

CLEAR CHOICES FOR EUROPE: SMART INVESTMENT IN RESEARCH AND INNOVATION

LERU RESPONSE TO THE EUROPEAN COMMISSION'S GREEN PAPER AND
CONSULTATION "FROM CHALLENGES TO OPPORTUNITIES:
TOWARDS A COMMON STRATEGIC FRAMEWORK FOR RESEARCH
AND INNOVATION FUNDING"

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Executive Summary

The European research and innovation policy agenda is at a critical point in time. Now is the time for Europe to make clear choices on the future direction of European research and innovation policy. Now is the time for smart investment in research and innovation.

Drawing on extensive evidence, analysis and experience, the League of European Research Universities (LERU) proposes, in response to the European Commission's Green Paper and Consultation¹, that the following five key principles must underpin any future European research and innovation framework and makes recommendations for each.

1) Focus investment in excellence

- Since research and innovation are instrumental in driving economic and social growth, the criteria for funding must be based on excellence.
- The European Research Council (ERC) has changed the landscape of European Union (EU) funded research and innovation. We strongly support its strengthening and wish to see its funding increased significantly.
- The Marie Curie actions have also been a hallmark of excellence which must continue to be supported.
- To stimulate excellence, investment must focus on attracting talented women and men into research and creating attractive career prospects for them.

2) Strike a better balance between directed and non-directed research

- Any future EU funding programme must ensure a well-balanced share between directed and non-directed research. For this to happen, the entire chain of innovation must be taken into account, from basic research to commercialisation.
- Researchers must have the freedom and space to develop their ideas innovatively. We wish to see a larger proportion of EU funding go to bottom-up, investigator-led or non-directed research.
- The Cooperation programme has been effective in funding top-down or directed research and enabling collaboration between academic and non-academic partners. It should be retained, although ways should be found to eliminate barriers to forming successful research ecosystems.
- JPIs and EIPs which have the potential to boost the impact and efficiency of public research should be supported, but they must allow for imaginative frontier research to be carried out within their structures.
- We wish to underline the important role of the social sciences and humanities (SSH) in the research and innovation agenda of the EU. It is crucial that SSH research is stimulated to take up its separate and independent role in pushing the frontiers of knowledge and to play to its strengths in addressing societal challenges.

3) Stimulate innovation and promote excellent environments

- Europe must ensure that it is creating the best environment for innovation to flourish.
- Instrument structures and rules relating to key innovation aspects such as Intellectual Property Rights must be non-prescriptive.
- Barriers must be removed so that researchers and entrepreneurs can bring ideas to market. In order for the very best people to participate in innovative research, instruments must be fairly structured so that rules for engagement do not favour specific sectors of society.
- Additional instruments need to be designed and implemented to bridge gaps in the innovation cycle.
- A balance will have to be found for the European Institute of Innovation and Technology (EIT) between much needed flexibility and freedom on the one hand and its alignment within a common framework on the other hand. We expect the Commission to draw on the lessons learnt from establishing the first Knowledge and Innovation Communities (KICs) and from the forthcoming external evaluation of the EIT.
- There must be more proof of concept type funding that facilitates and enables the very best researchers to sustainably explore commercial and innovative activity.

4) Distinguish between funding research excellence and capacity building

- A truly world class research and innovation programme must focus on excellence.
- The goals of capacity building must be clearly defined as an independent objective not embedded in a research and innovation framework underpinned by excellence.
- Targeted incentives and mechanisms must be developed to ensure that cohesion policy funds are more readily available for and compatible with research and innovation policies.

5) Develop simple instruments that incentivise and bring real European added value

- There must be a clear step-change towards true simplification.
- Funding to carry out research and innovation must be sustainable.
- The rules that underpin and govern European research and innovation funding must be transparent and consistent.
- Avoid a radical shift towards output-based funding.
- Whilst it may make sense from a policy perspective to bring together funding instruments and agencies together, it is essential that such a move does not produce a framework that is inaccessible and overly complex.

¹ From Challenges to Opportunities: Towards a Common Strategic Framework for Research and Innovation Funding. European Commission. COM (2011) 48. Consultation website: http://ec.europa.eu/research/csfr/index_en.cfm

Introduction

Reducing the knowledge and innovation gap

1. It is clear that Europe, as a community of nations, continues to lose ground compared to its traditional competitors such as the US and Japan, and to up-and-coming competitors such as China and India². Further investment in higher education, research and innovation is too low and, as such, constitutes a major contributing factor to the growing gap between Europe and its competitors. If the EU is serious about research and innovation, it must redirect significant funding to support its aspiration to be a world leading knowledge-based economy.

