CESAER

Input note

Topic:	Towards next framework programme for research & innovation 2028-2034 ('FP10')
Date:	14 December 2023
To:	EU institutions and partners
From:	CESAER

CESAER - the strong and united voice of universities of science & technology in Europe - welcomes the efforts of the EU institutions to prepare a solid foundation for the next European framework programme for research & innovation 2028-2034 ('FP10'), and welcomes the invitation to contribute with feedback and considerations.

Since the establishment of CESAER in 1990, our association has provided constructive input to subsequent cycles of the EU funding programmes which have <u>evolved substantially</u> over time. For the last (2014-2020) and current (2021-2027) framework programmes for research & innovation, examples include our input (i) to the interim evaluation of Horizon 2020 (<u>October 2016 statement</u>), (ii) for the proposal for Horizon Europe (<u>June 2018 statement</u>), (iii) after our first experiences with EU funding programmes from 2021 to 2027 (<u>April 2022 input note</u>), and (iv) for the public consultation on the past, present and future of the European research and innovation framework programmes 2014-2027 (<u>February 2023 statements</u>).

Key design considerations for FP10

Building on our <u>recent contributions</u>, we below provide a synthesis of key design considerations for FP10. The considerations are particularly important in the context of two overarching and ongoing political trajectories, both described in the 2023 State of the Union <u>address</u> by European Commission President Ursula von der Leyen: (i) the push towards a more elaborate EU industrial policy, and (ii) the EU-27 moving towards EU-30+.

1) Engage the knowledge value chain along the full research continuum

Leadership in <u>frontier areas</u> of scientific knowledge and <u>key technologies</u> – including notably deep tech, cleantech and biotech – can only be achieved by engaging the full knowledge value chain: from the earliest stages of frontier research to the latest stages of close-to-market development. Under Horizon Europe, different parts of the knowledge value chain are supported in different ways by different instruments: ranging from pillar 1 with its focus on excellent science, through pillar 2 supporting collaborative research and innovation activities in thematic areas, to pillar 3 aiming at boosting ground-breaking innovation. From a societal perspective, all these areas are needed to support the full knowledge value chain, especially as the process leading to societal impact and benefit of research and innovation activities is deeply interconnected and rarely linear. This is also underlined in a joint statement by the European Innovation Council and the European Research Council. From a system-wide perspective, an unbalanced and undue focus on one part of the knowledge

value chain to the detriment of other parts will, therefore, have a negative impact on the ability of research and innovation activities to lead to societal impact and benefit.

After shifts from research to innovation from the seventh framework programme for research and innovation (FP7) to Horizon 2020, and from Horizon 2020 to Horizon Europe, a push is currently taking place at the policy level towards short-term, close-to-market activities causing an imbalance and putting the full knowledge value chain under undue stress. An example of this is the shift towards <u>ever-higher technology readiness levels</u> (i.e., 'TRL'). We reiterate our <u>call</u> that cluster calls under Horizon Europe must be rebalanced so that the legal obligation is respected, and for FP10 we call for a more balanced approach to be ensured.

Fundamentally it is about reversing the trend to focus increasingly on close-to-market R&I (with unbalanced TRL being one aspect of this). This includes strengthening the aspect of pre-competitive collaborative research. Engaging the full knowledge value chain means involving all three pillars fully (using the 'pillar' terminology from Horizon Europe). This is also connected to the need to re-evaluate citizen participation and co-creation, its effectiveness and the role it should play in FP10.

As the process leading to societal impact and benefit of research and innovation activities is deeply interconnected across the full knowledge value chain and strongly non-linear, we call on EU institutions to ensure a balanced approach leveraging and reinforcing all funding instruments covering the earliest stages of frontier research to the latest stages of close-to-market development. This requires reversing the current trend along a serious and effective consideration of the entire research continuum.

2) Put researchers and innovators in driving seat through open and competitive calls

We <u>recall</u> that 'use' and 'utility' are equally legitimate drivers for investigator-driven frontier research and innovation. Next to 'curiosity', they often result in unexpected and concrete solutions to real problems having tremendous impact. In this way, different drivers for research & innovation, as elaborated in <u>Pasteur's quadrant</u>, complement each other and do not have to lead to any tension in the research & innovation landscape as long as researchers and innovators remain in the driving seat. Tension is introduced if prescriptive and detailed directions are imposed externally. In other words, the political and policy levels have an important role in establishing overall favourable framework conditions (particularly sustainable funding levels and favourable legislative conditions), but they should refrain from attempts to direct at the detail-level research & innovation activities as this is counter-productive and will slow down progress to create societal benefit and impact.

