European Commission

Driving Progress for Research and Innovation in Europe

The potential of R&I foundations

Written by the Expert Group on "Foundations, Venture Philanthropy and Social Investments"
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Research and Innovation

Driving Progress for Research and Innovation in Europe: The potential of R&I foundations

European Commission
Directorate-General for Research and Innovation
Directorate B - Open Innovation and Open Science
Unit B3 - SMEs, Financial instruments and State Aid
Contact PUENTE GONZALEZ Ignacio
E-mail Ignacio.PUENTE-GONZALEZ@ec.europa.eu
RTD-PUBLICATIONS@ec.europa.eu
European Commission
B-1049 Brussels

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EUROPEAN COMMISSION

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Edited by

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2018

Directorate-General for Research and Innovation
SMEs, Financial instruments and State Aid

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PREFACE

The Expert Group on "Foundations, Venture Philanthropy and Social Investments" was commissioned by the European Commission (EC) Directorate-General for Research and Innovation (DG RTD) to invite and facilitate philanthropic foundations and philanthropists to join other partners to foster the impact of the EU's knowledge economy. To achieve this purpose, framework conditions, innovative financial tools and policy actions, and inspiring forms of collaboration have to be explored. This report contains the results of this mandate for each of these three areas.

The Expert Group started in June 2017. It had the advantage of being able to build on the results of previous reports, research, advisory groups and conferences on foundations and research since 2005 including, in brief, "Giving More for Research in Europe: Strengthening the role of philanthropy in the financing of research" (EC, 2006); "Giving in Evidence – Fundraising from Philanthropy in European Universities" (EC, 2011); "The Role of Philanthropy in the Promotion of Responsible Research and Innovation" (EC, 2013); "The European Foundations for Research and Innovation (EUFORI) Study" (EC, 2015); the conference "Building Capacity for the Future" (EC, 2015) and the "PhiSi Conference Report" (EC, 2016).

The time has come to harvest the products of such work and to act. This report offers concrete steps to take and presents evidence-based examples of good practice of collaboration and promising financial tools. The recommendations are addressed to a variety of stakeholders: the European Commission (EC), national governments, research and innovation (R&I) foundations, venture philanthropists, research performing institutions (RPOs), businesses, private bankers, citizens, umbrella organisations and researchers. A strong call is made to these constituencies for readiness to explore and learn, for implementing new approaches, for inviting new actors to join and to collaborate. If the rules of the game change, all players have to rethink their positions and redefine their roles.

The Expert Group was composed of representatives of foundations, the business community and academia (see Annex 1). Working with experts from different disciplines and countries has been an enriching and inspiring experience. I would like to thank the experts for their dynamic and fruitful collaboration.

Finally, I would like to express my gratitude to those who have been supportive of the work of this Expert Group. First of all, many thanks are due to the European Commission Directorate-General for Research and Innovation, Unit B.3 SMEs, Financial Instruments and State Aids, for taking the lead in setting up this Expert Group and for recognizing foundations as important partners in finding solutions for societal challenges in Europe. We are particularly grateful to Ignacio Puente González of the DG RTD for his advice and commitment. The Expert Group also benefited from the input received from policy officers of different DGs and departments of the European Commission, and from Hanna Surmatz of the European Foundation Centre (EFC), Max von Abendroth of the Donor and Foundation Network Europe (DAFNE), Priscilla Boiardi of the European Venture Philanthropy Association (EVPA) and Stuart Pritchard of the Wellcome Trust who shared the ideas and outcomes of an informal working-group of foundations and the EC.

Many other stakeholders kindly offered information and guidance and they deserve a special thanks. A full list is set out in the Acknowledgements (Annex 2).

It is our hope that this report will meet with a positive response and create constituency and stakeholder engagement for the actions proposed.

Theo Schuyt, Chair

EXECUTIVE SUMMARY

The objective of the Expert Group on "Foundations, Venture Philanthropy and Social Investments" is to unleash the potential of R&I foundations and other providers of capital and expertise, such as venture philanthropists and social investors, through:

1. Advising on suitable *framework conditions* that will ease R&I foundations' establishment, expansion of activities and (cross-border) operations at national and European levels.

