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the Art

**Flemish reflection paper on
the tenth European
Framework Programme for
R&I**

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Colophon

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**DEPARTMENT OF
ECONOMY, SCIENCE & INNOVATION**



Introduction

The Flemish Department of Economy, Science and Innovation (EWI) took the initiative to prepare a joint reflection paper together with its stakeholders¹ on the next Framework Programme for Research and Innovation (FP10). In this paper, we make clear which general principles are important for Flanders and propose some ideas on how to implement these.²

As a general principle FP10 should continue to award funding based on excellence aimed to achieve the best possible scientific, societal and economic impact. The Framework Programme should provide ample and balanced room to the full range of research: frontier and applied research, small- and large scale, bottom-up and top-down, individual and collaborative, and multidisciplinary. Stakeholder engagement and transparency are important principles to maintain both the high quality and attractiveness of FP10.

Other important messages of this paper are to keep beneficiary-oriented simplification in mind when designing the next framework programme, to design FP10 as an innovation pipeline able to support and connect frontier with applied research and innovation and to develop a coherent, synergetic and holistic view on the funding ecosystem in Europe. In order to tackle the most pressing key challenges Flanders considers coordinated planning to be instrumental to fully exploit this ecosystem. From this perspective missions can be seen as a particular case where coordinated planning could be implemented.

Where an ambitious European budget for the Framework Programme is a necessary condition to answer the challenges confronting Europe, this alone will not be sufficient. Not only *more* investment, but also *smarter* or more *coherent* investment in R&I is required. We propose that FP10 represents a higher share of the European Multiannual Financial Framework (MFF). Given its current structure, we advise raising it to 10% of the MFF. . And also Member States should co-invest their own resources (3% of their GDP and 1.25% of public effort) in their local as well as the European R&I system.

As a final note, we ask the reader to keep in mind that this reflection paper has been written in the first half of 2023 so that inevitably some statements risk to be rapidly outdated in the fast evolving EU R&I funding policy landscape.

¹ See the annex for the participating stakeholders.

² While discussed in depth, the various arguments made and positions taken do not necessarily reflect the views of all WG12 members.

Executive Summary

1. **Investing in R&I through FP10 will contribute to tackling the global challenges and remaining resilient and competitive globally**
 - a. Investing in R&I is essential to tackle global challenges and is a crucial driver to prosperity, resilience and welfare. The European Framework Programme for R&I has a proven track record in offering EU added value and bringing the research community, industry, policy maker and civil society together. Flanders suggests in the next Multiannual Financial Framework (MFF)³ to allocate 10% of the total budget to the Framework Programme on R&I.
 - b. Acceptable success rates are needed to safeguard the attractiveness of the program. The FP10 budget should be able to (at least) maintain the heightened success rates so far under Horizon Europe compared to Horizon 2020.
 - c. In order to remain resilient and competitive at the global stage, the EU needs to further strengthen its efforts in R&I, especially since others are stepping up.
 - d. Flanders also calls upon the responsibility of the Member States to keep investing in favourable national conditions for R&I and reach the investment targets of 1.25% of public effort and 3% GDP to research and innovation.
 - e. Ambitious funding is necessary, but not sufficient. More attention should be paid to *better* or more *coherent* funding. The complex European R&I landscape should be more designed as a whole in synergy between all programmes, including EU, national, regional, private, ... funding, creating a holistic European funding ecosystem which the missions could fully exploit.
2. **Keep the budget allocations and priorities in FP10 as stable as possible and as flexible as necessary in order to achieve fully the goals of the Strategic plan and avoid complexity and fragmentation**
 - a. FP10 should primarily focus on achieving the goals set in its Strategic Plan, while remaining flexible where needed. Over the last few years priorities kept being added to Horizon Europe, however, in some cases without a clear link to R&I, or budget being reallocated. This makes the programme overly complex, fragments the budget and shifts the balance to higher TRL due to the political/urgent nature of additional priorities. Stability and long(er) term planning should be incorporated in the design of FP10 as core principles while also allowing for sufficient flexibility to respond to urgent challenges .
3. **Keep beneficiary-oriented simplification at the heart of designing FP10 to safeguard the attractiveness of the programme and encourage newcomers**
 - a. As a general principle, success in FP10 should be based on excellence and impact alone. By making the application process as simple and

³ Provided that the overall macrostructure of the MFF remains (largely) maintained, and that current programmes under the MFF are not removed from within its scope.

straightforward as possible, the programme becomes more attractive and more accessible to less experienced applicants. Previous efforts on simplification such as reducing the page limit of (collaborative) proposals are well received, yet again challenged by the additional complexity of the increasing number of transversal elements that need to be addressed in applications.

- b. As a general principle Flanders welcomes testing innovative measures aimed at enhancing the efficacy or the impact of the programme by piloting initiatives. However, these require thorough testing before broader roll-out and should always be based on a clear, comprehensive and transparent evaluation with adequate inclusion of stakeholder input.
- c. The evaluation of Horizon proposals should meet the highest standards and be as excellent as the projects that are funded.

4. Towards a more comprehensive notion of impact through interdisciplinarity

- a. Flanders prefers to continue the 3+1 pillar structure of Horizon Europe and appreciates the cluster approach that combines the industrial and technological aspects with their societal context as it allows for interdisciplinary crossroads in research and innovation. Expertise from arts, social sciences and humanities (ASSH) is vital to understand societal evolutions and address global challenges.
- b. The inherent value of (ASSH) in informing about and understanding the societal context, for which call priorities can be defined and in which the innovation is to be used, is essential for its uptake. Technology development cannot be separated from the society in which it functions, and demonstrates the contribution that technology and innovation can offer in tackling societal challenges. Where applicable, this should be better included in the conception and wording of the topics, and considered in a robust way during the evaluation process. Introducing societal readiness levels, in particular for projects with clear societal goals, might be an additional help.
- c. Stakeholder engagement in Pillar 2 research projects should be included where possible. Including active involvement of stakeholders in co-creating, codesign and/or executing projects, in particular end-users, enhances the credibility, relevance and legitimacy of the research results.

5. Increase the internal coherence of FP10 as an innovation pipeline

- a. Flanders suggest to reinforce the internal logical and coherence between the different pillars and instruments of FP10, aiming to establish a funding framework that can maximize the potential follow-up or exploitation of research results while at the same time trying to avoid fragmentation.
- b. The Strategic Plan has the potential to function as the cornerstone of the European R&I policy, setting clear R&I priorities over longer term process. Before setting these priorities a wide and open consultation including all actors of the quadruple helix is essential. Also, a good alignment with existing policies (e.g. industrial/innovation agenda for partnerships) and structural foresight activities should form the basis for a strong Strategic Plan.

- c. More selective priority setting would allow for more funding per selected priority enabling a more substantial impact per domain. At an operational level this would allow for more broadly formulated calls where more projects could get funded, offering the European Commission to exploit the bottom-up creativity of applicants to the fullest.
- d. Flanders considers introducing 'Research Actions' in Pillar 2 of FP10 a valuable addition to the innovation pipeline as it offers additional strategic planning options, more coherent projects descriptions and increased adaptability in consortia to mitigate the innovation gap.
- e. In addition to 'Research Infrastructures' under Pillar 1, Flanders suggests to include 'Innovation Infrastructures' aimed at testing or validating excellent research results in a relevant environment under Pillar 3 as a means to bridge the gap between science and innovation and eventually foster better uptake by the market and society..

6. Towards a coherent and synergetic European R&D&I Funding Ecosystem

- a. While the current focus on synergies with the structural funds is certainly worthwhile and should be continued, Flanders urges the European Commission develop a more holistic view on the European funding ecosystem. In the current MFF some relevant EU programmes received more budget or new funding programmes were set up with a (partial) innovation objective, covering domains that are thematically related to Horizon Europe. This calls for more urgency to align these programmes and to spend these funds as strategically and coherent as possible.
- b. For this a long-term vision and consequent strategic or even coordinated plan is essential. A structural dialogue both at policy as operational level needs to be set up to realize synergies in practice. As a potentially useful descriptive tool, we propose to use a multidimensional maturity level model.

7. Exploiting the European Funding Ecosystem through R&I Missions

- a. Where the mission approach clearly has a lot of potential, the current implementation of the missions is perceived to be on a route towards failure to realise its goals.
- b. Flanders suggests to re-orient the missions as a coordinated strategic planning process able to exploit the full range of existing relevant programmes and instruments in the European Funding Ecosystem, especially beyond FP10. In line with the ambitious and measurable goals of a mission, an operational (retro)plan should be established covering all necessary steps needed to achieve that goal, which in practice would need to be translated into calls over all relevant programmes. This way of working would not require additional budget as it mobilizes existing budgets, but would need close monitoring and evaluation.
- c. The mission approach offers a potential benefit for science communication in that, besides trying to capture the imagination of citizens and bringing R&I as such in the picture, it enables to communicate a more longitudinal and realistic approach to R&I as a *non-linear process* (cf. long term planning of the missions with intermediary evaluation over the years where readjustment is needed) instead of only focussing on the (positive) results.

8. Towards a refined concept of widening

- a. Recent years indicate that the R&I performance of the initial widening countries diverges. As the widening measures of the Framework Programme are essentially aimed to become superfluous when a country achieves a certain level of R&I excellence, a thorough evaluation of these measures in the current and previous Framework Programmes would be valuable to determine what worked (or not).
- b. Flanders suggests to investigate the possibility of allocating widening funding based on more regional instead of national parameters in order to have widening measures reach those regions that would still most benefit from it.
- c. In order to have structural effects, the FP10 widening measures need to be complemented with the necessary investments at the Member State level.

9. International collaboration is essential, but tread with care

- a. Flanders strongly supports the notion of being open to the world for international R&I collaboration, but adheres to the principle of 'as open as possible and as closed as necessary', in combination with the terms described in the Communication by the European Commission on the Global Approach to Research and Innovation.
- b. Finding the balance between open and restricted international collaboration is not easy and needs to take the necessary granularity into account. Improved awareness and proportional measures of the issue of knowledge security would be beneficial.

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1 Core Principles

1.1 Investing in R&I through FP10 will contribute to tackling the global challenges and remaining resilient and competitive globally

The contribution of science and technology in tackling the ever more pressing challenges that Europe is facing cannot be underestimated. Being able to rely on a strong knowledge base and building on new enabling or disruptive technologies and innovations will allow the EU to better modernise its industry, address the climate crisis or loss of biodiversity, respond to challenges towards democratic governance, find new and more sustainable solutions to the energy crisis and the food security issue, fight diseases and anticipate the effects of the coming wave of ageing on healthcare, and in general to be better prepared for future challenges. In order to safeguard its long term welfare and productivity and maintain the attractiveness of the next Framework Programme on Research & Innovation (FP10)⁴, the EU needs to substantially invest, and even step up the investments, in R&I. Flanders suggests to allocate minimally 10%⁵ of the total budget of the next MFF⁶ to FP10 .

Although international R&I collaboration remains the norm (cf. section 3.6), due to more recent (geopolitical) evolutions such as rising tensions and growing international competition (e.g. towards China, but also the US), the longer term effects of Brexit or the war in Ukraine exposing a crucial dependency on third countries for European energy and food supply, the urgency to strategically invest in key R&I domains has drastically increased if the EU wants to realise its open strategic autonomy. In order to remain competitive on a global scale Europe cannot reduce its efforts in R&I, especially when others are stepping up.

