives.

RTOs - Research and Technology Organisations

From the lab to your everyday life. RTOs innovate to improve your health and well-being, your safety and security, your mobility and connectivity. RTOs’ technologies cover all scientific fields. Their work ranges from basic research to new products and services’ development. RTOs are non-profit organisations with public missions to support society. To do so, they closely cooperate with industries, large and small, as well as a wide array of public actors.

EARTO - European Association of Research and Technology Organisations

Founded in 1999, EARTO promotes RTOs and represents their interest in Europe. EARTO network counts over 350 RTOs in more than 20 countries. EARTO members represent 150.000 highly-skilled researchers and engineers managing a wide range of innovation infrastructures.

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