Cyprus' Universities position paper on the next EU Framework Programme for Research and Innovation

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Introduction

This paper reflects the opinions of all eight (8) Cypriot Universities in view of the discussion of the next EU Framework Programme for Research and Innovation (working title "FP9"):

- University of Cyprus
- Open University of Cyprus
- Cyprus University of Technology
- European University Cyprus
- Frederick University
- Neapolis University Pafos
- University of Nicosia
- University of Central Lancashire – Cyprus

In order to better understand the position of Cypriot Universities towards FP9, it is important to have an overview of the key figures regarding R&I in Cyprus.

It is critical to retain that the total Gross Expenditure on Research and Development (GERD) in Cyprus accounted to 0,50% of GDP (or EUR 91 million) in 2016. Cyprus, as well as other countries with less developed research ecosystems, are in need of incentives in order to develop. Lack of funding and low success rates in EU funding processes can forestall excellent research (and/or research potential).

In Horizon 2020 the overall Cyprus' success rate is 11,8 %. The major research activity is performed by the Universities. Cypriot Universities major participation is in Excellence and Societal Challenges (most popular societal challenges: Energy, Inclusive Societies, Health, Security, Environment). Marie Skłodowska-Curie actions (MSCA) and ICT are the most attractive programmes among Cypriot researchers. European Research Council (ERC) applications however, have not been as successful in Horizon 2020 (low success rate 6%) as in FP7.

Key messages

On FP9, Cypriot Universities call for:

- An increased overall budget of EUR 120 billion, with more budget share going to bottom-up programmes (ERC, MSCA, SME instrument) as well as WIDESPREAD programmes, where the requirement of being part of established EU networks, where underperforming Member States have a handicap, is not always a requirement.
- Continuity from Horizon 2020 to FP9 regarding the three pillar architecture, allowing however space for small collaborative projects (EUR 1-4 million) that are more accessible to Cypriot Universities.
- Enhanced integration of Social Sciences and Humanities (SSH) across programmes and creation of thematic calls in these research areas with the provision of either mono-beneficiary or small scale projects.
- Creation of ERC grants for the less advanced R&I countries, which will be collapsed in five levels including a Proof of Concept and Synergy type of grant.
- Extended integration of the knowledge triangle in FP9, with transfer of knowledge to students as a prerequisite in projects, and with linkages among the mobility and teaching activities, and curriculum development of the Erasmus+ projects with research projects.
- Research-based and non-research-based innovation, welcoming the integration of the European Innovation Council (EIC) into FP9, under the Industrial Leadership pillar, with a full autonomy equivalent to the European Research Council (ERC) one.
- A limited number of missions (no more than 5) selected with caution, to avoid losing focus from other pressing challenges and priorities.
- A clear framework for international cooperation, in line with the Sustainable Development Goals (SDGs) for 2030, and enhancement of Euro-Mediterranean cooperation in addressing common societal challenges (migration, security, pollution, migration of marine species, and energy), with joint calls in which common evaluation processes are applied.
- A reinforced Spreading of Excellence and Widening Participation programme with an increased budget and more supported activities in FP9.
- Rationalisation of the rules of participation and funding from all EU as well as transnational and national funding programmes. The sheer administrative burden required to master and provide support for the participation in the different programmes, makes participation prohibitive for smaller organisations.
- Further administrative and financial simplification. The “reduced scope of calls” is definitely not to the advantage of Universities from Cyprus, as narrower scopes, mean less budgets and fewer projects per call and more defined subjects set by stronger already well networked players which later become the main contenders for these calls.
- Engagement of students in research projects and allow them being part of the public engagement.

1. An increased Budget

The case for an increased FP9 budget should be echoed by all stakeholders, including Cypriot Universities, both in principle as this is a sound investment for the future, as well as to alleviate to some degree the problem of very low success rates of proposals. We advocate for more budget share going to bottom-up programmes (ERC, MSCA, SME instrument) as well as WIDESPREAD programmes, where the requirement of being part of established EU networks, where underperforming member states have a handicap, is not always a requirement.

The case made by many EC circles, that an alternative to significantly increasing the FP9 budget is to leverage more budget from structural funds to support R&I activities at national level has potential value as well, but with the current framework of implementation and rules of participation, utilising structural funds to support cooperative or basic research and innovation projects will be totally unproductive and the promised value will be false. For this measure to be effective, the rules for managing structural funds as well as State Aid provisions for private entities involved in R&I activities will need to change to be totally aligned with the EC framework programme rules of participation.