Investing in the European research base

2. The European research base has some of the highest levels of productivity and excellence in the world, but it is concentrated in those areas where it has been sustained by long-term national and European investment, coupled to positive interactions with industry. Public investment in research is essential. It has a demonstrably powerful social impact, from advances in medical diagnostics and therapeutics that improve health and the quality of life, to innovation and the development of new technologies essential to Europe's future competitiveness.

Research and innovation as a key driver for economic growth

3. A key point at both Member State and European level is that research funding is not perceived as a drain on public expenditure and resources, but regarded as an investment for the future. Economic history has shown the central role of research and innovation in the productivity growth of industrialised nations³. It is crucial, therefore, that during times of economic difficulty, Europe – in the same way as its global competitors - commits significant investment to research excellence and research-driven innovation which will lead to sustainable economic growth.

Frontier research requires patience, persistence and investment

4. Research is quite simply the foundation for

Europe's future competitiveness. In this, the role of universities and associated research institutes is fundamental. Their focus on basic science lays the foundation for discovery and innovation, and their laboratories develop the human capital that businesses need for success. Innovation is a complex process, not a linear progression of basic science into new products. It is rare that the new knowledge created by scientific breakthrough has immediate practical implications. Often it is accidental. Frontier research requires patience, persistence and investment. Europe's research-intensive universities have the unique capacity to bring together the three elements that are essential to ensuring Europe's long-term competitiveness and welfare: higher education, research and innovation⁴.

Making clear choices

5. The European research and innovation policy agenda is at a crossroads. The next research and innovation framework will shape European sustainability and growth for the next generation. In terms of moving towards a Common Strategic Framework, Europe must now take stock of what works well, what needs to be improved and what aspects are unsustainable. Whilst it may make sense from a policy perspective to bring different funding programmes and agencies together, it is imperative that it does not result in a framework that is inaccessible and overly complex. It will require making clear but potentially tough choices.
6. LERU welcomes the Green Paper as well as the consultation and debate with stakeholders organised by the Commission. We wish to respond to the Green Paper by outlining in this paper LERU's position on the future of European research and innovation. We suggest that making clear choices should be based on the following driving principles for a successful framework for funding research and innovation.⁵
 1. Focus investment in excellence
 2. Strike a better balance between directed and non-directed research

² http://www.leru.org/files/publications/LERU_AP5_Innovation_Union.pdf

³ <http://royalsociety.org/The-scientific-century/>

⁴ http://www.leru.org/files/publications/Getting_to_grips_with_the_competitive_challenge.pdf

⁵ Our five principles and associated recommendations cover many of the questions in the Green Paper. The numbers of the questions addressed are given in footnotes and are also listed in an Appendix.

3. Stimulate innovation and promote excellent environments
4. Distinguish between funding research excellence and capacity building
5. Develop simple instruments that incentivise and bring real European added value

Principle 1: Focus investment in excellence

Recommendations:

- Criteria for funding research and innovation must be based on excellence.
- The European Research Council must be strongly supported and its funding must be increased.
- Support the Marie Curie Actions.
- Attract and retain the very best men and women researchers through excellence.

Excellence⁶

7. To optimise impact, excellence must be the single most important criterion for funding research and innovation. Organising competition at the European level is one of the most effective ways to foster excellence. At a time of financial constraint and increasing global competition research quality must be the primary factor in the distribution of research funding at a European level.

Peer review⁷

8. LERU recommends the creation of a coherent and professional peer review system working in harmony across Europe⁸. Good trans-European models already exist. The ERC model, for example, can be used as a model of best practice for formulating new structures whilst ensuring that the primary factor of excellence is retained.

ERC support⁹

9. LERU fully supports the ERC as the first pan-European research funding organisation for frontier research and is very much in favour of ERC

grants. For LERU, the ERC has met a need that has existed for a long time across Europe. LERU fully supports the ERC's approach to stimulate research excellence in Europe by funding the very best researchers. The ERC has changed the landscape of EU-funded research¹⁰. The ERC demonstrates how the principles of excellence and bottom-up research can work at a European level. By setting clear and inspirational targets based around excellence the ERC has enhanced the standards of national research efforts and raised the status and visibility of European frontier research on a global level. LERU fully supports the introduction of the new ERC Proof of Concept scheme and the recently proposed ERC+ scheme. However, the success of the already established Starting and Advanced Grant schemes, and the introduction of both the Proof of Concept and recently proposed ERC+ scheme, is such that in order for the ERC to continue to have a credible impact, the ERC must receive a significant increase in funding beyond 2013.