The European Framework Programme on R&I (currently the ninth, Horizon Europe, 2021-2027) has a demonstrated track record to be both effective and impactful, offering substantial European added value. This programme plays a pivotal role in bringing together Europe's research community and industry, as well as involving policy makers and civil society, which would not be possible to do without European funding. This enables Europe to set up better collaborations, align priorities and framework conditions in all Member States thereby contributing to deepening the European Research Area.

The application rate to the Horizon programme is at the same time a clear indicator of its success while also being one of the threats to its attractiveness due to insufficient budget leading to a significant oversubscription. This results in a substantial loss of excellent projects, both in impact on European society and economy of projects not being able to realise their potential, as well as in a waste of time and effort that has been invested by applicants to write proposals that

⁴ *Only 30% of the high-quality proposals could however be funded with the budget available, even if this is slightly better than in Horizon 2020 (25%), an additional €34billion would have been needed to fund them all*, in [Horizon Europe Implementation, Key data for 2021-2022](#), p.1

⁵ The share of Horizon Europe in the MFF 2021-2027 budget is about 8.8%. Horizon 2020 had a share of about 8% in the MFF 2014-2020 (based on <https://www.europarl.europa.eu/factsheets/en/sheet/66/policy-for-research-and-technological-development>). Hence the choice for 10% as minimum investment level.

⁶ Provided that the overall macrostructure of the MFF remains (largely) maintained, and that current programmes under the MFF are not removed from within its scope.

eventually were not granted.⁷ Sufficient budget (cf. above) is needed to allow the programme to continue attracting the most excellent applicants and projects.

The European added value of the European Framework Programme needs to be complemented by sufficient investment in R&I at the national level. Relying only on FP10 or other relevant programmes under the EU budget alone will not suffice to induce the changes needed to overcome the challenges that Europe is currently facing.⁸ Flanders calls upon the responsibility of the European Member States to implement the investment targets of 1.25% of public effort and 3% GDP⁹ to research and innovation, which in 2020 still was on average 2.3% throughout Europe.¹⁰ More substantial national/regional budgets will not only help to overcome these challenges, but also improve general conditions for applicants who will be better served by local instruments and thereby reduce unnecessary oversubscription to the framework programme. In line with the ERA policy agenda, Flanders emphasises the responsibility of the individual member states in domains where the authority lies on the national level to create the best framework conditions for R&I to thrive in (cf. also section 3.5). A robust national R&I system remains an important driver for success in the EU Framework Programme.

1.2 Keep the budget allocations as stable as possible (and as flexible as necessary) in order to fully achieve the goals of the Strategic Plan and reduce current complexity and fragmentation

Flanders welcomes the introduction of the Horizon Europe Strategic Plan setting out the key strategic orientations for R&I in alignment with the political priorities of the European Union. Therefore, FP10 should maintain the use of a Strategic Plan. It not only offers directionality and stability, but also enables more coherent and strategic planning across all instruments of Horizon Europe pillar 2. As such, it could serve as the cornerstone for R&I policy in Europe. Its longer term vision with the first part of the Plan encompassing 2021-2024 and the second 2025-2027, with both again being divided in multiple one or two year work programmes, offers additional flexibility when needed. At the same time, the Framework Programme should also be able to respond swiftly to grave and unforeseen circumstances that call for a more immediate need to redirect R&I efforts. Previous examples such as ZIKA or COVID have demonstrated the added value of this. However, recent years clearly indicate that the balance between long term strategic planning and more ad hoc redirections of efforts is shifting. One explanation is what has been called the state of 'permacrisis', leading to the addition of new priorities to Horizon that the Strategic Plan could not foresee. On top of that, also other more politically oriented initiatives with a much less clear link to R&I nor attesting to high urgency have found their way into the work programmes. This has led to new priorities being included in Horizon Europe, consequently requiring re-allocation of budgets without compensation. Such practices essentially put the longer

⁷ The success rate in Horizon Europe for 2021-2022 was 15.9%, compared to 11.9% in Horizon 2020. [Horizon Europe Implementation, Key data for 2021-2022](#).

⁸ A new ERA for Research and Innovation, [COM\(2020\) 628 final](#), p. 6.

⁹ Again acknowledged in recent [Council conclusions \(EU/CO 4/23\) 23/03/2023](#).

¹⁰ European Commission, Directorate-General for Research and Innovation, [Science, research and innovation performance of the EU 2022: building a sustainable future in uncertain times](#). Publications Office of the European Union, 2022.

term strategic agenda of an FP under stress. Adding components to an FP after the Strategic Plan has been determined brings additional complexity to the Programme and leads to more fragmentation of the total budget, hindering long term continuity and making it difficult to fully achieve the goals as set in the Strategic Plan. Stability and long(er) term planning based on the Strategic Plan should be the main rationale.

As is inherent to crises or also political priorities, timing is of the essence meaning that projects are required to achieve impact on a relatively short term, aimed for by defining higher technology readiness levels (TRL). As the budget for these initiatives in the current Horizon Europe programme comes from pillar 2, by its nature aimed at R&I in support of policy priorities, this not only means a further fragmentation of existing budgets but also an additional shift towards higher TRL as the Horizon Europe partnerships already take up to half of the pillar 2 budget and the EU missions are (currently¹¹) capped at 10% of the total budget of pillar 2. With FP10 functioning as an innovation pipeline (cf. section 2.1), a more balanced approach needs to be taken. Sufficient room for collaborative research at lower TRLs in pillar 2 must be maintained (cf. also section 3.2).

1.3 Strive towards a more comprehensive notion of impact through interdisciplinarity

Stimulating the uptake of R&I results is essential to maximise its potential effects and impact on society. Flanders therefore supports the shift of the FP from an ‘activity-driven’ to an ‘impact-driven’ design. Inherent to the complex and profound issues that Europe is facing at the moment is that no single discipline or institute can tackle these alone, which calls for international and interdisciplinary collaboration. In this respect Flanders prefers to maintain the Horizon Europe cluster-approach aimed at increasing ‘collaborative research and innovation across sectors, disciplines and policy fields – boosting flexibility, focus, and impact’.¹² Integrating the ‘Industrial Leadership’ (second) pillar of Horizon 2020 with its (third) pillar on ‘Societal Challenges’ made it clear that technology development cannot be separated from the society in which it functions. It also showed the contribution that technology and innovation have in tackling societal challenges.

Where relevant, reflections on how the research results, technology or innovation affect the society in which these will be deployed have to be included in order to fully comprehend and enhance the potential impact of the research in all clusters. Not only the legal and ethical issues are crucial in this regard, but a better understanding of the society in which the innovation is to be deployed is equally essential for its uptake. Consider, for example, investments in health sciences that have produced significant advances in vaccines or AI-enhanced diagnostics. In order to ensure uptake in society, e.g., social determinants of health in different demographics should be understood and explored, in order to assess how innovations such as vaccines or AI can be understood or trusted by the intended end users. All relevant aspects such as the gender dimension, underrepresented or vulnerable populations, different age groups, regional differences, potential distrust in (specific) technologies, cultural-historical particularities, ... that could have an effect on the potential impact or uptake need to be taken into account to enhance the design and

¹¹ At the time of writing it was not clear if the budget would remain 10% or increased to 11%.

¹² Commission Staff Working Document, SWD(2018) 308, [Executive summary of the Impact Assessment](#), p 1.

effectiveness of technical solutions (cf. also section 3.7). The rigorous and early involvement of ASSH researchers in the definition, evaluation and implementation of relevant research topics is a prerequisite for maximising the potential of impact under the cluster research.

1.4 Investing in stakeholders engagement leads to shared beliefs and commitments

Stakeholder engagement in FP10 should be emphasized where relevant. Including *active* involvement of stakeholders, including citizens or Civil Society Organisations (CSO), as end-users in cocreating or co-executing projects, enhances the credibility, relevance, and legitimacy of the research results. This will help to realize the full potential impact as it maximises the chances for uptake. Involving citizens, and where relevant considering a citizen science approach, might also be beneficial to tackle the present distrust in science in general, which might of course also hinder the uptake of the crucial innovations provided by science and technology.

In this regard, also science communication can play an important role in better connecting science to the citizen. Flanders welcomes the attention given to science communication projects in Horizon 2020,¹³ and invites the Commission to focus on implementing or mainstreaming their results. Offering adequate support to researchers and institutions in science communication will not only benefit the trust in science and facilitating the uptake of research results in society, but also offer extra visibility to these important fields of science, where so many new talents need to be attracted for further research.

Engaging with stakeholders in the context of FP10 can start with the traditional downstream National Contact Point (NCP) activities (facilitating participation in FP10). However, this should be complemented by upstream activities of involving a wide range of stakeholder representatives during the drafting of strategic plans and work programmes. Member States have a responsibility to complement the Commission's efforts to connect to the stakeholder in a quadruple helix setting. A regular and structural stakeholder engagement process is also beneficial for creating shared beliefs and common narratives regarding the EU values and principles that shape the ERA and underpin the EU programmes such as FP10. As a result, stakeholders might be more inclined to engaging themselves at the international level in support of these values and principles (cf. section 3.6). Investing in Europe and a European R&I ecosystem is therefore not only to be understood in monetary terms (cf. section 1.1), but also in kind such as time and commitment of national or regional administrations in setting up and supporting these structures.

1.5 Increase beneficiary-oriented simplification to encourage participation

Complementary to having a clear strategic focus in FP10, rationalisation and simplification that *really benefit the applicant* and potential beneficiary should be at the core when designing the next Framework Programme. Complexity in the application process or in the management of a

¹³ E.g. [CORDIS result pack on science communication](#), European Research Executive Agency 2022. Or the more recent ERC Science Journalism Initiative (FRONTIERS).

grant puts newcomers or institutes with less experience at a disadvantage. Additionally, many applicants, in particular SMEs, are deterred by the (perceived) bureaucratic overload that, in combination with the complexity of the landscape and the low success rates, diminishes the attractiveness and on the longer term even the success of the programme. Success in the Framework Programme should be based on the excellence and potential impact of the projects and e.g. not on a better knowledge of the procedures and the inner workings of the programme. In addition, the higher the complexity of the landscape and the procedures, the larger the need for professional internal or external support facilities. Investment in extra support causes an uneven playing field between applicants that can afford such support and others that cannot, and/or between applicants that can count on the services of an extensive NCP support and others that cannot.

Having a stable structure, with instruments that have a clear purpose and have minimal overlap with others, combined with a streamlined submission process and project management is essential for all applicants, experienced or not. Flanders appreciates the clear three-pillar structure of Horizon Europe (cf. also section 2) and its internal logic ranging from Excellent Science (Pillar 1) over Global Challenges and Industrial Competitiveness (Pillar 2) to the more entrepreneurial logic of Innovative Europe (Pillar 3). Maintaining a stable and coherent structure of the FP10 will increase the recognisability, which in turn helps to lower the threshold to participation.