With regards to expenditure targets on R&I set by Europe, it is worth noting the deviating results manifesting so far. In addition, the majority of higher education systems in Europe have been deprived of a significant percentage of their funding. Combined, these trends illustrate the different speeds between European countries in delivering excellent research, innovation and education culminating in the undermining of the European Research Area and the European Higher Education Area. Subsequently the European Commission must do more in persuading Member States, especially underperformers, to invest more of their national budgets in measures that will boost R&I activities, on a continuous basis as well as make their programmes more open to cooperation with other Member States, so as to bring all states closer to the targeted 3% average of GDP in R&I investment. Besides all the apparent benefits this will have on the sustainable growth of EU, the oversubscription issue to framework programmes will also be reduced as many participants will seek funding from the FPs less frequently and in the cases of most important challenges that require a wider collaboration.

ERC and MSCA are two very well-functioning programmes, beneficial for Cyprus to promote excellent research and innovation, but they tend to be very competitive, resulting in many excellent proposals not being funded due to lack of funds. Problems caused by high demand should be addressed by securing the continuation of these two programmes in FP9. In that regard, the total funding share could also be increased in these calls suffering from underrepresentation of participants from countries with less developed research ecosystems while the framework could support smaller (in terms of size and/or funding) projects to be funded. Smaller, more flexible consortiums aiming for smaller scale projects should be granted a significant percentage of the budget in order to foster the freedom necessary for the expression of their innovative work.

Bearing in mind the aforementioned points, we proposed an increased overall budget of EUR 120 billion for FP9.

2. Structure of the programme and themes

Cypriot Universities wish to see continuity from Horizon 2020 to FP9 regarding the three pillar architecture, as follows: Pillar I: Excellent Science; Pillar II: European Innovation Council; Pillar III: Global challenges and missions. However, there is place to improve the balance between the Pillars boxes. The new FP should allow for frequent evaluation and revisiting of the instruments' structure in order to ensure smooth response to emerging new trends. This can be secured by flexibility in work programmes with a maximum duration of 3 years.

Bottom-up schemes as well as smaller collaborative projects (EUR 1-4 million) are more accessible to Cypriot Universities and the case should be made to avoid, where not absolutely necessary, large scale programmes where funding is usually available for 1-2 projects. In those later cases, requirements in the call could be incorporated for the inclusion of partners from EU13 countries (e.g. with at least 20% budget allocated to them).

Bottom-up: Different approaches should be taken when designing the way in which priorities are set for bottom-up and top down funding. Top-down funding is undeniably necessary in tackling political and societal challenges. Solution oriented call topics that guarantee the generation of new knowledge should be formulated as missions that prioritise achieving Europe's sustainable development. Adequate funding should however be secured for bottom-up approaches as well, in that they embody the dire societal needs as perceived by the scientists in their fields of expertise.

Smaller projects: Small, focused projects are significant for Europe and the evolution of knowledge in certain areas of interest by focusing on particular innovative aspects of these areas. The allocation of funds should be proportionate and not given only to larger scale initiatives, thus creating an impasse where only large consortia who already have funding are being chosen. This can result in countries with less developed research ecosystems to be overlooked and innovative ideas to be lost. Exceptionally targeted scientific questions can be successfully addressed by small scale collaborative projects (less than EUR 4 million) which at the same time make the new FP hospitable to new teams without overlooking the importance of larger projects. Horizon 2020 has proven to be more easily accessed by large consortia involving a large number of countries resulting in increased adjustment and friction costs for those involved. Tackling this and orienting the calls for proposals towards asking specific scientific questions that can be addressed by smaller projects could encourage new participants in the FP. Nevertheless, such projects should be shorter in terms of time to encourage applicants to be mature in their research or work on these areas to ensure the success (since in these instances a smaller team would need to ensure the success of the project).

Transectoral character: The work already funded by Horizon 2020 has a transectoral character and this should continue and increase in order to allow common values e.g. responsible research, to be applied in the future projects. Concepts such as open access or sustainability are better evaluated and evolved through transdisciplinary activities that can be supported under FP9.

The approach has already proven quite successful across Europe in education, research, etc. Therefore, themes that can foster this transectoral evolution approach such as RRI, Ethics, Education, Policy, etc. should definitely be featured as umbrella themes to support specific and technical innovation, e.g. technology-related research (ICT, Big Data, Nanotechnology, Cybersecurity, etc.).