Investment in people¹¹

10. Whilst science requires long-term and sustainable investment, infrastructure and an enabling policy environment, its most important resource is people. To maximise the impact of research and innovation, the very best researchers must be given the opportunity to pursue their curiosity. Research funders around the world are increasingly aware of this, shifting the balance of their research and innovation funding away from projects towards excellent people. Although the ERC is only four years old, it is already regarded as a success. France, Italy, Spain, Switzerland, Sweden and others are now using the ERC assessments as an indicator of quality to offer grants to their researchers¹². However bottom-up frontier research still represents a relatively small portion of funding compared to the rest of FP7. LERU would like to see a significant increase in funding for frontier research based on excellent individuals with increased autonomy and freedom to develop ideas. Now is the time to build on the strengths of the ERC and establish additional

⁶ See question 22 of COM (2011) 48

⁷ See question 22 of COM (2011) 48

⁸ http://www.leru.org/files/publications/LERU_Advice_paper_FP8_final.pdf

⁹ See question 21 of COM (2011) 48

¹⁰ http://www.leru.org/files/publications/ERC_Note_final.pdf

¹¹ See questions 21 and 23 of COM (2011) 48

¹² <http://royalsociety.org/The-scientific-century/>

streams of excellence to attract and retain the very best researchers on a global level. It should be a high priority to extend the current dynamism in existing programmes to attract and retain top talent and to perform excellent basic research with the sole purpose of the advancement of research and innovation.

Marie Curie support¹³

11. Next to the ERC grants, the Marie Curie (MC) programme is the most popular FP7 programme within universities. The programme is not only interesting to universities but crucial for Europe not only because it funds basic research, but also because it is an important attractor for young people who wish to undertake a research career in Europe. LERU strongly endorses the continuation of the MC programme and urges EU policy makers to ensure that it continues to operate on the principles of research excellence and curiosity-driven research, and within the bounds of an EC research programme. As with the ERC, emphasis on research excellence has been the recipe for success in Marie Curie and the research imperative must remain its driving force. LERU would like to see the Marie Curie programme stripped back and simplified. Instead of trying to address all areas of researcher mobility, the Marie Curie programme should focus on funding instruments that currently work well and bring real European added value. For the LERU community these would be the individual fellowship schemes and the Initial Training Networks.

Doctoral training¹⁴

12. LERU also supports the idea of EU funding for innovative doctoral training. To ensure maximum impact and effectiveness in fostering global research leadership doctoral schools or programmes should be embedded in strong and diverse research environments focusing on research excellence, delivery and outreach to society¹⁵. Such programmes should include (and fund) all stages of early career researchers and have scope for seconding academics to undertake leadership roles. They should interact with professional sectors appropriate for their focus area - be it industry, business, charities, non-profit organisations, health care or government - but the

weight of doctoral training should lie within the university. Innovative doctoral programmes should be able to support research that is often interdisciplinary, international, and intersectoral. However not all aspects of a programme need encompass all three features and there should be clear opportunities for these features where they add to tackling the research questions. A programme must be able to demonstrate why a European dimension is important and should involve international networking among the partners and to other collaborators both inside or outside the EU.

Diversity and quality¹⁶

13. EU policy makers should understand and celebrate the diversity of doctoral training frameworks in Europe. Doctoral programmes prepare researchers for research careers but also for a wide range of careers where depth, rigor and research skills are important. They should not seek to regulate and impose new structures upon universities, which will lead to additional administrative overload and cost. It is crucial that a PhD project makes a demonstrably new and original contribution to the body of existing knowledge. Universities are the best guardians of such substantive quality assurance. Quality standards, assurance, and enhancement for doctoral education must remain the responsibility of existing structures such as Graduate Schools or equivalent.

Attractive careers for women and men¹⁷

14. It is vitally important to make progress towards ensuring that the research profession is attractive to both men and women researchers. Researchers should have well-signaled access to well-designed, well-funded and well-supported jobs that are embedded in transparent career structures. A lack of clear career perspectives and of attractive work place conditions can be a serious disincentive to embark on or remain in the research profession for many researchers, particularly for women, who often face even more painful obstacles to balancing work and family or personal life and who are shown to leave academia at greater rates than men¹⁸. It is clear that time will not redress the under-representation of women in an adequate fashion and that specific

¹³ See question 23 of COM (2011) 48

¹⁴ See question 23 of COM (2011) 48

¹⁵ *Doctoral degrees beyond 2010: Training talented researchers for society*. LERU, March 2010.