However, despite the clear overarching structure as such, the programming and the different instruments of Horizon Europe, as well as the demands put forward in the individual topics, seem to have only increased in complexity. FP10 should be careful not to install too many different instruments or subprogrammes, which fragments the programme and dilutes the budget. Before a new instrument is introduced, an ex-ante assessment should demonstrate the validity and feasibility of its goals, indicate which other instrument(s) it replaces or complements and argue why it is needed in the first place. Before a new instrument is rolled out over the entire FP10 or to its fullest extent, well designed and fully implemented pilots or trials should convincingly demonstrate its efficiency and effectiveness (cf. also section 1.6). Not increasing the administrative burden and overall complexity nor diluting the funding streams should be some of the criteria to take into account. Flanders asks to closely consider and evaluate each instrument to determine its added value compared to others and to plan more coherently across all different FP10 instruments (cf. section 3.1).

From an applicant's perspective, the work programme and the topic description should be sufficient to start working on an application and should contain all relevant information or links (e.g. to policy background, potential synergies, links to missions or partnerships, ...). While topics should very clearly and coherently state what expected outcomes projects should aim at, it is vital to allow projects to select methodologies and approaches more freely, in particular in pillar 2 (cf. also section 2.3). Given the long gestation time of a work programme, overly detailed demands on the 'how' part of project carries a real risk that these become obsolete by the time a proposal is submitted.

The Funding & Tenders Portal should be the 'one stop shop' for all EU-funding programmes (including all partnerships, missions, ...). Additionally, calls of programmes such as Digital Europa Programme, EU4Health, LIFE, EDF, ... should be integrated in the same portal. Flanders encourages the Commission to make all calls more easily findable (through adding keywords indicating thematic domains, mission-related calls, potential links with ERA as well as cross-cutting-priorities

such as internationalisation, ASSH, Open Science, ...). This will also allow for better monitoring from the side of the Commission. The Horizon Dashboard¹⁴ is a valuable addition and Flanders invites the Commission to further elaborate on its functionalities and possibilities. Flanders also proposes to extend e-Corda to other EU programmes, such as the European Defense Fund (EDF), as well (in line with the EU programmes included in the Funders & Tenders Portal).

1.6 Maintain high quality standards to safeguard the attractiveness of the programme

The evaluation of FP proposals must meet the highest standards and be as excellent as the projects that are approved for funding. Keeping the quality of the evaluation high and beyond refute is essential in safeguarding the reputation of the programme for the applicants. Flanders therefore points to differences in the way evaluation summary reports (ESR) seem to be approached over different clusters and to the sometimes (perceived) lack of quality. The constant optimization of the evaluators' instructions and monitoring the quality and conformity of evaluator's work should therefore remain high on the agenda of the European Commission. In order to increase transparency the Commission should look into further increasing the quality of the evaluation reports that are sent to the applicants. In line with the inherent interdisciplinary nature of especially the collaborative projects (cf. section 1.3), Flanders insist that the evaluation of such projects should be conducted by a team of truly interdisciplinary evaluators.

Flanders suggest, in a spirit of open science, to release the names and affiliations of evaluators, as happened during Horizon 2020. Therefore, candidate evaluators are supposed to agree¹⁵ with the publication of their name and affiliation once the evaluation results are made public. Of course, care should be taken that evaluators cannot be linked to a specific call, let alone individual evaluation results. Skilled and competent evaluators are a hallmark of on qualitative evaluations. Experienced evaluators might be asked to review more proposals than currently is the case if otherwise there would too many lesser experienced evaluators evaluating a proposal.

As a general quality improving principle Flanders welcomes introducing innovative measures aimed at enhancing the efficacy or the impact of the programme by piloting initiatives (e.g. rebuttal, hop-on, blind evaluation or lump sum). However, these would require adequate testing before broader roll-out and should always be based on a clear and transparent evaluation with adequate inclusion of stakeholder input.

The transparency and uniformity in the functioning of programme committees should be improved. A more transparent procedure of defining the different work programmes across the various FP10 programme committees would be welcomed as a measure that preserves the quality of (and stakeholders' trust in) an important FP10 process. All relevant stakeholder organisations – advisory groups, expert groups, each national Programme Committee's (PC) own supporters in

¹⁴ Although measures are needed to reduce the 'letter box' effect, i.e. international organisations or umbrella organisations that act as financial go-betweens for other actors abroad should not be considered as Belgian beneficiaries only because they are located in Belgium (usually Brussels). The most striking examples are the COST Association and some Joint Undertakings

¹⁵ This request should be formulated in a GDPR compliant manner.

their respective Member States – should have the opportunity to deliver input in advance directly and give feedback during (open) consultations. Trust in the current cascade system is to be reinforced, which is also a national/regional responsibility (cf. also section 1.4). PC delegates should ensure timely dissemination of information to national stakeholders¹⁶ and continue their coordination and steering role. In addition, the PC remains the concertation platform among Member States and with the Commission for discussing how the FP performs. In essence, a PC monitors, and if needed, adjusts its work programmes, while striking a balance between the interests of the various national delegations with their stakeholders for the sake of the originally defined goals. The Commission has to provide sufficient opportunity during the PC meetings to discuss the national input in a co-creation spirit, reply timely and satisfactorily to questions of PC members and effectively take their input into account. NCPs should receive/have access to appropriate evaluation statistics in a timely manner, i.e. at the same time or very shortly after the PC has received the complete evaluation information.

¹⁶ This concerns information regarding the preparation of the work programmes etc., not the more practical issues and information related to proposal submission, which is the realm of the NCPs.

2 FP10 Structure

2.1 Increase the internal coherence of FP10 as an innovation pipeline

In order for R&I to achieve sustainable impact on society, the whole innovation pipeline ranging from basic blue-sky research to applied research and innovation is needed. The structure of Horizon Europe allows for a good exploitation of this pipeline, from frontier oriented research in Pillar 1, over the impact driven directionality of Pillar 2 and the innovation focus of Pillar 3. Hence, Flanders suggests to maintain the same structure for FP10. A stable, coherent and clear structure of the next FP, with distinct and not overlapping instruments with easily findable calls would already help applicants (and NCPs). The aim is to establish a funding framework that can maximize the potential follow-up or exploitation of research results while at the same time trying to avoid fragmentation. Clear guiding documents describing the strategic choices the Commission made and what potential funding options on the medium or longer term might exist in order to 'migrate' between FP10 pillars (and even EU programmes - cf. also section 4.2) to evolve from idea to application would be beneficial for applicants, research managers and administrators (RMA) and NCPs.

2.2 Pillar 1: Bottom-up driven Scientific Excellence

Flanders recognises the importance of frontier or blue-sky research and strongly supports the European Research Council (ERC) as the 'gold standard of research'. Scientific excellence should remain the only evaluation criterion. In this respect curiosity and creativity are the main drivers for ground-breaking research. This not only contributes to broadening the knowledge base, strengthening Europe in making it more resilient to tackle unforeseen crises, but it also forms the basis of the innovation pipeline where it lays a foundation for later innovations. The long-term stability (including submission deadlines) and recognisability of the ERC adds to its appeal for researchers, which is something to maintain. Flanders, however, wants to point out that grants for ERC have not been corrected according to inflation since 2007, causing in practice a decrease in funding per project. ERC should remain the most attractive and highly prestigious grant, attracting only the very best talents (also from outside the EU) and leading to innovative, disruptive research.

Although scientific excellence should remain the only evaluation criterion applied by the ERC, frontier science does not exclude innovation in any way. Flanders in this respect supports the Proof of Concept (PoC) grants that maximize the economic and/or societal innovation potential that breakthrough research holds.¹⁷ Better connections of ERC results to e.g. the EIC (in an adapted collaborative consortium) are to be stimulated.

Flanders also strongly supports the Marie-Skłodowska-Curie Actions (MSCA). The focus on mobility, innovation, cross-sectoral mobility, and research and innovation make this a very valuable programme which also has a structural impact on the training of the next generation of

¹⁷ [Assessing the Influence of ERC-funded Research on Patented Inventions](#), Final report, 11 November 2022.

researchers. MSCA boosts careers of fellows, especially in academia (e.g. increased chances for ERC). In light of the current economic situation in Europe, Flanders requests to update the country coefficients to enable the grants to fully cover the rising salary levels of researchers and safeguard the attractiveness of the MSCA.

Flanders appreciates the overall objective of the Research Infrastructure (RI) programme under FP10 which, together with the European Strategy Forum on Research Infrastructures (ESFRI), contributes to creating a coherent and strategic approach to the European RI policies. In many domains RIs are an essential enabler of cutting-edge research, emerging needs and scientific breakthroughs. In addition, it increases the general attractiveness of Europe for researchers and talents abroad. Complementary to Research Infrastructures, Flanders suggests to introduce Innovation Infrastructures under the EIC as a means to close the innovation gap (cf. also section 2.4). While the focus of RI lies on scientific excellence, focussing on potential spill-over effects to those domains that are of strategic interest to the European Union (as formulated in the Strategic Plan) should be stimulated.

Next to its strategic agenda of reducing fragmentation or responding to new challenges, adequate attention to the longer term sustainability and further development of existing Research Infrastructures is required. Also, the non-technological aspects of RIs plays an important role here. Without skilled personnel to ensure the scientific quality these infrastructures risk to perform suboptimally. In this regard, Flanders welcomes the recent attention for training of RI users, as well as strengthening the RI scientific, technical and managerial competencies of staff.

2.3 Pillar 2: European Industrial Competitiveness and Societal Impact in function of Global Challenges

With its aim of achieving impact on the life and wellbeing of EU citizens, tackling the major challenges that Europe is facing, as well as stimulating and modernising the European industry, Flanders fully supports the impact driven design of Pillar 2 (cf. also section 1.3), but would ask for a better and clearer priority setting in the work programmes.. In order to invest the available funding of this pillar as coherently and strategically as possible and minimize potential fragmentation of efforts, it could be considered to limit the number of priorities at the strategical level. This of course should not affect the number of clusters, nor the total budget allocated to these clusters.

Having less priorities would allow at an operational level to allocate more budget to additional and more broadly formulated calls where a larger range of diverse yet relevant projects could get funded, offering the European Commission the opportunity to exploit the bottom-up creativity of applicants to the fullest. Due to potential high application pressure for broadly formulated calls a two-step procedure would be preferable. Selecting the most pertinent priorities in the Strategic Plan will be essential, which calls for a robust strategic planning process (cf. section 3.1). Coherence between step 1 and 2 of the evaluation is to be safeguarded, either by trying to select the same evaluators, or by making the step 1 ESR available to the evaluators in step 2. Applicants would also welcome receiving the full ESR after the first step.

Flanders welcomes the simplification efforts made by the Commission such as the reduction of number of pages in the template for (R)IA applications to (in most cases) 45 pages. Contrastingly, the number of 'additional' demands or transversal elements in the submission template has increased. Although these are commendable in their own right (e.g. Do Not Significant Harm, Open Access, Research Management, interdisciplinarity, Artificial Intelligence, gender, policy advice in the Dissemination, Exploitation & Communication section, ...), these transversal elements reduce the space left for the applicant to focus on the actual excellence of the project. Reducing the number of pages also puts larger consortia to a disadvantage as a simple consequence of needing more space in descriptive tables which cannot be used to explain the actual project. Flanders asks to find a better balance here.