Social Sciences and Humanities (SSH): In order to make innovative technology a useful, meaningful solution that benefits the public in a practical way and guarantees tackling societal challenges, the involvement of SSH has to be enhanced. Defining excellence in a project should involve the assimilation of their activities with a SSH-based approach. This should be established across the forthcoming framework programme. Tackling humanity's challenges by encouraging disruptive research on SSH is deemed imperative by Cyprus' Universities. Well rounded attention to the new advancements on social and cultural innovation is emphasised. We plea for an increased funding for SSH research and innovation with simultaneous reduction of per project budget; for the creation of thematic calls for these basic research domains such as Mathematics, History, Philosophy; and for the provision of the opportunity for mono-beneficiary or small scale projects.

ERC grants: Create ERC grants for the less advanced R&I countries which will be collapsed in five levels including a Proof of Concept (PoC) and a Synergy type of grant.

3. Synergies between Research, Innovation and Higher Education

Stronger links between European Higher Education Area and European Research Area, should be pursued, and the integration of the knowledge triangle could be more extended in FP9.

Incentives for academics to incorporate their projects in their teaching process should continue in FP9. Based on modern European University culture, the inclusion of research project results in curricula contributes to the dissemination of achievements and should be considered a valuable mechanism in accomplishing impact. To enhance that, linkages should be created between Higher Education systems and other important stakeholders from the public and the private sector. Provisions for at least the minimal inclusion of academic students in EU funded projects should be foreseen in the new framework programme. Linking the students can for example be achieved by including them in the public engagement.

It is critical to link the mobility and teaching activities, as well as the curriculum development, developed under Erasmus+ projects, with research projects, so that their results are included in University curricula.

With regards to the European Institute of Innovation and Technology (EIT) and the Knowledge and Innovation Communities (KICs), we call for simplified administrative procedures especially in the proposal phase, in order to reduce unnecessary resources.

4. Funding for innovation via the European Innovation Council

We welcome the integration of the European Innovation Council (EIC) into FP9, under the Industrial Leadership pillar, with a full autonomy equivalent to the European Research Council (ERC).

FP9 should focus on both incremental improvements of existing technologies and fundamentally new ideas, which prepare the grounds for disruptive innovation. Therefore, we believe that both, research-based and non-research-based innovation, should be supported under the FP9. While research-based innovation might not necessarily lead to solutions/products/services for immediate market introduction, EIC projects will allow innovators (not necessarily academia) to create market-creating innovations by either building on existing research results in an incremental approach or by working on fundamentally new high-risk ideas. These could be project proposals with very high TRLs ensuring that prototypes will be developed and their potential to propagate into the market will be investigated.

Moreover, it is our position that emphasis should be put into key sectors that will allow Europe to improve its performance against other global economies, especially as they relate to the digital economy.

5. Mission-oriented approach

Missions would certainly have significant value in building public support and engagement with research and innovation activities and could potentially lead to breakthroughs in targeted major societal challenges. Furthermore, they could lead to more bottom-up initiatives that are overall more inclusive for all stakeholders including Universities and RTOs from Cyprus.

However, since this will be a new venture, topics of the missions should be selected with caution, taking into account the worries and challenges faced by the whole EU population, or global ones, especially in the area of environment and sustainability. To avoid losing focus from other pressing challenges and priorities, given the long term impact nature of these Missions, they should be very limited in number in FP9 (no more than 5).

However, in order for Missions to manifest their usefulness, a structure needs to be developed that is based on realistically set, solid sub-goals. To map and define these, a bottom up approach in receiving input from scientists could prove helpful. This will further encourage a successful tracking of goal achievement.

6. Widening participation

Of particular importance to Cyprus is the Spreading of Excellence and Widening Participation programme. Nevertheless, despite the apparent success in the corresponding Horizon 2020 programme, mainly by the public universities and some research organisations, the overall state of R&I activities in Cyprus is still very low by many metrics and many other stakeholders can benefit either directly or through spill over effects from the implementation of such programmes in Cyprus through FP9.

Regarding the programme itself, we consider it as very successful in engaging and boosting the capacity of research organisations from underperforming countries and therefore would like to see it enhanced with an increased budget and more supported activities in FP9. All actions should focus on research excellence, and they should be open to all disciplines and forms of innovation.

Twinning: Under the Twinning action, a limited amount of research activities should be allowed as a very effective means for hands-on tech transfer from advanced to underperforming partners. This can take the form of sponsorship of co-supervised PhD or post-doc positions with compulsory mobility/secondments of the researchers between partner organisations. In such a case, a new funding programme like the proposed "Widening Fellowships" would not be needed. However, the allowed budget per Twinning proposal should increase (to ~EUR 1.5 million) to reflect the extra activities and the fact that the cost of involvement of partners from advanced partners is relatively high, given their high staff cost rates, for the amount of input work requested from them.