¹⁶ See question 23 of COM (2011) 48

¹⁷ See question 24 of COM (2011) 48

¹⁸ *She Figures 2009. Statistics and Indicators on Gender Equality in Science*. European Commission, 2009.

measures to support women's careers in academia, in a context of attractive research careers for all and with a view to enhancing research quality, are needed. Gender measures should be aimed at women- and family-friendly working environments with targeted support and incentives, at good governance and leadership commitment, and at close monitoring of and accountability for results-oriented gender policies. Responsibility for research careers cannot be borne by universities and research institutions alone. Research funders in the public and private domain, local and EU governments and policy-making bodies each share part of the responsibility. They must work individually and collectively to ensure that Europe continues to attract, train and retain talented women and men into research.

Principle 2: Strike a better balance between directed and non-directed research

Recommendations:

- Strike a better balance between non-directed, bottom-up and directed, top-down research.
- Invest more in investigator-driven research.
- Allow researchers the necessary freedom to develop their ideas.
- Ensure frontier research is protected in JPIs and EIPs.
- Stimulate social sciences and humanities research both in directed and non-directed programmes.

Striking the correct balance¹⁹

15. Research is essential to tackle the great societal challenges that face us all on a European and global scale. Output-driven, top-down research funded schemes are definitely a means of coordinating research efforts and avoiding duplication across different European programmes at national and European level. This is particularly evident when looking at the Framework Programme, emerging Joint Programming Initiatives (JPIs), Public Private Partnerships (PPPs) and European research infrastructures. Research, however, can only fulfil its key role if given enough space and funding to identify and tackle future, yet unknown Grand Challenges through cutting-edge and innovative bottom-up research performed with maximum

academic freedom. Curiosity-driven or basic research is essential for creating unforeseen innovation. It is therefore imperative to create the correct balance between bottom-up and top-down driven research and innovation.

Importance of collaborative research based on excellence²⁰

16. The Cooperation programme is a unique and largely successful instrument for funding trans-European collaborative research. It has enabled industry and academia to work together in an international context and on an equal basis, across disciplines, institutions and areas of specialisation. The current healthy balance between academia and industry involvement should be retained for future programming. However, more incentives need to be created and barriers removed to ensure the formation of ecosystems of collaboration between universities, research centres, policy and public engagement bodies and small and large industrial players in a composition that best suits the proposed research and its intended output and exploitation.

Invest more in investigator-driven research²¹

17. Researchers should be given the freedom to develop their own ideas both individually and collaboratively. The cooperation theme has traditionally been structured by a top-down policy-driven framework. Whilst institutions and researchers can influence the research agenda through lobbying or liaising with National Contact Points, this process is lengthy and complex - which can act as a serious disincentive for researchers. As such, LERU would like to see more funding instruments such as the FET (Future and Emerging Technologies) scheme that promote bottom-up investigator-led research.

JPIs and EIPs²²

18. Challenges of the day such as global climate and environment change, energy, food and population would benefit greatly from networking or focusing of national programmes at a European level. LERU welcomes recent efforts to develop Joint Programming Initiatives (JPIs), which could pool national research efforts to tackle major societal challenges²³. As a complement to undiminished EU

¹⁹ See question 9 in COM (2011) 48

²⁰ See question 15 in COM (2011) 48

²¹ See questions 10 and 17 in COM (2011) 48

²² See question 4 in COM (2011) 48

²³ http://www.leru.org/files/publications/LERU_AP5_Innovation_Union.pdf

support for undirected, bottom-up research, JPIs have the potential to create scientific excellence in international collaborations and the implementation of common strategic research agendas should boost the impact and efficiency of public research.