2. Guiding governments and other stakeholders on *policy actions and financial tools* to support R&I activities funded by R&I foundations.

3. Stimulating the *collaboration* of R&I foundations and other stakeholders (i.e. governments, business sector, research performing organisations, R&I umbrella organisations) in R&I activities at national and European levels.

The Expert Group has formulated recommendations for each of the three working areas, addressed to different stakeholders at the national and European levels.

1. Framework conditions

The purpose of these recommendations on framework conditions is to foster an enabling environment for Research and Innovation (R&I) foundations. The aim is to improve, elaborate and enhance existing framework conditions so as to ease R&I foundations' establishment, expansion of activities and (cross-border) operations at national and European levels, in order to facilitate cooperation between the European Commission (EC) and foundations as well as between foundations. These recommendations acknowledge both the independence of the EU decision-making process and the autonomous and voluntary role of research and innovation foundations.

The recommendations take into account the variations in the legal environment for foundations between countries, and the legal and philanthropic traditions in each specific country. Further, even though national legislation (both civil law and tax law) is often the most important factor, international legislation also has a strong effect on regulation of the philanthropic activities of foundations. This influence is even more important as philanthropy becomes more international in scope and culture.

Recommendation 1

Commission a feasibility study exploring the possibility of implementing a supranational legal form for European foundations which can be used as an instrument for cooperation with the EC.

Addressed to the European Commission and the member states

The Expert Group's suggestion is that the EC commissions a feasibility study tasked with exploring the possibility of using Article 20 in the Treaty on the Functioning of the European Union (TFEU) to implement a supranational legal form for European foundations which can be used as an instrument for cooperation with the EC. This recommendation is aimed at overcoming the failed previous attempts at creating a European Foundation Statute, in which one of the main challenges was the need to use Article 352 TFEU.

Recommendation 2

Formulate a common definition in EU legislation which enables a greater understanding of what a foundation is and facilitates cooperation between foundations and the EC.

Addressed to the European Commission

Accept (for the time being) member state foundations as EC eligible foundations if they are considered public-benefit foundations according to national law in their home country. This is intended to ease and stimulate collaboration between foundations and the EC as well as create a level playing field with the private sector in entering partnerships and collaborating with EC funding.

Recommendation 3

Launch a study into how foundations can use their endowments and their grants in a more flexible way.

Addressed to the European Commission

This study would consider the legislation regarding how foundations are presently able to use their endowments and their grants, and the limitations that currently exist in civil and tax law in some European countries. Recommendations for more flexible use of endowments and grants would first have to address the civil and tax law constraints. Links within the report's text to recommendations around innovative financial tools and collaboration provide illustrations of more flexible uses.

Recommendation 4

Enhance policy coherence on the EU level regarding philanthropic foundations.

Addressed to the European Commission and philanthropic organisations such as EFC[1], DAFNE[2] and the Global NPO Coalition on FATF.[3]

The Expert Group's suggestion is that the European Commission engages in policy dialogue with relevant philanthropic organisations into how the policy landscape for foundations within the EU could be made more enabling, supportive and coherent.

Recommendation 5

Enhance cross-border giving and philanthropic investment by philanthropic foundations.

Addressed to the European Commission, EFC and DAFNE

The Expert Group's suggestion is to create a website resource which pools national knowledge and know-how, providing details on existing or emerging member state tax authority procedures as well as rules related to cross-border giving and philanthropic investment by philanthropic foundations.

[1] European Foundation Centre.
[2] Donors and Foundations Networks in Europe.
[3] The Financial Action Task Force.