Teaming: We invite the European Commission to consider including a Teaming Phase 3 call for proposals near the end of FP9 to strengthen the sustainability prospects for the ~20 Teaming Centres of Excellence that will be running by then.

ERA Chairs: An area in which the research sector suffers is the lack of sustainability of job positions (especially in the less advanced R&I countries) and the uncertainty it conveys. Create long-term projects for less advanced R&I countries with a smaller annual funding amount. i.e. Chairs in specific thematic or multidisciplinary areas. For example a Chair could be funded for 20-30 years with a budget of i.e. EUR 250κ X 20 years = EUR 5 million. This will ensure the sustainability of the core function of the new chair/lab and create some permanent positions and will allow for further R&I development with attraction of external funding. This could be the evolution of the H2020-WIDESPREAD- ERA-Chairs call for proposals.

Greater flexibility in applying the remuneration rules that enables all countries to attract outstanding researchers is needed.

Another issue that is very relevant to Cyprus is the development of calls and a scheme that promotes networking activities which are considered of considerable importance due to its somewhat geographic isolation. Such schemes should be simplified, have shorter evaluation time and include a higher budget in order to encourage these forms of synergies. Measures taken by COST are considered as very interesting approaches to widening participation.

COST action should be enhanced and redefined to ensure that involved participants in the various funded actions are actively committed to them, rather than just attending meetings. Each member country is allowed to have up to two members in the COST committee who might not be very relevant to the topic and/or not actively contributing, and this possibly blocks the participation of more appropriate and/or active or experienced researchers in the specific actions. The notion of openness is good for the academia, but there are concerns on how this could be beneficial for companies which want to develop market-creating innovations.

7. Strengthen strategic international cooperation

FP9 should facilitate international cooperation as effectively as possible, without unnecessary barriers, by setting a clear framework for international cooperation, in line with the Sustainable Development Goals (SDGs) for 2030.

A regulatory framework must be in place in order to guarantee Intellectual Property Rights of all parties and to facilitate the exploitation of patents on the EU territory.

Incentives could be given to international partners so as to participate in FP9 in the sense that funding should be given to them to support research rather than just for travelling. This could be along the same lines as EU-Japan and EU-Brazil programmes. Where relevant, reciprocity between third country programmes should be sought.

Universities in Cyprus call for the enhancement of Euro-Mediterranean cooperation in addressing common societal challenges (immigration, security, pollution, migration of marine species, and energy). We suggest joint calls to be launched in these specific areas of common interest, applying common evaluation processes.

8. Rationalise the EU funding landscape

There is the need to rationalise the various funding instruments, increasing focus on the highly successful and reducing / ceasing investment in the others. Both, instruments and partnerships, should be rationalised and streamlined in FP9 compared to the Horizon 2020 programme. The partnerships introduced often have an unbalanced pattern of participation, especially where national funding and support is required. Smaller Member States like Cyprus can only allocate funding and administrative resources to participation in some of these initiatives. A better balance is needed to ensure that potential applicants from small Member States are not excluded from participating in these actions.

There is a critical need to streamline the rules of participation and funding from all EU as well as transnational (e.g. Interreg, Era-Net) and national funding programmes. The sheer administrative burden of participation in the different programmes, makes participation prohibitive for smaller organisations (including SMEs) that cannot afford the administration offices/services available in larger more established organisations.

Furthermore, the issue of 'closed clubs' between more established researchers and institutions, not including excellent partners from less-established regions, should be tackled.

Even though further measures can be implemented in the direction of simplification (see response to point 9), Horizon 2020, and better yet FP9, can offer a very good paradigm on how the funding and rules of participation should be for programmes that support R&I activities, which differ significantly from other large scale infrastructure projects and cannot be implemented and monitored with the same rules as the later.

An issue faced by the private Universities in Cyprus is that for programmes that fund Innovation activities they are treaded not as a University/Research Organisation, but as a business (with funding rate at 70% instead of 100%). Even though legally this may reflect the case, operationally this is far from reality as in all such proposals/projects we participate as Research/knowhow providers with minimal if any capacity to take part in the economic activities that should result from the implementation of such projects. The usual mode of operation for these cases is for the inclusion of licencing terms for the exploitation of our foreground. In any case the mode of operation does not differ from what any public University/Research Organisation will do and benefit from. In FP9, we would like to see such differences that apply to private Universities to be eliminated, i.e. all Accredited Universities/Higher Education Establishments to have the same rules of participation and funding, both for the sake of simplification as well as for non-discrimination by addition of extra obstacles for participation.