19. Joint Programming should be based on a common vision of how to address the major societal challenges, which should be defined by relevant stakeholders in complete transparency and with the contribution of top researchers. Transparency in the setup process and management of JPIs is crucial. A proliferation of different rules of participation should be avoided. Leading scientific experts (academics or industrial players) should decide on the challenges that grow into JPIs. Joint Programming should concentrate in a strategic manner on a few, major societal challenges with large impact on Europe: e.g. quality of life and environment, health, food, water and energy supply. Addressing these challenges will require collaborations across a large range of disciplines with vital contributions from the humanities and social sciences. The EC should take on the role of gatekeeper by establishing efficient and harmonised governance. It should also ensure that excellent researchers from countries that are not part of the JPI discussion are able to participate. Finally, enough flexibility should be built into JPIs to include both result-driven applied research as well as basic research.
20. Whilst LERU agrees on the need to tackle global societal challenges, the approach taken thus far by the various EU institutions appears uncoordinated and haphazard. “Grand challenges” are mentioned not only in relation to JPIs, but also in the Knowledge & Innovation Communities, FP7 work programmes and in the European Innovation Partnerships (EIPs) proposed in the EU 2020 strategy. There is concern that the term “grand challenges” has developed into the latest buzz word to be introduced into every instrument. EIPs, for example, should only be created if they can truly ensure better coordination or harmonisation, transparency and effective governance of already existing European initiatives²⁴. They must not be developed as yet another layer to be added to the existing ones, which would create an even bigger morass of European projects. The risk of overlap is great and would be devastating to any attempts to

simplify and better coordinate the current plethora of instruments and initiatives.

Importance of social sciences and humanities

21. LERU wishes to single out and underline the essential role of humanities and social sciences in the research and innovation agenda outlined above. Humanities research generates important new knowledge that is fundamental to broader social issues in Europe. The disciplinary agenda of the humanities is increasingly complemented by an interdisciplinary agenda addressing societal challenges in Europe. They include international conflicts, human rights, ethics, religious traditions, institutions, changing media, literacy, identities and cultural memories, linguistic diversity, creative industries and cultural heritage. The social sciences investigate the processes that govern the behaviours of individuals and groups. This understanding is as important as contributions from scientific and technological disciplines to the creation, implementation and evaluation of effective public policies and innovative structures underpinning corporate performance.
22. Research in the humanities and social sciences is concerned with issues that are essential to stability, good order, creativity and inspiration in society²⁵. Humanities and social sciences are a key part of the research and innovation spectrum and must be represented as both a separate and integrated part of any new research and innovation framework.

Principle 3: Stimulate innovation and promote excellent environments

Recommendations:

- Let innovation flourish in a non-prescriptive environment.
- Create instruments to stimulate innovation at the user-end of the innovation chain.
- Align the EIT with the requirements of a common framework in a flexible manner.
- Increase proof of concept funding.

Innovation leading to growth²⁶

23. During the last decade, universities in Europe, par-

²⁴ http://www.leru.org/files/publications/LERU_AP5_Innovation_Union.pdf

²⁵ [http://www.leru.org/files/general/%E2%80%A2What%20are%20universities%20for%20\(September%202008\).pdf](http://www.leru.org/files/general/%E2%80%A2What%20are%20universities%20for%20(September%202008).pdf)

²⁶ For paragraphs 23-30 see question 2 in COM (2011) 48

ticularly those that are research-intensive, have adopted as part of their mission to engage more deeply with the innovation process, and through this have come to understand their actual and potential roles more clearly. It is now recognised that universities are important businesses in their own right, realising the highest levels of financial return on public investment, and making a significant contribution to GDP and national employment.

Complexity

24. The route from discovery to patenting and licensing is not universities' only contribution to innovation, but more complex relationships involving the recruitment by industry of PhDs and researchers, exploitation of codified knowledge, joint problem-solving enterprises, and the use of the university as a public space together make a dynamic and more flexible contribution as well.
25. While innovation is in large part a demand-side process of business engagement with markets, universities play their most important role on the supply side of the innovation chain. Indeed, universities are indispensable when it comes to creating an environment that allows innovation to flourish. Research-intensive universities in particular, as the bedrock of internationally competitive research and the home of excellent researchers, are hubs of creativity which attract research-intensive companies and investment into a region and help to catalyse innovation in local businesses.
26. While universities in general and research-intensive universities in particular play an important role in the innovation chain, they do not operate in isolation but are instead part of a larger innovation ecosystem. If universities are to be more effective in supporting and catalysing innovation in Europe, action is required under three broad headings that reflect the interaction between supply and demand, namely 1) enhancing supply of relevant university capacity, 2) stimulating business demand and 3) improving university-business interactions.