2. Innovative financial tools and policy actions

Many research and innovation initiatives have potential for great public benefit, but their incubation and establishment on the market needs long-term, patient financing and they can be a high risk investment. Like social enterprises, they need non-financial expertise and flexible combinations of philanthropic and investment funding in their early stages if they are to focus on maximising social value and avoid mission drift towards prioritising income generation. The independent governance and assets of foundations mean foundations can deploy their funds in innovative and flexible ways to pursue their mission. They can provide dedicated growth support for research and innovation ventures at the point where they need to supplement grant funding with loans or patient investments, but are not yet sufficiently developed to attract full-blown commercial finance. A minority of foundations are using innovative funding approaches, mainly in the social sector. Governments, EC, foundations and intermediaries could incentivise R&I foundations to play a greater part in funding innovative ventures through an integrated set of policies and actions with four key aims: 1) to strengthen expertise in, and access to, innovative funding tools amongst foundations and philanthropic funders (supply side); 2) to build the business capacity of innovative ventures seeking funding (demand side); 3) to extend the range of innovative financial tools available; 4) and to build the supply of funding for research and innovation.

2.1 Facilitate market entry (supply side)

Recommendation 6

Support skills-building and mentoring programmes to strengthen expertise amongst R&I foundations in using innovative funding such as Venture Philanthropy and Social Investment to achieve their mission.

Addressed to the European Commission, national governments, foundations, member and infrastructure groups

To adopt innovative funding approaches requires encouragement in new ways of thinking, as well as access to business and finance expertise beyond traditional foundation grant-making. There is a dynamic policy opportunity for governments, the EU and others to stimulate innovative funding amongst foundations and other funders through supporting skills-building and mentoring programmes which bridge knowledge gaps and build new expertise.

The inclusion of practical case studies of innovative funding would provide experimental learning opportunities and examples which could be publicly-shared. Besides such collaborative, experiential and on-site learning programmes, an 'open library' for Venture Philanthropy and Social Investment should be set up, providing wide access to effective online and more traditional educational opportunities.

2.2 Strengthen the pipeline of innovations seeking funding and investment (demand side)

Recommendation 7

Set up a business, finance and investment-readiness programme to build the organisational capacity and ability of research and innovation ventures to attract growth funding.

Addressed to the European Commission, national governments and foundations

Research and innovation initiatives, including in university departments and research institutes, often stall in the 'valley of death' investment gap because they lack the expertise or maturity to develop promising ideas into marketable applications and products which could attract commercial investment.

Governments, foundations and venture philanthropists could make an invaluable contribution to the promotion of research and innovation through policy action to support 'investment-readiness' programmes. This would aim at building organisational capacity and enabling entrepreneurial ventures to develop market-based solutions which could attract further and commercial investment. Support could include funding for intermediaries which support enterprises in structuring and raising mixed or hybrid packages of grant and investment funding.

2.3 Provide innovative 'full spectrum' finance instruments

Recommendation 8

Incentivise the creation of blueprints for using and replicating innovative finance models by providing support for practical demonstration projects.

Addressed to the European Commission, national governments and umbrella or member bodies for foundations

The availability of a full spectrum range of financial approaches and instruments is crucial to enabling promising research-based innovations to cross the 'valley of death' and progress to full potential. To stimulate the use of new financing models to progress research and innovation governments, the EU and foundation member bodies could support pilot demonstration projects dedicated to researching, developing and sharing learning on funding solutions. Knowledge dissemination could be achieved by providing grants to intermediaries, foundations and ventures who structure and implement innovative financing packages, and commit to the creation and open publication of blueprints, guidelines and shared learning.

Recommendation 9

Create a dedicated guarantee instrument with straightforward conditions adapted to foundation requirements which would enhance their capacity to make mission-related investments in research and innovation ventures.

Addressed to the European Commission, national governments and the EIF

In many European countries national foundation regulations are not supportive of investment strategies which prioritise impact on mission-achievement rather than optimisation of risk and return. An additional financial facility to help foundations where they cannot make investments which balance social as against financial returns and risks would be the introduction of a European foundations guarantee instrument. The *European Investment Fund* (EIF) offers guarantees and counter-guarantees to financial intermediaries to support impact investing in Europe.[4] If the guarantee programme were extended and adapted specifically for foundations, this would enable foundations seeking to expand investment in mission-related research and innovation to make fuller use of their unique opportunities to progress higher-risk early stage ventures with high potential impact.