The Commission should be careful that these transversal elements are not treated as standardised template texts in proposals, thereby only reducing space to describe the project. Preliminary experience shows for example that the mandatory Open Science and Research Data Management demands result in quite standardised texts. Evaluators should have adequate training and guidance on these elements ensuring that these elements are taken up as intended

Feedback from stakeholders before (new) transversal elements in the proposal submission template are imposed should help to avoid unintended or unwarranted consequences (see also section 1.6). For example the introduction of the Do Not Significant Harm (DNSH) principle, while commendable on its own, creates uncertainty for applicants, especially those working in emerging fields or early stage research where the full potential environmental consequences are not yet fully clear. For these latter, the administrative burden could be reduced by integrating the DNSH principle in a checklist of an 'ethics by design' approach. Similarly, the introduction of the Researcher Table, while officially intended to keep track of researchers' careers involved in EU projects, seems to have an effect on the gender evaluation of the consortium. As this table focuses on *researchers* as defined by the Frascati Manual, caution should be made not to use this information for gender evaluation purposes for the whole consortium that usually comprises other types of involved staff (besides research staff) as well.¹⁸

Open feedback or more transparency/explanations on the selection of projects on the reserve list would also add to the trustworthiness of the evaluation process.

2.4 Pillar 3: Innovative Europe

Flanders supports a third pillar of FP10 on innovation and innovative ecosystems. Including this pillar makes the structure of FP10 reflect the full innovation pipeline, from basic science to innovation. The bottom-up nature of the EIC (except the Challenges) contributes to a stronger R&I base, offering possibilities for potentially disruptive impacts based on early stage science, with maximal attention for implementation or valorisation of research results in function of society or industry. While aiming for valorisation in a business context, the evaluation process of EIC should reflect the technology readiness level (and/or the societal readiness level – cf. section 3.7) of the

¹⁸ In this regard, additional guidance would be welcomed on how to complete the Researcher Table for non academic partners.

funding scheme that allows applicants the opportunity to explore new ideas and perform high risk/high gain research.

The EIT (and its stakeholder communities¹⁹) can be better integrated in the Horizon structure. Even if rooted in a different legal base (and managed different DGs), the FP and the EIT cannot operate in splendid isolation. The MoU and cooperation between the EIT and EIC is a valuable first step but having in the same thematic area a KIC as well as a partnership and in some cases also a mission (e.g., the mission on sustainable cities next to a Driving Urban Transition partnership (originating from the JPI Urban Europe) next to an Urban Mobility KIC) raises questions about the dilution and effectiveness of funding. When considering the creation of new KICs, the overall EU partnership landscape should be taken into account.

The EIT (and the KICs) have a 15 year horizon (and long reaching vision), which is quite unique in the European funding landscape. A long term vision and sustained commitment of 15 years was felt to be needed to establish novel and strong institutions that can foster new high tech enterprises and stimulate entrepreneurship for researchers. However, in order to successfully reach that term, the EIT will need to reconsider its administrative overhead, the centralized budgets and the need for increased funding, including through membership contributions, deterring or making it difficult for many types of actors to join the EIT. A substantial in-depth analysis of the EIT and the KICs would be needed. If the analysis points to a negative conclusion, the EIT should not be kept for its own sake, while its valuable elements could be integrated in the EIC. Alternatively, based on the evaluation the nature and tasks of the EIT (and KICs) might be recalibrated in order to attain more easily a level of self sustainability.

An essential step in valorising excellent research results, from proof of concept to technology validation, is being able to test, upscale, demonstrate or co-create these results in a relevant environment. Flanders considers the introduction of 'Innovation Infrastructures' (e.g. wind tunnels, demonstration facilities, living labs, ...) as a means to bridge the gap between science and innovation and eventually foster better uptake by the market. We also refer to the ERA action 12.2 on technology infrastructures.²⁰ Similar to RI (preparing for ESFRI) under Pillar 1, an instrument could be set up under Pillar 3 to define a strategy aimed at mapping and better using existing infrastructures, and identifying and preparing the set-up of newly needed Innovation Infrastructures. Flanders suggests to work strategically in identifying the most relevant Innovation Infrastructures and always link these to strategic priorities or roadmaps. This will also better enable linkages with industry in the form of partnerships (in alignment with industrial policies), or with implementation programmes such as e.g. the Digital Europe Programme and the IPCEIs. Strategic dialogue between these infrastructure-related instruments in Pillar 1 and 3 is needed to avoid the creation of silos.²¹

¹⁹ E.g., In practice, even if invited, KICs have not taken part in stakeholder meetings of the Knowledge Hub for Partnerships, while few representatives of the HEU partnership community participate in the EIT Innovation Summits.

²⁰ We prefer 'innovation infrastructures' to "technology infrastructures" as the former has a broader scope.

²¹ Even if a sharp theoretical distinction can be made between research infrastructures and innovation infrastructures, in reality some infrastructures will be situated in a grey middle zone by combining aspects of both.

3 Improvements for FP10

3.1 Further commit to Strategic Planning for FP10

Flanders welcomes the Strategic Plan for FP10 as a cornerstone of EU R&I policy. The priorities selected to which R&I could contribute must be reflected in the clusters, partnerships, missions or other instruments. This plan should also reflect how FP10 can connect with other funding programmes (cf. section 4).

Even if the Strategic Plan essentially adds a political layer to the still existing Specific Programme, it can bring more overall coherence to the FP. However, there is still some room for improvement as the following examples show. The link between the work programmes of the clusters and the strategic research and innovation agendas (SRIA) and annual work plans of the partnerships is not always clear; the EU missions are managed via yet another work programme; calls from the New European Bauhaus initiative (NEB) can be found in both the cluster work programmes as well as the mission work programme, where in the first case the link with R&I is unclear and for the second NEB is strictly speaking (still) not a mission.²²

A solid and transparent consultation process is essential to obtain qualitative input as well as gain support by all relevant actors of the quadruple helix. This consultation should target all actors, ranging from Member States, academia, industry as well as the citizens. Flanders considers the voice of the citizen to be very important, but connecting to the citizen is not always easy. However, offering the opportunity to citizens, stakeholder groups and '(organised) civil society' to let their voice(s) be heard should be part of any consultation on the Strategic Plan. Stakeholder platforms at the national/regional level can greatly contribute to stimulating the stakeholder to engage at the European Level (cf. section 1.6).

During the strategic planning phase, alignment with (industrial) agendas, SRIA and strategies can be beneficial to connect better and get additional support from ongoing or planned industry or other activities. For example, better synchronisation in line with the New Innovation Agenda and other relevant EU policy agendas can boost the (industrial) buy-in for the programme or allow for more synergies based on the Strategic Plan, enabling more research & innovation as well as implementation/valorisation options (cf. also section 4).

Additionally, the Commission should rely more on systemic foresight studies, in a quadruple helix setting, for strategic planning. Also bottom-up projects within the framework programme such as ground-breaking research in ERC, EIC or other projects (such as RA, cf. section 3.2) could offer valuable insight in emerging relevant domains in which the EU should invest .

Flanders reiterates the point made above that in order to achieve the priorities set in the Strategic Plan, the programme should remain as stable as possible, while remaining as flexible as necessary (cf. also section 1.2). More elaboration than is currently offered under Horizon Europe on how and why priorities are chosen would also be welcomed.

²² In its recent Communication on the Missions (COM(2023) 457 final), the Commission has expressed its intention to have the NEB become the sixth HEU mission.

3.2 Introduce low-TRL and bottom-up collaborative Research Actions

Flanders considers the introduction of Research Actions (RA) a valuable addition to the innovation pipeline of FP10. These actions are to be defined as collaborative, bottom-up (yet thematic according to the logic of Pillar 2 and following the strategic plan) research projects focusing on explorative research. A solid plan on dissemination and valorisation of research results and possible future R&I steps needed to be undertaken in a specific domain, should be included in the list of deliverables by such RA.

The benefit of RAs is that these allow for more strategic planning to collaboratively explore potentially interesting domains. Depending on the state of affairs within a certain domain, it becomes possible to program thematic calls covering a broader scale of TRLs. This results into a better balancing of projects over TRLs across the pillar 2 as a whole. If adequate proof of concept is available, Innovation Actions (IA) can be preferred; if research and validation are needed, Research and Innovation Actions (RIA) would be more appropriate. If an emerging domain becomes relevant but the current knowledge base is still insufficient, Research Actions (RA) can offer proofs of concept and further strategic directions.²³ On a strategic planning level, creating RAs therefore offers the advantage of being able to focus on effectively creating new insights and future strategies at a collaborative European level. RAs could for example be planned as an open call within Destinations for every first year of a work programme. Where relevant the results of these projects can feed into the strategic plan and could also be useful in the missions portfolio.

RAs could contribute to narrowing the innovation gap as these offer the opportunity for more tailored topic description. This prevents topics from being formulated too ambitiously, covering too wide a range of TRLs thereby making the project and the consortium complex and less efficient. RA would allow for a better differentiation in planning with regards to TRL level. As such, consecutive calls overarching multiple consecutive work programmes could shift programming from RA to RIA or IA in specific domains where relevant.²⁴

An indirect and additional benefit of introducing Research Actions is that by the more limited scope of these RAs, smaller consortia would suffice to achieve the expected outcomes and impact. This could lower the participation threshold for newcomers or less experienced actors, be it from industry or applicants from widening countries who can become more acquainted with the workings of the FP.

3.3 Continue streamlining the R&I Partnership instrument

Flanders strongly supports European R&I partnerships as these may leverage additional strength and innovation potential to the FP thanks to industry or Member State involvement. However, the

²³ RAs, by being more thematic/programmatic, could also complement the EIC Pathfinder with its typical high risk/high gain and disruption requirements.

²⁴ The same core consortium could of course compete again to turn 'their' results into higher TRL, but calls are always open and competitive.

partnership instrument still introduces a lot of variety and complexity as the instrument offers individual partnerships a high degree of flexibility in defining and setting up its internal rules and procedures. Despite the valued intention and actions of the Commission towards rationalisation, risks to fragment and potentially duplicate research efforts remain. E.g., a Climate KIC exists next to a mission on Climate Adaptation next to many climate related calls in the work programme and next to a proposal for a potentially new partnership on Climate (rooted in the JPI Climate).

Flanders urges the Commission to continue rationalising the partnership landscape and attend to increasing their openness, coherence and simplicity. The Single Basic Act (SBA) constitutes a common starting point for Institutionalised Partnerships. However, the rules diverge again per partnership regarding project submissions etc. Also other specifics often make it more complex than it was in Horizon 2020 to submit proposals to calls by institutionalised partnerships.

Aside from the application process, simplification efforts should also be geared towards the various facets of the management of the projects, including amendment mechanisms, periodic reporting, assessment, the auditing process, etc. Some initiatives have been undertaken in line with this recommendation, e.g., financial reporting and these should be at least maintained in FP10 and reviewed if necessary.