EIT

27. The European Institute of Innovation and Technology is being developed to strengthen those vital links across the knowledge triangle of research, education and innovation, between universities and businesses, between public and private monies. LERU recognises

the EIT as a potentially powerful vehicle for innovation. However, the legal difficulties and frustratingly long delays that have been encountered in setting up the first Knowledge and Innovation Communities (KICs) demonstrate the difficulty in bringing together the different players into a well-tuned orchestra. If the EIT is going to have a positive impact, EU policy makers will need to make sure that it is governed and managed with due regard to the specificities of the research enterprise and that it is allowed to develop in a flexible manner responding to ever-changing research agendas. It should be kept in mind that the EIT's ambition is to act as a "smart investor". It is not, nor should it become, a funding programme of the Commission. A balance will therefore have to be found between the EIT's need to retain enough flexibility to address distinct needs whilst ensuring alignment with other elements based within a common framework. Finally, we look forward to the results of the ongoing external evaluation of the EIT, in particular where it focuses on its relevance, complementarity and effectiveness. The external evaluation also has a clear emphasis on the set-up phase of the KICs and the structures established by them, including their potential to create significant added value. We expect the Commission and the EIT to draw the necessary lessons and conclusions from this external evaluation, particularly in view of the announced EIT Strategic Innovation Agenda 2014-2020 and the second round of KICs.

Flexible and creative environments²⁷

28. Creating the best environment for innovation to flourish does not involve taking a top-down hierarchical approach. On the contrary, in order for innovation to develop and flourish conditions must be optimally balanced. Individuals and institutions must be incentivised. The Innovative Medicines Initiative (IMI) however is an example of how funding schemes do not create the best environment for innovation to flourish. The combination of disadvantageous financial and intellectual property rules – which differ to standard FP rules – are key barriers to academic and SME participation. As a consequence, several LERU members and other research institutions have implemented stringent procedures for researchers who wish to participate in an IMI proposal, with the effect that most of them have withdrawn since academic participation is not feasible²⁸. It is absolutely imperative that any future PPP

²⁷ See questions 15 and 20 in COM (2011) 48

²⁸ http://www.leru.org/files/publications/LERU_Letter_on_IMI_2010_09_02.pdf

schemes create a flexible and creative environment for research and innovation to flourish.

The important role of Technology Transfer Offices

29. Research-intensive universities have well developed technology transfer offices (TTOs) that can act as entrepreneurial hubs throughout the entire innovation network. TTOs are not only the engines of university third mission knowledge transfer operations but are direct contributors to university traditional core activities of research and teaching. This is channeled through the knowledge networks and the revenues TTOs can generate. TTOs should be able to operate under an IP regime that allows them to maximise these outputs. Knowledge transfer activities will further benefit from appropriate accreditation, high level training and recruitment of knowledge transfer and commercialisation experts; this in turn has significant implications for universities' HR policies, people mobility and research careers.

Proof of concept funding²⁹

30. Innovation is a complex process, not a linear progression of basic sciences into new products. It is rare that new knowledge created by scientific breakthrough has immediate practical implications. Often it is accidental. In order for researchers and consortia to take ideas forward, LERU would like to see an increase in proof of concept funding. There appears to be a funding gap between good collaboration and bringing ideas to market which can often stop once EC funded collaborative projects finish.

Principle 4: Distinguish between funding research excellence and capacity building

Recommendations:

- Recognise that funding for research capacity building is important.
- Do not mix the capacity and research excellence agenda.
- Provide clear guidance on a research capacity framework.
- Develop targeted incentives and mechanisms to make cohesion policy funds more readily available for and compatible with research and innovation policies.

Importance of capacity building³⁰

31. Undoubtedly research capacity building is needed in

areas of Europe where the research base has been neglected or decayed but where national economic, cultural or social priorities now demand reinvigoration. Such demands are real, valid and need to be responded to.

Research based on excellence

32. However, a truly world class research and innovation programme must focus on excellence. Mixing research excellence with capacity funding will dilute both the excellence and the capacity imperative. The research and innovation budget of the EU (FP7 €53.3 billion) is small compared to research-oriented cohesion policy funds (about €86 billion), especially when compared to the total EU budget, national budget allocations for research and investments that are being made in other regions globally. Given the economic realities in Europe on the one hand and the goals set out in the Europe 2020 strategy on the other hand, it would be unwise to insert capacity building measures in an already limited research excellence programme risking to water it down and doing no justice to the quite different imperative of capacity building.

Clearly defined goals

33. It is therefore essential that the goals of funding capacity building in Europe are clearly defined as an independent objective and are not embedded in the next research and innovation programme. Within the CSF research excellence should prevail as the only criterion for all EU 27 member states and other qualifying participants. A significant part of the EU's capacity building funds (regional/structural/cohesion funds) should be aimed at improving research capacity, including human and other resources, large infrastructures and good governance, in the EU 12 and other qualifying regions.