[4] European Investment Fund (December, 2016). EaSI Guarantee Instrument. http://www.eif.org/what_we_do/microfinance/easi/easi-guarantee-instrument/index.htm

2.4. Strengthen the supply of funding

Recommendation 10

Create a new 'Catalytic Research & Innovation Fund for Europe' for foundations, venture philanthropists and other financial stakeholders, which can apply the full spectrum of innovative finance.

Addressed to the European Commission

National foundation regulations which are not supportive of investment aimed at impact on mission rather than optimisation of risk and return inhibit foundations from making full use of their options in balancing social as against financial return (and risk), or investing in short or long-term solutions. To help overcome internal and external barriers to foundations in making use of innovative financial tools and to extend partnership opportunities, a new and accessible vehicle to implement new financing models and provide additional resources could be of great benefit to philanthropic institutions and other investors. This 'Catalytic Research & Innovation Fund for Europe' should be structured specifically to meet foundations' requirements and operating conditions. It would be explicitly empowered to deploy its funds with 'whatever it takes' tailored approaches to developing research and innovations with a high probability of achieving significant research, technological, environmental or social impact. Achievement of the mission would be pre-eminent and apply whether the Fund were:

- funding or investing in not-for-profit, hybrid or for-profit entities;
- blending different philanthropic, public and private sources of capital;
- de-risking projects with exceptional growth potential and value to society; or
- deploying finance fully or partly paid back to the Fund.

The European Commission should make budget available in accordance with its priorities for seeding the fund as well as matching funds provided by foundations.

Recommendation 11

Set up an expert forum with the private finance sector to increase its engagement with foundations and research stakeholders and identify research and innovation development opportunities using social investment and venture philanthropy.

Addressed to the European Commission, the R&I foundation community and the private finance sector

Engaging the private finance sector is essential to building a full-scale thriving innovative finance market, and ensuring that innovations maximise their reach, scale and potential benefit to society. Innovative financing solutions are not fully understood, or regarded as core business, by many in the private finance sector, leading to a loss of both financial and research and innovation opportunities. This represents a policy and market gap which could be addressed through building stronger links between foundations, the banking community and stakeholders in the European Research Area (ERA), to exchange understanding, expertise and information on investment opportunities in research projects (national and/or European).

3. Collaborative approaches

Foundations can create synergy through collaboration with different stakeholders in the research and innovation arena, including with other foundations, governments, the business sector and research performing organisations (RPOs). Collaborations between different funders and actors can improve the efficiency of individual actions in accelerating the advancement of science and transforming knowledge into solutions to overcome the great challenges ahead. Taking a *mission-oriented approach* to global challenges can provide a guiding objective to align individual efforts and to stimulate innovation in how different funders (and other research and innovation stakeholders) collaborate. In order to increase the impact and visibility of existing initiatives such as pooled research funds between foundations or matching funding schemes between foundations and governments, this report proposes the following three over-arching actions: 1) improve infrastructure and information sharing; 2) exploit effective multi-stakeholder partnerships; 3) stimulate collaboration to generate impact on society. These over-arching actions are divided into eight specific recommendations.

3.1. Improve infrastructure and information sharing

There is a need for improved dialogue, information exchange, networking and cooperation between foundations that support R&I, and between foundations and other public and private funders. A collaborative infrastructure is an important requisite for connecting different stakeholders and exploring and stimulating opportunities for collaboration.

Recommendation 12

Stimulate the infrastructure for information-sharing, networking, policy dialogue and collaboration between R&I foundations and other stakeholders at the national and European levels.

Addressed to national governments, the European Commission, R&I foundations (and umbrella organisations of foundations) and the research community

In order to stimulate a collaboration infrastructure, the Expert Group's specific suggestions, amongst other related recommendations in this report, are: creating an inter-Directorate-General (DG) working-group of policy officers (engaged in topics related to philanthropy) within different policy areas of different DGs; organising regular meetings between foundations, other funders, R&I umbrella organisations, the research community and the inter-DG working-group; assigning points of contact and contact persons for foundations within different DGs.