A more consistent management by the various European executive agencies that should remain flexible towards unforeseen issues in the context of partnerships is a must. Administrative rigidity – as unfortunately has been the experience in the past – must be avoided not to scare away potentially contributing partners from the partnership instrument (in particular for the co-funded partnerships). Flanders advocates in favour of a partnership coordinating team that groups all executive agencies of the Commission, including representatives of DG RTD, to manage partnerships in a consistent and uniform way (e.g., regarding contributions in kind, conflicts of interest, etc.). Partnerships reporting specific administrative problems must find an ear willing to listen and solve problems in a client-friendly spirit. Even if eventually the strategic programme committee decides on FP partnerships (except for the EIT KICs), the Knowledge Hub on Partnerships, with its stakeholder participation, can act as a forum and facilitate exchanges between the Commission, the Member States and Associated Countries, and partnerships' representatives on various issues (policy or practical ones).

The added value of new partnerships should be more strictly interpreted as described in the current Horizon Europe Regulation (art 10.2) that states that partnerships are only to be set up '*in cases where the objectives of the Programme would be achieved more effectively through a European Partnership than by the Union alone*'. As such, setting up partnerships is not linked to domains, but to leveraging joint efforts of private partners, Member States, networks or ecosystems where mobilising additional efforts is required. The partnerships should bring additional value to the FP that cannot be realised in the domains covered by its regular work programmes. Having the majority of the budget in Pillar 2 allocated 'outside European Partnerships' does not necessarily set a *target* of *having to* spend 49.9% of Pillar 2 budget on establishing partnerships.

Partnerships should build active and sustainable ecosystems within their domain of expertise facilitating wider uptake of scientific knowledge. They could also provide a platform for the development of knowledge and new experimental methodologies. Partnerships can help to bridge

the 'technological valley of death' by linking excellent research with technology and solution-minded business undertakings, hence generating virtuous cycles of research and innovation. Where possible, the partnerships should link with policy or industrial ecosystems and priorities, enabling a better dissemination of the research results and maximising the chances for further uptake in society and/or the economy. In addition, also partnerships can provide valuable input in the policy process as they can provide a rich policy learning experience and an extended network of relations amongst all types of stakeholders.²⁵

Flanders encourages all initiatives to better collaborate between the clusters and partnerships in FP10, such as EIT Health and the Innovative Health Initiative (IHI), complementary to investigating 'Identification of areas of mutual interest and of means of collaboration' options to the IPCEI on health and Acceleration programmes.²⁶

3.4 Continue, but reorient the Missions in FP10

One of the biggest and perhaps most visible innovations in Horizon Europe was the introduction of European R&I missions. Already announced in the Lamy Report (2017), and mostly elaborated in reports by Mariana Mazzucato (2018 & 2019), these missions are conceived as 'a portfolio of actions across disciplines intended to achieve a bold and inspirational and measurable goal within a set timeframe, with impact for society and policy making as well as relevance for a significant part of the European population and wide range of European citizens'.²⁷ Flanders supports this mission-oriented approach with its inherent long term, strategic vision and directionality, including a whole-of-government portfolio driven approach and with a focus on impact on key challenges for EU citizens.

In September 2021 five domains were selected in which missions would be implemented. However, the current implementation of the missions is, generally not perceived as successful yet. Several criticisms of the missions were formulated: (i) being exclusively focused on Horizon Europe instead of taking a more holistic approach²⁸; (ii) adding to the already high complexity of Horizon Europe (e.g. again adding a new and separate work programme); (iii) following an unclear portfolio approach; (iv) having too low submission numbers suggesting that the missions were not attractive for applicants; (v) focussing on topics with a too high TRL level; (vi) impossibility to independently monitor and/or demonstrate the actual goal or achievement; and finally (vii) unclear citizen or member state buy-in. In some cases the missions were even reported to hinder scientific research as calls in e.g. the mission on Cancer to set up infrastructure (Uncan.eu) led to cancer research almost being excluded from the regular Cluster 1 'Health' work programme. Hence

²⁵ See for example [Translating research into innovation: Lessons from 3 case studies in health partnerships](#). March 2023.

²⁶ <https://eithealth.eu/news-article/eit-health-and-ihl-unite-to-drive-healthcare-innovation/>

²⁷ DG RTD (2021). [Horizon Europe. The EU Research & Innovation Programme 2021-2027](#).

For the Lamy report, see: DG RTD (2017) [LAB-FAB-APP. Investing in the European Future we want: report of the independent High Level Group on maximizing the impact of EU research & innovation programmes](#), p. 15. For the reports of Mariana Mazzucato see DG RTD (2019) [Governing Missions in the European Union](#) and DG RTD (2018). [Mission-oriented research & innovation in the European Union. A problem-solving approach to fuel innovation-led growth](#).

²⁸ Flanders fully supports the position that FP money should be spent exclusively on R&I activities.

a gap in cancer research for the first years of Horizon Europe might occur. Even if the missions, due to the current budgetary constraint²⁹, most probably will fail to meet their initial goals, a significant improvement, properly monitored and demonstrated, of the operationalisation of the missions on the EU-level is a prerequisite to lift the budgetary cap of 10% of the Pillar 2 budget. Additional operational complexity is also the remit of the Member States, but it takes time to re-orient national/regional R&I systems to mission oriented R&I policies. A deepened interaction/cooperation on missions with national/regional public administrations is required to turn EU missions into a success story.

As the missions are novel their implementation is still experimental. In line with the spirit of the missions where ‘failure should be allowed’³⁰, Flanders continues to support the concept of missions but asks for a reorientation. The recommendations included in the recent communication of the Commission on missions offer a good starting point.³¹

Flanders suggests to re-orient the missions in the spirit of a holistic and coordinated planning process to exploit fully the possibilities of the European funding ecosystem (see section 4). In line with the ambitious and measurable goals of a mission, an operational (retro)plan should be established covering all necessary steps needed to achieve the goal, which in practice needs to be translated into calls of all relevant EU programmes. As such, Flanders considers the missions essentially not to be a *new instrument*, but rather as a coordinated planning process and tool able to exploit the full range of existing relevant EU programmes and instruments, also beyond FP10. As a technical example, a coordinated plan for AI links up actions in the infrastructural domain (funded by the Connecting Europe Facility – Digital and the RI part of Horizon Europe), uses R&I-results (funded by Horizon Europe) to digitise the European industry (Digital Europe) and to re- and upskill the European labour force (Digital Europe, EIT-KICs). IPCEIs could be the logical ‘complements’ in the industry landscape of Horizon Europe R&I partnerships. In addition, promising R&I-results are valorised by creating spin-offs and spin-outs (EIC and EIT). Also non funding instruments such the Single Market Programme, that, a.o., sets standards, could be used in a mission oriented approach that combines funding and non-funding instruments. Additional instruments governed by the member states, regional governments or industry could also be aligned to reinforce the mission approach nationally and/or regionally. National/regional mission projects could be of a more limited scale and duration, but have the potential to quicker mobilise and connect citizens. In addition, this coordinated planning process allows to build up experience on how to mobilise all (relevant) components of the EU funding ecosystem.

Where the selection of mission domains should be determined in the FP10 strategic plan (cf. section 3.4), Flanders suggests that the ERA Forum, containing all relevant actors (the Commission, Member States and EU stakeholders) could be well placed to give input to such a mission plan as described above in the context of an ERA action (cf. section 4.4). After a mission domain has been determined, a (thematic) ERA action related to that mission domain should be set up as a means to involve all participants in the Forum in codesigning and engaging in EU missions. Moreover, it would allow for feedback from stakeholders to the European Commission to determine the mission implementation by translating it into different work programmes. Although the final

²⁹ Capped at 10% of pillar 2 of Horizon Europe, regulation art 8.3.

³⁰ DG RTD, LAB-FAB-APP, p. 16

³¹ COM(2023) 457 final

responsibility lies in the hands of the European Commission following the comitology rules, this procedure could enhance the relevance as well as increase the (political) support of the missions by Member States and stakeholders.

The role of the Member States (and their regions) to involve their Civil Society Organisations (CSO) and citizens is crucial for the definition and local uptake of the EU missions, and hence their overall impact, and complements the Commission's efforts to reach as much relevant CSOs as possible in the entire European Union. (cf. section 1.4).

As missions require more elaboration in their set up combined with ambitious and visible goals, strong governance and accountability including (intermediary) monitoring is needed to ensure that the missions remain on the right track. For this, the overall coordination of the missions should remain at DG RTD. In a structural and structured dialogue with the lead-unit of the EU (funding) instruments involved, an executive mission governance board should be able to plan calls in detail in all relevant EU programmes. Such calls would be labelled as 'missions calls' in the various work programmes to indicate to applicants that these calls are part of an EU mission (implying a.o. portfolio management). To keep the overview as well as for communication purposes, a separate work programme on missions bundling all calls in all instruments could be composed.³² To avoid additional complexity all mission topics follow the established evaluation procedure of the funding instrument in which they are programmed (except for the portfolio approach). In the evaluation summary report, next to the 'regular' evaluation comments, a section on how the project did or did not fit the portfolio would be essential to include, maintaining high evaluation standards, most of all transparency. It implies that the mission experts subgroups, currently under the Horizon Europe strategic committee, are no longer needed as the thematic PCs become responsible for the mission flagged calls in FP10 (cf. also section 4.4).

As long term planning makes the missions by their very nature vulnerable to external changes, missions need to remain as stable as possible, yet as flexible as necessary. This may include discontinuing what is no longer relevant (consistent with portfolio management). Where individual projects are to be measured according to the evaluation procedures of the instrument which they are subject to, a mission as a whole requires new procedures to assess the additionality of its systemic dimension.

In this model, a mission would as such not need its own budget³³, but would be able to mobilise funding from existing EU programmes. In case of FP10, funding should only come from Pillar 2 given its top-down agenda and impact-directed approach. Pillar 1 and 3 projects can be linked to the missions, but only post hoc (e.g., by labelling them in a mission progress report).³⁴ The more inspirational a mission is, the more resonance it could have in bottom-up channels at the initiative of the applicant.

Caution must be made that, similar to partnerships, missions are not a 'silver bullet' and are only to be set up for those challenges where a mission approach could offer additional impact beyond

³² This separate document would not be a formal mission work programme, but mainly serve to give an overview.

³³ Except for a budget for the coordination of the missions by DG RTD.

³⁴ See for example '[HORIZON-MSCA-2023-FTP-01-01: MSCA Feedback to Policy 2023](#)': Coordinated monitoring and exploitation of the contribution of Horizon 2020 and Horizon Europe MSCA projects to the EU Missions' (Work Programme MSCA 2023-2024, p. 7, 55, 59)

the existing regular instruments (cf. also section 1.6). The regular work programmes of FP10 should remain the main part of the programme. In order not to dilute efforts, limiting the number of missions is appropriate. Flanders also suggests not to start additional missions on top of the existing ones. Similar to HEU partnerships, a mission at a point in time should have accomplished its goals, and as a consequence be discontinued. Therefore, each mission must have clear specifications on its targets and outcomes and on the way the mission will end its activities (cf. 'sunset clause', including knowledge transfer).

As a sidenote, the missions could offer additional benefits to science communication as well (cf. section 1.4). Currently the focus of science communication in general often lies on the (positive) *results* of scientific research, implying almost by definition a success story. However, science is by definition unsure and scientific results or breakthroughs do not always occur as 'planned'. The current concept of R&I missions might offer an opportunity to better communicate about science and innovation as a *process*. When planning long-term missions, establishing a path of needed actions (projects) to reach the long term strategic goals, it allows a more longitudinal view on scientific work. This includes the potential redirections needed based on unexpected or lack of results, the need to shift the design due to external changes to give a more realistic view of science as a non-linear process.