Synergies and accessibility

34. LERU supports the view taken in the Green Paper that synergies should be sought between a European research and innovation framework and cohesion policy. We recommend that targeted incentives and mechanisms are developed to make cohesion policy funds more readily available for research and innovation policies. The Commission should aim to develop effective and research-appropriate instruments for capacity building that will bring real benefit to univer-

²⁹ See question 19 in COM (2011) 48

³⁰ For paragraphs 31-34 see question 8 in COM (2011) 48

sities and research performing organisations in the EU12 and other qualifying regions. To be attractive to universities and other research performing organisations, the system must be set up in such a way that rules and regulations for research funding in both programmes are compatible. If this is not accomplished, the administrative burden to manage both types of funding programmes with very different requirements will be too high to make capacity funding attractive to universities. A sign of success will be the voluntary engagement of Europe's leading research-intensive universities in such initiatives.

Principle 5: Develop simple instruments that incentivise and bring real European added value

Recommendations:

- Take more and substantial steps towards simplification (accept proven models of funding).
- Ensure that funding for research and innovation activities is sustainable.
- Strive for transparency and consistency of rules.
- Avoid a radical switch towards output-based funding.
- Create a common strategic framework that is simple to understand and use.

Key values³¹

35. It has been estimated that 25% of European research and development funding is dedicated to administration, i.e. by the end of 2013, €13 billion of the €53.3 billion of funding available under FP7 will have been spent on administrative and bureaucratic procedures³².
36. The future success of European research and innovation will be largely dependent on its architectural framework. It is absolutely imperative therefore that EU funded research and innovation is simplified. The current financial regulations, as they are presently interpreted and applied in FP6 and FP7, are not sufficiently suited to the needs of the research community in general and the ERA in particular.

Accepting proven national models of funding

37. When it comes to project management and adminis-

tration, universities are guided by national requirements. National funding agencies are generally the main source of external funding for universities. So to a large extent the regulations of these national funding agencies determine the way in which universities arrange their financial administration and the systems used. On the basis of good practice examples collected, LERU suggests that the EC takes national funding systems as a starting point when defining new funding regulations since many national funding programmes use much simpler methods for research funding³³. The Commission could accept these simplified methods used by member states as a basis for project accountability in EU programmes. This would remove the requirement for universities to use parallel accounting rules for national and EU projects.

Certificate of Methodology

38. LERU acknowledges the effort the EC has already made by introducing the Certificate of Methodology (CoM), which was intended to be a label, granted by the EC, to avoid overburdening participants with controls and audits. However the effort needed to obtain the CoM is considerable in relation to the simplification offered. If the CoM is to be maintained, the best solution would be to expand it to a certification of usual accounting practices and control mechanisms of the institution as a whole, which is in line with LERU's recommendations on the certification of trustworthy national funding systems.

Simplification

39. In order to attract and retain the very best researchers and institutions, funding for research and innovation must be sustainable. The diversity of EU funding schemes with differing financial rules, rules for participation and rules regarding intellectual property rights makes EU funded research complex and inaccessible. Simplification too often means simplification for the EC, not the recipients. There have been a number of simplification measures taken under both FP6 and FP7 that have not had a positive impact on the stakeholders or end users.

Reduce red-tape

40. Excessive reporting rules impair the efficiency of

³¹ For paragraphs 35-43 see questions 1 and 6 in COM (2011) 48

³² Figures based on Carvalho, Marcia da Graca "Report on simplifying the Implementation of Research Framework Programmes". The estimated 25% comprises both EC and beneficiary's overhead, with the latter including not only project overhead but also additional non-reimbursed overhead which universities typically incur in applying for and managing EU projects.

³³ http://www.leru.org/files/publications/Research_Funding_Note_final.pdf

research operations. LERU therefore requests the removal of timesheets since this is perceived as particularly burdensome, is often misconceived for researchers and is not very commonly used in national funding practice³⁴.

Avoid a radical shift towards output-based funding

41. LERU does not support a drastic shift towards output-based funding for research and innovation since it would bring about a whole new layer of complexity. Of the three feasible options being looked at by the EC for simplifying funding models (project-specific lump sums for entire projects; extended use of flat rates, lump sums and scales of units or a continuation of the current cost reporting approach but with a simplification of the cost eligibility criteria) LERU overwhelmingly supports the latter³⁵.