Those who are best placed to advance the frontier in scientific knowledge and key technologies are, and will always be, researchers and innovators. Recent crises demonstrate the impossibility of predicting the specific research and innovation requirements in a future that cannot be anticipated as a straightforward extension of the recent past. Instead, in Europe, resilience has primarily relied on scientific knowledge and technologies that researchers and innovators have been building upon for many years. This underlines the importance of a strong focus on non-prescriptive approaches allowing researchers and innovators to give direction to their work. It also stresses the need to put researchers and

innovators in the driving seat as a key design consideration for FP10, to set the direction for the programme, with EU institutions and EU member states in a supportive role. Concretely, this is implemented by open and competitive calls, with a strong focus on non-prescriptive approaches.

We call on EU institutions to ensure that open and competitive calls, with a strong focus on non-prescriptive approaches, is the default for awarding funding across all parts of FP10 (i.e., across 'all pillars' to borrow terminology from Horizon Europe).

3) Ensure predictable and stable conditions

To boost resilience in Europe, researchers and innovators need predictable and stable conditions. We welcome that the Chair of the European Parliament's Budget Committee, Johan Van Overtveldt, on 15 September 2023, <u>underlined</u> the need to move towards a "EU budget of the 21st century" suggesting to make the European research and innovation budget the biggest allocation in the EU budget (larger than the shares allocated to agriculture and cohesion). FP10 should aim very high and break all previous financial or political barriers.

Stable conditions for research and innovation include suitably high and sustainable overall funding levels combined with stability, the latter boosted through ring-fencing. A ring-fenced EU budget for research & innovation would help to reduce instabilities being caused by (i) annual discussions around proposed cuts to the budget for the framework programme for research & innovation in the context of the annual EU budget procedure, and (ii) regular re-allocation of the budget from the framework programme for research & innovation to new priorities proposed at the EU level without any additional funding (i.e., 'fresh money') provided by member states.

We call on the EU institutions to ensure stable conditions for FP10 and research & innovation in Europe by:

- > allocating at least €200 billion to FP10;
- swiftly enacting the 3% GDP target to research & innovation agreed by the European Council in Barcelona on 15 and 16 March 2002 ("to be achieved by 2010", but still far from achieved), reiterated by the European Commission in 2020 and by the European Council in Brussels on 23 March 2023;
- endorsing and enacting the 1.25% GDP public effort target to be achieved by member states by 2030 in an EU coordinated manner, as proposed by the European Commission in 2020 in its communication 'A new ERA for Research and Innovation';
- creating an annual review mechanism of current performance vis-a-vis the 3% and the 1.25% targets at the Economic and Financial Affairs configuration of the Council of the EU (ECOFIN) and the European Council, including annual reporting for all member states in terms of:
 - \circ $\,$ being on-track to achieve or exceed the targets by 2030; or
 - \circ $\,$ needing to improve their trajectory to achieve the targets by 2030.
- ring-fence the part of the EU budget allocated to research & innovation to make it more difficult to reallocate and to ensure more stability;

ensure any new priorities can only be added to the European framework programme for research and innovation programme if accompanied by the corresponding new budget.

4) Unleash synergies

We recall the need to put synergies at the heart of the design of new EU funding programmes as <u>elaborated in our October 2022 position</u>. An additional important consideration is to ensure effective conditions for funding inter- and transdisciplinary research including between science, technology, engineering and mathematics (STEM) and social sciences and humanities (SSH), as we <u>elaborated in detail previously</u> together with <u>UNICA</u>. European Partnerships provide an additional dimension for bringing together the European Commission with private or public partners, or both.

We call on the EU institutions to:

- adopt an all-of-society approach towards research and innovation to help tackle local and global challenges through societal transformations especially by considering new ways for leveraging key knowledge focused and future-oriented programmes to 'crowd in' funding from other EU, national and regional funding programmes (and from non-governmental sources);
- put synergies at the heart of the design of the EU funding programmes 2028-2034. Crucially, this must be pursued in a way so that research organisations are not left with the burden of combining co-financing from instruments with incompatible legal and administrative requirements.
- > ensure effective conditions for funding inter- and transdisciplinary research;
- carefully evaluate the European Co-Fund Partnerships as there is a need to streamline efforts to consolidate and boost European collaboration on strategic topics with a view of ensuring the critical mass and talents needed to progress and contribute leadership also globally.

5) Reinforce excellence and prepare for cooperation in context of EU-30+

FP10 should continue to <u>set the standard for excellence</u> in Europe. In that context, it is important to ensure that the widening gap is swiftly closed (e.g., in the context of '<u>widening</u> <u>countries</u>').

Talent exists everywhere across the continent. The next cycle of EU funding programmes should much more effectively leverage cohesion policy funding instruments, including at regional and national levels, to complement an FP10 based around open competition where funding is awarded to the most excellent proposals. This will be particularly crucial as the process of enlarging EU-27 towards EU-30+ advances. After all, the cohesion policy of the EU intends to "help ensure there are no gaps between countries and regions" and its dedicated funding instruments should be much more effectively leveraged to bridge research and innovation gaps, particularly in the EU-30+ context.