3.5 Towards a refined concept of widening

Flanders acknowledges the undesirable reality of a geographical divide amongst European Member States in terms of R&I performance. In order to help reducing this divide, and although ESIF is the main Cohesion Policy instrument to help close the R&I gap, Flanders principally supports the widening measures as an inherent part of the Framework Programme as long as these measures are limited in time. Countries are expected to grow in their R&I performing capacity. Some countries have indeed succeeded in greatly increasing their R&I capacity. Additionally, a shift in geography has also been manifesting itself lately more towards the South of Europe with new countries becoming eligible as a less R&I performing country.³⁵ As the widening measures of the Framework Programme are essentially aimed to become superfluous when a country achieves a certain level of R&I excellence, a thorough evaluation of these measures in the current and previous Framework Programmes would be valuable to determine what worked (or not).³⁶ These insights and recommendations would form a solid basis for emphasising only the most effective measures in FP10.

Flanders suggests to investigate the possibility of a more regionalised approach towards widening.³⁷ While some institutes and regions indeed succeeded to increase their R&I performance and became 'pockets of excellence', they nonetheless remain considered as widening institutes as long as the entire country qualifies as a less R&I performing country. These excellent institutes

³⁵ Borunsky, L., Martino, R. & Surgeon, M. (2020). [Inclusiveness and R&I](#). Policy Brief. DG RTD.

³⁶ [Spreading Excellence and Widening Participation. Impact Report. H2020 Results and Outlook to Horizon Europe](#). European Research Executive Agency, 2021.

³⁷ European Commission, Directorate-General for Research and Innovation, [Science, research and innovation performance of the EU 2022: building a sustainable future in uncertain times](#), Publications Office of the European Union, 2022. (p. 15)

and regions can easily become preferential partners for actors in non-widening countries. This may lead to a 'Mathew-effect' where a small number of regions (or even institutes) in a less R&I performing country is able to benefit disproportionately from widening measures, possibly also at the detriment of other regions in that country. Flanders suggests to investigate the possibility of allocating widening funding based on additional regional parameters instead of national parameters only in order to have (more) widening measures reach those regions that need them most.

In order to have structural effects, the Horizon widening measures need to be complemented with the necessary investments at the Member State level (cf. also section 1.1).³⁸ For example, investing in co-funded partnerships (e.g., with ESIF money) means that researchers have their own national budgets in international and collaborative R&I projects that would already provide an opportunity for real capacity building.

3.6 International collaboration is essential, but tread with care

Flanders strongly supports the notion of being open to the world for international R&I collaboration. To truly tackle the global challenges that Europe faces, global scientific collaboration is essential. Cooperating internationally also offers a benchmark to maintain the highest possible quality and relevance of R&I. Though strengthening key domains is important for Europe to achieve more open strategic autonomy, falling into the autonomy trap³⁹ must be avoided. In light of the recent (geopolitical) evolutions, Flanders stresses the importance of basing international collaboration on the values and directions as set out in the Communication by the European Commission on the Global Approach to Research and Innovation.⁴⁰

As part of evidence informed policy making, foresight exercises should be used to help determine potentially critical areas where the EU should increase its autonomy. FP10 could fund such foresight exercises. It thereby not only advances the state of the art of foresight methods, but 'mainstreams' its application in studies on specific topics as well (cf. also section 3.7). Results of such exercises could be fed into the strategic plan and/or work programmes.

Flanders supports the notion of being 'as open as possible and as closed as necessary', while acknowledging that finding a good balance between open and restricted international R&I collaboration is not easy. Efforts are needed to increase the awareness of applicants to the potential risks in international collaboration, without the intent to deter but rather to derisk opportunities on international cooperation. The necessary granularity (between potentially sensitive research domains, topics, institutes, ...) needs to be taken into account for when assessing the risks of international cooperation. It should always be very clear for applicants with which (third) countries collaboration is possible under which specific conditions. The application of art. 22(5) and 22(6) of the HEU regulation should be carried over to FP10 (but should be used

³⁸ Borunsky, L., Martino, R. & Surgeon, M. (2020). Inclusiveness and R&I. Policy Brief. DG RTD, p. 9. OECD: science, technology and innovation outlook.; EC industrial scoreboard.

³⁹ I.e. A country that is completely isolating and denying itself access to the state of the art expertise and technology and consequently losing R&I capacity and competitiveness.

⁴⁰ COM(2021) 252 final.

with restraint). A general additional declaration on knowledge security (with a reference to a policy document concerning knowledge security that is publicly available on the website of the consortium partners⁴¹) by each consortium partner could be added to the A-forms of collaborative proposals to explicitly ask attention for this issue.

Flanders suggests to allow a partial association or the establishment of joint roadmaps (only applicable to Pillar 2) of all interested third countries. The association procedure should be as light and proactive as possible to avoid delays, but attention needs to be paid to knowledge security and values such as reciprocity, openness, level playing field etc. that are more or less shared by what are called like-minded countries. The EU could also proactively look for a brain gain strategy and collaborate strategically with third countries in domains where the EU is lagging behind.⁴²

3.7 Improved inclusion of the societal dimensions of R&I

Technology does not operate in a void but is always part of a larger sociotechnical system or context (cf. also section 1.3). It impacts on society as a whole as well as on individual citizens. Conversely, individual citizens and societal institutions shape the way potential solutions will be taken up and used in real life.

In terms of Horizon Europe, this holds mostly true for Pillar 2, but also 'deep tech' projects of Pillar 3 or ERC or MSCA projects of Pillar 1 should take this dimension into account where relevant. Adopting a mere technological perspective on these activities is not adequate. Studying the societal context raises questions such as: are citizens (and which groups of citizens?) willing to change their current behaviour, embrace new (technological) solutions and apply them in the foreseen way (and why not)? Can they provide alternative solutions? How can (groups in) society be stimulated to change behaviour? Is society ready for novel solutions, which do not only have to be technological? How can society be protected against negative side-effects? Which groups risk exclusion? And so forth.

From the above (and also section 1.3) follows that Arts, Social Sciences and Humanities (ASSH) can make an important contribution by its focus on societal aspects in multidisciplinary projects. ASSH should not be serving as a mere 'add-on' to a STEM project or an additive to technologically oriented research. Instead, ASSH should be included 'by design' in any technology oriented project to incorporate relevant behavioural, social, cultural, economical, ... aspects, which will help identify challenges and maximise the potential for societal acceptance and uptake of the innovation. In this respect, a more deliberate or thoughtful inclusion of ASSH research in the *wording* of the topics in the work programmes is needed to better capture these societal dimensions of the research and its impact.

In practice it means that resorting to mere 'flagging' or indicating that ASSH is a 'cross-cutting-issue' does not always allow for ASSH research inclusion as the topic text is often not clear what

⁴¹ It is most efficient to have the LEAR include the policy document in the participant profile.

⁴² Not necessarily with likeminded countries only, but only if no likeminded country exist with an equivalent R&I profile.

is to be specifically expected.⁴³ It often leads to artificial or symbolic integration of ASSH research expertise in a consortium and does not contribute to improved mutual understanding between the different disciplines. Adding a mere ‘container clause’ in the call text asking in general terms for the ‘effective contribution of social sciences and humanities’ still leaves the question open on what exactly is to be expected.⁴⁴ Insufficient knowledge of what ASSH research actually is in e.g. STEM or Health domains hinders work programme development and project collaboration. ASSH is not a monolithic block but a combination of social sciences and the humanities, which are further subdivided into various other research areas.

Consequently, when drafting work programmes, or when evaluating proposals and projects, experts from different ASSH domains are required, already at an early stage when defining a call⁴⁵. Applicants and evaluators need to fully understand what is meant or expected in order to ensure a robust evaluation of projects, a fruitful collaboration in projects, and eventually a better uptake of innovation and novel solutions, technological or not. But by no means the added value of ASSH is limited to studying the societal context in function of larger (technology) projects or to providing the theoretical groundworks for policy oriented projects. The inherent value of ASSH lies in providing insights and foresights of societal evolutions, aiming for social innovation and transformation, and for tackling global challenges. Flanders considers investigating a more societal focus in topics by means of a ‘societal readiness levels.’ Currently, technology readiness levels (TRL) are used as a maturity scale to describe the stages from a basic technology idea to product in the market. Specifically for projects with clear societal goals, the introduction of societal readiness levels (SRL) that mimic the structure of the TRLs, constitutes a complementary instrument that helps assessing the level of development (maturity) of societal ideas from conception to adoption by society.⁴⁶ The SRL scale follows the same logic as the TRL scale. Both scales can be used in combination to account for a better consideration of societal aspects in FP10. We refer to section 4.2 for an even more comprehensive framework with several dimensions with maturity level scales.

To be clear, SRLs should not be confused with the notion of societal readiness assessment (SRA)⁴⁷. The Commission wants to experiment in the Horizon Europe with pilots introducing the SRA⁴⁸. It is seen as a required part of a project proposal, completely oriented towards the notion of Responsible Research & Innovation (RRI) as a process and defined by four dimensions (inclusion,

⁴³ A [BRIDGE2HE paper](#) that aimed at highlighting SSH-friendly topics outside Cluster 2 e.g., explicitly referred to some *SSH-flagged topics* as having ‘minor relevance’ for SSH (p. 18).

⁴⁴ Example of the use of a container clause in topics: “This topic requires the effective contribution of social sciences and humanities (SSH) disciplines and the involvement of SSH experts, institutions as well as the inclusion of relevant SSH expertise, in order to produce meaningful and significant effects enhancing the societal impact of the related research activities.” However, if the concept of SSH as such is unclear (in STEM or Health domains) or its added value is not clear, this will most likely not inspire fruitful collaboration.

⁴⁵ Early stage input to work programmes is to be done through the regular EU consultation channels or according to the regular SRIAs drafting procedures.

⁴⁶ This idea originally stems from Innovation Fund Denmark:
https://innovationsfonden.dk/sites/default/files/2018-08/societal_readiness_levels_-_srl.pdf

⁴⁷ Based on <https://decarbon8.org.uk/social-acceptance-and-societal-readiness-levels/> and <https://newhorizon.eu/societal-readiness-level-thinking-tool/>

⁴⁸ Starting with cluster 5 and the cities mission.

anticipation, reflection, responsiveness)⁴⁹: For reasons of coherence and consistency, SRLs should follow the same logic and structure of TRLs, while the SRA proposal of the Commission should be renamed to e.g. 'RRI compliance' or 'RRI readiness'. An RRI compliance assessment has value on its own as it operationalises how a project should reflect on and incorporate RRI supporting activities as well as work towards 'RRI proof' outcomes.⁵⁰ But an 'RRI-proof' project gives no indication at all of how thoroughly (maturity level) the project results were tested in a societal context.⁵¹

⁴⁹ Guidance for applicants - Societal Readiness (SR) assessment Cluster 5 – Work Programme 2025 (draft note given to HEU cluster 5 PC – update of June 2023) & Societal Readiness Integration in Horizon Europe Cluster 5 Concept Paper (update June 2023)

⁵⁰ For larger projects, such as the EU partnerships, RRI compliance assessment would be an appropriate separate task or work package, but would add an important extra burden on smaller scale projects (unless improving the RRI compliance is the entire project).