Sustainability of funding

42. In order for European research and innovation to attract the very best institutions in Europe and researchers globally, funding levels must be sustainable. There are currently too many schemes – characterised by high-levels of co-funding - that provide inadequate levels of funding. This has led to some members of LERU adopting institutional approaches not to permit researchers at their respective institutions to participate in some funding schemes under FP6 and FP7.

Continuity in good funding models

43. Whilst it may make sense from a policy perspective to bring different funding instruments and agencies together it is imperative that it is done in such a way which does not result in the development of a framework that is inaccessible and overly complex. Now is the time to make clear choices on the funding instruments that work well, and are taken forward in some capacity to a new research and innovation framework, and those that are unsustainable.

Conclusion

Make clear choices guided by the following principles:

- Excellence
- Balance between directed and non-directed research
- Environment for innovation to flourish
- Capacity building
- Simplification

44. European research and innovation policy is at a crossroads. Now is the time for Europe to make clear choices that will pave the way for the next generation. In order for Europe to compete with its traditional competitors, more investment will be needed. Funding for research and innovation must be spent wisely and efficiently to maximise Europe's social and economic growth. Research and innovation is an investment for now and the future and will act as a key driver for growth on a European and global level. As such, it is absolutely imperative that the EU's research and innovation programme is focused on funding the very best researchers and on promoting attractive research training and career development opportunities for men and especially for women.
45. Now is the time to take stock of the funding instruments that work well, and those that are not fit for purpose. It's essential that in doing so, Europe creates an optimum balance between top-down policy driven research, and bottom-up investigator-led research and innovation.
46. In order for all of this to work coherently, it's critical that Europe creates the best environment for innovation to flourish. This involves removing barriers so that researchers and entrepreneurs can bring ideas to market. So that the very best researchers and institutions can participate, the rules for engagement must be evenly balanced or, at the very least, up for negotiation in a non-prescribed environment.

³⁴ http://www.leru.org/files/publications/Research_Funding_Note_final.pdf

³⁵ Administrative costs for managing grants under the 7th Framework Programme for Research and Technological Development (FP7). LERU Note, April 2011.

47. Funding for research capacity building is important, but its objectives must be defined and operationalised separately from the research excellence agenda. In seeking synergies between an EU research and innovation framework and cohesion policy, research-appropriate instruments should be developed for capacity building that bring real benefit to universities and research performing institutions in the EU12 and other qualifying regions.

48. To enable all of this to happen there must be a move towards simplification which involves a clear step-change towards a more high-trust and risk-tolerant approach. It is clear that the money needed to simply administer an EU research programme such as FP7 currently is disproportionate and unsustainable. Instead of reinventing the wheel, the EC can use and adopt methods of accounting that are already tried and tested at national level. Rules for participation must be harmonised and simplified. EU research and innovation programmes must be accessible and sustainable.

Appendix

Our recommendations cover many of the questions in the Commission's Green Paper. The following list indicates which questions of the Green Paper are addressed in which paragraphs.

- Question 1: paragraphs 35-43
- Question 2: paragraphs 23-30
- Question 4: paragraph 18
- Question 6: paragraphs 35-43
- Question 8: paragraphs 31-34
- Question 9: paragraph 15
- Question 10: paragraph 17
- Question 15: paragraph 16, 28
- Question 17: paragraph 17
- Question 19: paragraph 30
- Question 20: paragraph 28
- Question 21: paragraph 9-10
- Question 22: paragraphs 7-8
- Question 23: paragraph 10-13
- Question 24: paragraph 14

About LERU

LERU was founded in 2002 as an association of research-intensive universities sharing the values of high-quality teaching in an environment of internationally competitive research. The League is committed to: education through an awareness of the frontiers of human understanding; the creation of new knowledge through basic research, which is the ultimate source of innovation in society; the promotion of research across a broad front, which creates a unique capacity to reconfigure activities in response to new opportunities and problems. The purpose of the League is to advocate these values, to influence policy in Europe and to develop best practice through mutual exchange of experience.

LERU publications

LERU publishes its views on research and higher education in several types of publications, including position papers, advice papers, briefing papers and notes.

Advice papers provide targeted, practical and detailed analyses of research and higher education matters. They anticipate developing or respond to ongoing issues of concern across a broad area of policy matters or research topics. Advice papers usually provide concrete recommendations for action to certain stakeholders at European, national or other levels.

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