We should also aim at convincing the incorporation of measures that would support the participation from EU13 stakeholders in programmes beyond WIDESPREAD. This would further improve the capacity building and networking issues faced by many organisations in these countries. Such measures could be to add a small "bonus" grade (less than 0.5) on the impact criterion for inclusion of partners from EU13 countries with at least 20% of the budget allocated to those partners, or in the case of IFs of the MSCA, if co-hosting and co-supervision of the fellow with an EU13 partner is envisioned in the proposal.

Another option that can be piloted under Horizon 2020, provided it does not add administrative burden on the process, is the two stage evaluation where excellence and impact are evaluated first with strict anonymity and implementation/consortium ability later. To a degree this is practiced in two stage proposals already, so that process can be modified a bit towards completely anonymised evaluation of Stage 1 proposals for minimising any clouds that may exist in the objectivity of evaluators when reviewing proposal by well-known institutions compared to less known ones.

9. Simplification

Cypriot Universities invite the European Commission to continue the work on administrative and financial simplification.

Oversubscription: Besides the proposed solutions to reduce oversubscription rates (two-stage submission procedure, more funding), a drive by the European Commission to "push" underperforming member states to up their game in supporting R&I activities from national budgets or structural funds so as to reach the 3% target, will help with oversubscription as well. The "reduced scope of calls" is definitely not to the advantage of Universities from Cyprus, as narrower scopes, mean less budgets and fewer projects per call and more defined subjects set by stronger already well networked players which later become the main contenders for these calls.

Lump-sum based funding model: Lump-sum funding, when compared to reimbursement of incurred costs, provides considerable simplification potential. The lump-sum approach will be a huge step for simplification provided practices that have been implemented in other programmes like Erasmus+ are not followed (e.g. grouped reduced rates for staff cost and travel expenses). The pilot action to test lump-sum project funding included in the Horizon 2020 work programme 2018-2020 is a positive development and could work as long as the actual cost of participation is estimated as accurately as possible.

Grant preparation and evaluation: Retain reimbursement rate of eligible expenses at 100% and extend this to other EU funding schemes. Align the rules for participation in different interlinked EU funding schemes such as FP9, Interreg, LIFE, etc. Create a unified framework which follows the same grant management principles. In terms of evaluation, ensure that each peer evaluating proposals has at least the same or more experience and R&I achievements from the Principal Investigator of the proposal under evaluation.

Audits: Audits can take place through a random selection process and can verify that organisations follow the IFRSs plus the fair recruitment rules.

Efficient reporting, dissemination, exploitation: It is suggested to introduce bigger reporting periods. We have to be careful in order to combine this solution with the duration and budget of each project. The discussion regarding exploitation of results is continuous. Nations need to adopt and promote policy mechanism in order to assist in exploitation of results. Such policies could be: National framework for the protection of IP Rights, Design and Implementation of a national Technology transfer office, Open Access etc.

Grant Agreements: The grant agreement models should not be modified too frequently. The number of Annotated Model Grant Agreement (AGA) should be reduced. There is a need of an AGA with all the necessary clauses. Any additional clauses and/ or bylaws applied to certain programmes should be additional to this AGA.

10. Public outreach – mobilise citizens in the co-design of R&I programmes

The social impact of the next framework programme must be emphasized and clarified. Horizon 2020 deals with big societal challenges, but the question is how to design the FP9 and especially its implementation in a way that creates more interest and excitement in society.

A way could be by bringing in other stakeholders like cities which could become living labs for new experimentations, new solutions. Tangible benefits for the citizens resulting from the funded research will enhance visibility and create a more strongly engaging narrative of the programme.

Based on modern European University culture, the inclusion of research project results in curricula contributes to the dissemination of achievements and should be considered a valuable mechanism in accomplishing impact. Linking the students in EU research projects should be foreseen in the new framework programme.

Stakeholders and end users have to involve themselves in multi annual programming. This can be achieved by giving motives/incentives to certain groups of stakeholders and end users. The provision of programme ambassadors and role models could contribute to reach this target. Universities can participate in dissemination and awareness campaigns in order to promote the importance of participation in these programmes.

This initiative was coordinated by the European Office of Cyprus.
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