⁵¹ Which is even explicitly mentioned in the concept paper: “Social acceptability is not the aim – although it may sometimes be a consequence -- of the kind of inclusive, deliberative, anticipatory, and responsive processes advanced by RRI”

4 Challenges beyond FP10: more synergies based on coordination

In order to maximize the potential impact of R&I on industrial competitiveness and society and ultimately the lives of EU citizens, not only the internal cohesion of FP10 (see section 2) needs to be strengthened, but also the external cohesion by means of synergies between other relevant European funding/financial programmes. To that end, it is important to design a coherent ecosystem of relevant EU programmes with potential bridges from one programme to another (section 4.1). A multidimensional framework can be a useful auxiliary descriptive tool to obtain a better overview (map) of synergetic opportunities in the programmes' ecosystem (section 4.2). A birds' eye view on the EU programme ecosystem helps to draft more coordinated policy plans that make use of potential for synergies of the EU programmes ecosystem (section 4.3). Results of projects can achieve more impact if these can find appropriate paths (synergies) through the EU funding landscape. Missions can be considered as a special case of coordinated plans whereby a path through the EU programmes landscape has been defined from the very beginning (representing the idea of directionality). The ERA Forum, including stakeholder organisations, might be a good platform to draft these coordination efforts (section 4.4).

Flanders encourages the Commission to keep investing in the complementarity between the relevant EU programmes to reduce fragmentation or unnecessary duplication to produce greater effects and obtain more EU added value from existing budgets compared to individual interventions.

4.1 Establishing a synergetic ecosystem of EU funding⁵² programmes

Already in the Horizon 2020 programme the notion of synergies was important. Horizon Europe paid even more attention to stimulating synergies. However, these are still largely operationalised in terms of synergies with the European Structural and Investment Funds, i.e. dedicating structural funding to actions and activities of the Horizon programme. This view on synergies, which is certainly worthwhile and should be continued, is nevertheless too limitative as there exist many other important EU programmes to be considered in this respect. Flanders therefore urges the Commission to move beyond the Structural Funds and develop a more holistic view on the European funding landscape.⁵³

In the current MFF, some existing EU programmes having a (partial) innovation focus received more budget or new relevant funding programmes were set up that also covered domains which are thematically related to FP10. This calls for more urgency to align these programmes as soon

⁵² With the term 'funding programme' or 'funding ecosystem', we also refer to the financial instruments or programmes.

⁵³ European Court of Auditors (2023). [Special report Synergies between Horizon 2020 and European Structural and Investment Funds. Not yet used to full potential.](#)
Commission Notice, [Synergies between Horizon Europe and ERDF programmes](#) (2022/C 421/03)

as possible and mobilise these funds as strategically and coherently as possible, especially in the context of the Missions approach.

E.g., as a result of the priorities on digitalisation the **Digital Europe Programme** (DG CONNECT) was established. The thematic scope of the programme includes e.g. cybersecurity, climate mainstreaming as well as digitalisation in the health sector. The thematic scope of the **EU4HEALTH** programme (DG SANTE) includes not only Health, but also digitalisation. As a result of growing international (geopolitical) tensions and competition, also R&I related to defence and security have become an European priority. The **European Defence Fund (2021-2027)** (DG DEFIS) supports research topics such as detectors, radars, sensors, AI, cybersecurity, materials, health, human language technologies, Other programmes (e.g. Erasmus+, LIFE, ...) from other DGs (such as DJ JUST, DG EMPLOY, ...) could be mentioned as well. In line with the Annex 4 of the Regulation of Horizon Europe that lists relevant 'other union programmes', Flanders asks the European Commission to continue investigating these possibilities to create more synergies.

Being able to create synergies with other EU funding programmes enhances the possibility to develop more holistic and coordinated plans encompassing different programmes covering all phases of the innovation process from research to validation or implementation. This could enable downstream synergies where research results from for example Cluster 1 'Health' or Cluster 4 'Digital, Industry and Space' from Horizon Europe could be picked up and further developed through the Digital Europe Programme or EU4HEALTH, which would already help reducing the innovation gap. However, investments in capacity or infrastructure from those implementation oriented programmes could also enable upstream synergies creating further or even new research options in Horizon Europe (e.g. by means of (co-) investment in innovation infrastructures (cf. section 2.4). Options towards combined funding should be made possible. However, all calls remain open and competitive. Flanders realizes that this will lead to a more elaborate planning process, but considers it worth the effort (cf. section 3.4). Also, having a tested holistic funding ecosystem in place with sufficient agility and flexibility would also increase Europe's preparedness and resilience in times of crisis.

From that perspective, more effort is needed to operationalise potential synergies between the FP and other EU programmes. Applicants as well as NCPs have a hard time detecting possible bridges between the various EU programmes, and even a much harder time to find out how bridging can be done in practice. Difficulties in finding opportunities and navigate the EU programmes' landscape is cited as a major hurdle hindering synergies.⁵⁴

In order to make synergies practically possible there is a need for a structural dialogue both at the strategic as well as the operational level between the involved EU bodies, Member States and stakeholders to detect at an early stage the possibilities of planning and timing of calls. Agreements on governance need to be made regarding alignment of rules, regulations, responsibility and monitoring of calls.⁵⁵ From an applicant's perspective, emphasis should be put on how to practically combine different programmes.

⁵⁴ Synopsis report: Looking into the R&I future priorities 2025-2027, (2023), p. 32

⁵⁵ The [report of the European Court of Auditors on Synergies](#) might already be very valuable here.

All European funding/financial programmes⁵⁶ are to be positioned vis-à-vis one another as interacting components of a comprehensive support ecosystem based on their fundamental characteristics and aim(s) in function of their relevance for FP10. In some cases, it can be seemingly straightforward: e.g., Horizon Europe subsidises R&I while Digital Europe subsidises the roll-out (of the results of the digital aspects of Horizon). Invest-EU provides loans to set up new companies and/or commercialise promising R&I technologies. Some overlap cannot be avoided but should be limited to a minimum, both on programme and on project level.

A description of the EU support ecosystem could lead to a better overview on synergies and bridges/interfaces between the various EU programmes. It becomes more natural to recalibrate EU programmes to address complementarities and synergies and avoid unnecessary duplication. Instead, bridgeheads towards other EU programmes should be built. A good example of such bridge is the Research Infrastructure part of HEU pillar 1 that paves the way with its preparatory actions for subsequent construction and exploitation efforts coordinated by the ESFRI initiative. An example of potential overlap on the other hand is the EIC that a.o. offers funding and loans to start-ups/spin-offs and the EU Invest programme that through its EIF also provides financial support (loans, equity) to companies; Similarly, EIT a.o. gives advice to start-ups/spin-offs, which is also taken care of by the InvestEU Advisory Hub.

In a similar way, a potential risk on duplication might occur with the EU partnerships as these function as an encompassing 'chain' of R&I activities specialised in a specific thematic area. Stimulating ecosystems, testing and deployment activities, (up/re)skilling initiatives, which are activities that might be part of the overall SRIA of a partnership⁵⁷ are also goals of other large scale EU programmes (such as Digital Europe for ICT related issues and the EIT skills initiative). Care must be taken to avoid fragmentation and reduce unnecessary duplication and overhead.

It remains important to respect the central mission, vision and principles of each individual programme. In that regard, FP10 should remain the central programme for R&I and keep true to its rationale and principles.⁵⁸

4.2 Mapping the EU funding ecosystem in multiple dimensions

In order to address the challenge of synergies as described above, a dedicated document or interactive tool outlining the practical guidelines to establishing synergies in practice would be welcomed. Calls which are set up in the context of synergies need to be flagged as such in the different work programmes. Each EU funding programme should provide sufficient information for the applicant on potential follow-up funding. Also NCPs should be able to offer advice on potential follow-up funding. A multidimensional framework that draws the map of the EU support landscape looks like a useful tool. Next to aspects related to the specific content and aims of each EU funding programme, an additional set of general descriptive dimensions that can be applied to all programmes can be helpful.

⁵⁶ At least (starting with) the ones mentioned in annex IV of the Horizon Europe Regulation.

⁵⁷ This applies in lesser manner to co-funded partnerships.

⁵⁸ E.g. article 7,1 of the Regulation of Horizon Europe to focus on civil application

Although there might be other, similar frameworks available⁵⁹, the KTH Innovation Readiness Level™ (IRL) framework⁶⁰ is used here as an **example to illustrate the rationale**⁶¹. (see Figure 1⁶²). We don't want to particularly promote this specific framework but rather sketch its general approach and underlying principles. In essence, the purpose of the KTH IRL™ framework is to describe and guide the transition of an idea from its very initial

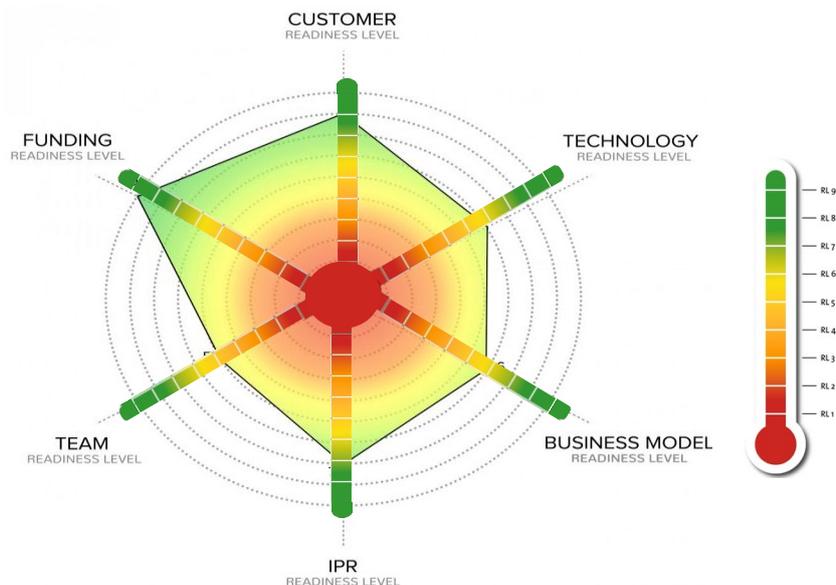


Figure 1: the six IRLs dimensions of KTH Innovation as a spider diagram

research status in the lab towards a final product, process or service available in the market using a multidimensional maturity level scale. At the various stages of its life cycle, various types of support, knowledge and expertise are needed, captured by the different dimensions. Similarly, different EU funding programmes⁶³ come to the front that focus on different aspects corresponding to these various lifecycle stages. Each programme can be described as a combination of different dimensions (in the case of the KTH IRLs, each of the six dimensions has its own definition of the nine readiness levels based on a similar logic differentiating the levels that is applied to all dimensions). A drawback of the current KTH IRLs is its focus on technology transfer and market take-up, without consideration of societal aspects. On the other hand, it is not that difficult to add a societal readiness dimension (cf. section 3.7) to it and follow the internal logic of the model when specifying the various societal levels.⁶⁴

It would thus be possible to design a trajectory from inception to final result through the available EU funding programmes. Also within the major programmes, c.q. FP10, the various pillars, or even parts of pillars, could be characterised using the concept of IRL framework. This could be of interest not only for the proposal submitters but also for EU officials, NCPs or advisors within their own organisation. E.g., Commission Services could inform consortia with promising results about opportunities to submit to other EU funding programmes as well (cf. section 4.3). Also, cumulative or consecutive funding could become easier to find as RPOs might “modularise” their

⁵⁹ Another four dimensional framework is described by Bruno et al. (2020): https://ec.europa.eu/isa2/sites/isa/files/technology_readiness_revisited_-_icegov2020.pdf

⁶⁰ <https://kthinnovationreadinesslevel.com/>

⁶¹

⁶² Adapted from <https://kthinnovationreadinesslevel.com/>

⁶³ Figure 20 identifies 21 other EU programmes that are relevant for Horizon Europe (Synopsis report: Looking into the R&I future priorities 2025-2027, (2023), p.33

⁶⁴ The model could be extended by even more dimensions if needed., e.g., an RRI readiness level (cf. section 3.7). In fact, any dimension relevant for EU programmes could be combined into this (or an alternative) model, as long as the same logic behind the different levels of the dimensions is used.