FP10 should emerge after careful consideration of the changing conditions for research and innovation in an enlarged European context. This notably includes the achievement of two objectives which remain challenging for many European regions and countries, namely:

- continuing to increase the volume of R&D expenditure to 3% of GDP by 2030, following internationally comparable terms in relation to the most industrialised regions in Europe and the world;
- 2. simultaneously increasing the intensity of R&D expenditure per researcher by 2030, in addition to an increase in the total volume of expenditure.

Any international comparison of these two challenges shows that there is a long way to go for Europe. Efforts should also consider the increasing demand to stimulate the quality of R&D activity and greater institutional maturity, especially with regard to collective co-responsibility for guaranteeing more and better professional opportunities and jobs, along with professional and scientific careers.

These perspectives are demanding and complex in social and economic terms. It indeed requires increasing salaries supported by increasing funding levels, and a new structuring and social valorisation of scientific and technical careers in the public and private sectors. This is important because low research intensities provide constraints that negatively affect research activities and their results.

We call on the EU institutions to:

- much more effectively leverage cohesion policy funding instruments 2028-2034, including at regional and national levels, to address the research and innovation gap and complement an FP10 based on competition among the most excellent proposals;
- integrate in the pre-accession assistance provided to prospective and candidate countries dedicated financial and technical support to ensure they are prepared to become a part of a European Research Area in which researchers, scientific knowledge and technology circulate freely.

6) Leverage a continent-wide approach to contribute to global research & innovation leadership

The free circulation of researchers, scientific knowledge and technology greatly accelerates progress and impact in research & innovation. For our continent to more fully contribute and collaborate to solving global challenges we must leverage the research and innovation capacity of our full continent and work closely with both long-standing partners and also like-minded partners beyond our continent. For Horizon Europe, science & technology collaboration was unnecessarily obstructed as elaborated by the <u>stick to science campaign</u> fully supported by CESAER. For FP10, it is imperative to ensure that open and barrier-free collaboration is fully supported.

We call on the EU institutions to ensure a streamlined procedure for association to FP10 to ensure there are no barriers to collaboration with long-standing and like-minded partners.

Recent contributions with relevance to FP10

Our association has published a range of <u>publications and contributions</u>, particularly over the last year, with direct relevance to the design of the next framework programme. For ease of reference, a list of key publications is included below in reverse chronological order:

- European Research Area as a trailblazer (July 2023 position)
- Supporting modern and stable research careers in Europe [and the excellence initiative under FP10] (June 2023 position)
- Bolder, deeper, more united (June 2023 comment)
- Deep tech unlocked by universities of science & technology (May 2023 position)
- Future-proof Horizon Europe through balanced cluster calls (<u>February 2023</u> <u>statement</u>)
- Boost synergies in research and innovation funding [including design considerations for synergies under FP10] (October 2022 position)
- Advancing innovation and knowledge valorisation from European Innovation Council (<u>December 2022 position</u>)
- Provide clarity on DNSH to boost contribution of science & technology (<u>October 2022</u> position)
- Boosting disruptive innovation by fostering new mindsets and co-creating innovation (<u>May 2022 position</u>)
- Caution needed on interim analysis of lump sum pilot (November 2021 statement)

We particularly note that for FP10 key considerations that were elaborated in the <u>June 2023</u> <u>position</u> 'Supporting modern and stable research careers in Europe' around the need to foster high-quality research and innovation careers remain highly relevant. A talent-focus must be at the heart of our endeavours and FP10 should be designed considering the five dimensions elaborated in <u>that position</u> and their follow-up activities, namely: (i) unlock stability in researcher careers through sustainable institutional funding; (ii) pursue balanced funding to achieve balance between temporary and non-temporary contracts; (iii) strengthen evidence base: implementing a 'Research & Innovation Careers Observatory'; (iv) modernise outdated legal and employment frameworks; and (v) foster excellent institutional support of (early-career) researchers through the European Excellence Initiative. This particularly includes the new competitive instrument elaborated under <u>subheading 5</u>) 'Foster excellent institutional support of (early-career) researchers through the European Excellence Initiative'.

We offer to provide our experience and expertise, built since our creation in 1990, in supporting the design and implementation of successive European framework programmes for research & innovation to help ensure that FP10 will be a flagship programme of Europe.

For more information and enquiries, please <u>contact</u> our Secretary General Mattias Björnmalm.

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Rooted in advanced engineering education and research, <u>CESAER</u> is an international association of leading specialised and comprehensive universities with a strong science and technology profile that advocate, learn from each other and inspire debates. Our <u>Members</u> champion excellence in higher $(\mathbf{\hat{i}})$ education, training, research and innovation, contribute to knowledge societies for a sustainable future and deliver significant scientific, economic, social and societal impact.

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