R&I activities into submissions to different EU funding programmes. As an example we refer to the case described in the previous section.

4.3 A coordinating birds-eye overview on the support ecosystem

Coordinated policy plans at the EU level are instrumental to tighten the linkages between the various EU programmes and should offer a canvas to select promising project results to inform the consortia of these projects of existing relevant opportunities in other relevant EU programmes. An example is the EU Coordinated policy plan on AI. The parts of the plan are implemented through the work plans (and strategic plan where available) of various programmes of the EU funding ecosystem. The main ones are Horizon Europe (including the co-programmed AI & Robotics partnership) and Digital Europe. Also the Connecting Europe Facility – Digital and the EIT Academy support elements of the coordinated AI policy plan. At the level of partnerships, the EuroHPC Joint Undertaking can be referred to as its strategic roadmap combines parts of Horizon and Digital Europe. Drafting coordinated plans is a resource intensive activity, and therefore cannot be generalised over all possible topics. Depending on the level of ambition and/or political priorities, the Commission is to judge whether or not a coordinated plan will be worth the effort.

Coordinated policy plans however must be complemented with practical guidelines of how the various EU programmes can be combined (sequentially or even in parallel⁶⁵) by projects in real life. Similar to the issues currently with synergies (cf. section 4.1), a lack of clarity on the possibilities for sequential funding and rules to benefit from multiple programmes is a serious barrier prohibiting potential linkages between different EU programmes.⁶⁶

A successful implementation of synergies and improvements as mentioned above requires intensive coordination processes and experts who have excellent birds-eye views on relevant projects in the various EU programmes. For the EU missions, specific mission managers have been appointed with that purpose in mind. Usually, mixed teams with members from different DGs overlook topics cutting across different EU programmes. Given the division of labour between the various Commission DGs and executive agencies, obtaining overviews of interesting project results looks already quite difficult for Horizon Europe and FP10, let alone if multiple EU programmes are concerned. Nevertheless, project officers of the executive agencies should be able to flag relevant project results to members of the concerned DG unit(s) who should be able to liaise with colleagues in other DGs who manage other EU programmes. When relevant these projects could be informed of opportunities for follow-up funding in other EU programmes.⁶⁷ However, this form of ‘information’ can by no means lead to a guarantee or promise on funding to the same consortium.⁶⁸ Every proposal has to comply with the criteria of the EU programme concerned and successfully pass the evaluation process.

⁶⁵ Of course, the same activities can only be funded once irrespective of the programme(s) at hand.

⁶⁶ Synopsis report: Looking into the R&I future priorities 2025-2027, (2023), p.32

⁶⁷ Taking the EIC Transition Open as an example (but without “guidance”): a list of potentially eligible projects is published based before the cut-off date as preceding funding from the EIC Pathfinder, ERC Proof of Concept, and EDF is a requirement..

⁶⁸ The composition of consortia may change as a consequence of the characteristics of the targeted programme– cf. the KTH IRL team readiness level..

A potential good example of how navigating through the EU funding programmes ecosystem could benefit from the method described above are the EU missions (cf. also section 3.4). As the latest assessment exercise of the EU missions explicitly mentions the suboptimal synergies with other EU instruments⁶⁹, the need to leverage other sources of funding (notably via the EIB)⁷⁰, the mission managers could explicitly plan on beforehand (directionality) the path that mission results should be able to follow through the EU funding programmes ecosystem. A mission manager should identify more easily which (parts of) EU programmes are the relevant and appropriate ones to manage the portfolio of projects in his/her care and inform them appropriately to additional, non-FP10 funding opportunities. R&I performers and mission NCPs could have a better understanding on the intermediary steps to take with an eye on the long term goals of a mission.

It has been suggested by the Commission⁷¹ to link EU missions and HEU partnerships more closely, in particular to engage industry. The various HEU partnerships indeed cover quite some “ground” addressed by the EU missions, and hence are good candidates to do part of the work for an EU mission. Conversely, updates of a SR(II)A of a partnership might be inspired by the plans of an EU mission. As stated above, missions can be seen as preconceived pathways through the EU programmes landscape so that results provided by a partnership in function of a mission can follow the mission plan to achieve the goals of that mission (impact pathway). At the same time, this increases the overall valorisation opportunities for the partnership.

As final, and more general, note to this section, it is to be acknowledged that more coordination for impactful synergies requires dedicated staff that can free up sufficient time to acquire the necessary overviews and insights. EU executing agencies should be able to make more in-depth content analyses while DG policy units should be able to plan more ahead in terms of coordinated plans and roadmaps. The former should feed into the latter, and the latter should be a reference for the former.⁷² In times when budgets and staff are constantly under pressure, this is not an evident message. Nevertheless, as R&I has become an important instrument in the geopolitics toolbox, R&I administrations and policy makers have to become strong enough to help tilting the global level playing field towards the desired direction, such as the green and digital transition or an inclusive and caring society, also embodied in a.o. international technology standards and supporting societal (democratic) values. At the national level, it implies that (national) support structures should acquire a broader overview⁷³ of all relevant related EU funding programmes while avoiding a too exclusive focus on one specific programme. This points towards more whole-of-government approaches, which is yet another coordination challenge for many MS/ACs (and required in the context of the EU missions).

⁶⁹ EU Missions two years on: assessment of progress and way forward, COM (2023) 457, p.8

⁷⁰ Ibidem, p. 15 and p.10 (mention of EIB)

⁷¹ Ibidem, p.10

⁷² Reports such as “BRIDGE – Cooperation between Horizon 2020 and Horizon Europe Projects in the fields of Smart Grid, Energy Storage, Islands, and Digitalisation 2023 Brochure, (2023)” report offer a good basis for deeper analyses.

⁷³ For that purpose Flanders has created a specific website : <https://eufundingoverview.be/>

4.4 The ERA Forum as an advisory platform for European R&I coordination

Ambitious coordinated plans spanning several EU programmes can be drafted by a team of relevant EU DGs in co-creation mode with Member States representatives and stakeholder organisations who can support potential alignment of national activities with European ones. These coordinated plans address the policy level. Strategic plans, such as the one of Horizon Europe, are made up of a combination of parts of policy goals of different coordinated plans that are translated into more operational goals of a specific EU programme with its specificities.⁷⁴ Drafting and approving strategic plans and work programmes have to comply with the comitology rules.

Other, smaller scaled, coordinated policy actions (such as thematic ERA actions) rooted within the R&I policy domain (but also reaching out to other policy domains) could be drafted by (subgroups of) the ERA Forum.⁷⁵ The ERA Forum combines input from the Commission Units, Member States, Associated Countries and European associations representing different types of stakeholders in a co-creation spirit. The revamp of the SET plan can be cited as a pertinent example of coordinating R&I and beyond activities under the umbrella of the ERA Forum. At the same time, it points to the importance of better involving a diverse range of stakeholder (e.g. including policy makers, civil society, ...) from non R&I policy domains.

From a legal perspective the ERA Forum is a formal expert group of the Commission that advises the Commission in its work, c.q. drafting proposals for coordinated policy actions. These draft texts are to be submitted as proposals for Conclusions or Recommendations to the Council after a political discussion in the Research Working Party in order to make sure that all Member States are involved at the political level.

The ERA Forum could also serve (as both are Commission expert groups) as programme committee for the FP10 work programme part that contains the ERA supporting/strengthening (and widening) activities. Quite some ERA activities defined under the ERA Forum umbrella are directly supported by the framework programme (e.g., as calls for CSAs, procurement calls) or have some form of complementary activities funded by the framework programme (e.g., calls for open access/science related activities, the activities of the Policy Support Facility, awards, contests, ...).

⁷⁴ Strategic plans can also contain elements that don't appear in any coordinated plan, but are relevant to the programme at hand.

⁷⁵ As it currently already is the case for thematic actions of the ERA Policy Plan.

Annex

This reflection paper prepared by the Flemish department of Economy, Science and Innovation (EWI) is the result of the joint effort of many individuals whom we would like to thank for their effort and involvement. In particular, our EWI members and the members of the working group 12 of the EWI stakeholder platform on international policy (see also <https://www.ewi-vlaanderen.be/en/flemish-stakeholder-platform-european-programmes>).

This stakeholder platform brings together civil servants from the relevant Flemish governmental departments and agencies as well as representatives from all types of stakeholders (academia, industry, civil society) and official advisory boards to discuss issues related to international science and innovation policy with a focus on European issues.

However, their individual contributions and involvement do not necessarily imply their (or their organisation's) consent on the entire position paper, precluding them (and their organisation) from expressing divergent opinions in other papers or at other occasions.

The list of participating stakeholder organisations (WG12) is as follows:

KU Leuven, Ghent University (UGent), Vrije Universiteit Brussel (VUB), University of Antwerp (UAntwerpen), Hasselt University (UHasselt), The Flemish Innovation and Enterprise Agency (VLAIO), Research Foundation Flanders (FWO), The Flemish Advisory Council for Innovation & Enterprise (VARIO), Liaison Agency Flanders-Europe (vleva), NCP Flanders, University College Vives (Viveshogeschool), University College Karel de Grote (Karel de Grote Hogeschool), University College Ghent (HoGent), PXL University College (PXL Hogeschool), Artevelde University College (Artevelde Hogeschool), AP University of Applied Sciences and Arts Antwerp, Interuniversity Micro-Electronics Centre (imec), Flemish Institute for Technological Research (VITO), The Flemish strategic research centre for life sciences and biotechnology (VIB), The Flemish strategic research centre for the manufacturing industry (Flanders Make), Research Institute Nature and Forest (INBO), Flanders Research Institute for Agriculture, Fisheries and Food (ILVO), Flanders Marine Institute (VLIZ), the Belgian industrial Research and Development (BiR&D), Agoria (Belgian federation of technology companies), Flemish Chambers of Commerce (Voka), The Belgian Federation for Chemistry and Life Sciences in Flanders (essenscia vlaanderen), Agrolink Flanders, Barco, Siemens, Flux50, the Blue Cluster, Flemish Department of Agriculture & Fisheries, Flemish Department of Environment & Spatial Development, Flanders Heritage Agency Flanders Investment and Trade (FIT).

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