Recommendation 13

Assess the feasibility of a two-sided online platform for matching R&I with Venture Philanthropy and Social Investment.

Addressed to the European Commission

An online matching platform for connecting demand and supply would facilitate the promotion, discovery, filtering, interaction, follow-up and optimisation of the current philanthropy and social investment marketplace. This double-sided platform would integrate philanthropy, venture and social investment, venture capital, and grant-makers on the one hand; and researchers, entrepreneurs, and NGOs on the other.

3.2 Exploit effective multi-stakeholder partnerships

Existing experience of cooperation between foundations and between foundations and other public and private funders shows collaboration multiplies the impact of individual actions. Increasing the visibility of such best practices could spark new synergies in the R&I 'ecosystem'. Recommendations 14-18 are based on a selection of different collaborative funding approaches, tools and instruments that have proved effective, replicable and implementable.

Recommendation 14

Increase the visibility, and raise awareness of existing mechanisms of cooperation between the European Commission and research foundations in Europe.[5]

Addressed to the European Commission and the R&I foundation community

Increasing the visibility of collaborative approaches could motivate others to follow their example. Existing mechanisms of cooperation provide the framework for a plethora of initiatives to spark synergies between the European Commission and foundations and increase the efficiency and impact of public and private funding in research and innovation.

Recommendation 15

Stimulate the creation of pooled research funds between foundations to fund R&I.

Addressed to the R&I foundation community and national governments

Encouraging the formation of pooled foundation research funds could help tackle the practical challenges R&I is facing on the ground. A pooled fund is a collective funding vehicle in which a number of contributors invest and from which financial backing is provided. Pooled funds formed by foundations can generate additional impact for research funding through streamlining the application, award and reporting processes.

Recommendation 16

Develop joint initiatives to stimulate cross-border R&I funding.

Addressed to the R&I foundation community

Although the existing barriers for transnational cooperation should not be underestimated, a will for cooperation based on mutual understanding, trust and openness could provide a platform for fostering joint initiatives with greater impact and transformative capacity.

Recommendation 17

Stimulate foundation donations to universities and other Research Performing Organisations (RPOs) through matched funding schemes.

Addressed to national governments

[5] This recommendation is inspired (but complemented) by the work done by a group of foundations, coordinated by the Wellcome Trust, and the EC, to discuss about future synergies between foundations and the EC.

In the model of matched funding, governments offer a pre-determined amount to supplement or match private contributions donated to universities and other RPOs. Matched funding schemes motivate foundations as they are attracted by the additional impact which 'matched euros' can generate, and may also encourage larger donations. As an added value, the scheme leads to an increase in mutual commitment and dialogue between universities, RPOs and foundations.

Recommendation 18

Seek unconventional partnerships between Research Performing Organisations (RPOs), foundations and the business sector to spur a win-win innovation infrastructure.

Addressed to the business sector, RPOs and the R&I foundation community

Companies, foundations and research organisations are encouraged to make joint investments in research and innovation, because unconventional partnerships between different sectors can spur innovation, and effectively embrace and exploit emerging ideas and inventions. Through joint investments, academic research supports the long-term competitiveness of companies while researchers get valuable experience in areas of direct business relevance.

3.3 Stimulate collaboration to generate impact in society: interactions between R&I providers with wider society

Recommendation 19

Increase the involvement of R&I foundations in further stimulating 'Science for and with Society' in Europe, to contribute to a more open and responsible R&I system.

Addressed to the R&I foundation community, RPOs, the European Commission and national governments

Foundations play an important role in raising awareness of the importance of research in society, in disseminating research results and engaging citizens in R&I initiatives and agenda-setting. As independent and neutral institutions, foundations can help bridge gaps between governments, researchers, the private sector and citizens in the R&I development cycle, and contribute to a more responsible and open research and innovation system.

INTRODUCTION

Since the 1990s the number of foundations in the EU fostering Research and Innovation (R&I) has grown exponentially. The EUFORI-Study on European Foundations for Research and Innovation signalled a strong and vibrant EU foundation community supporting R&I.[6] Figures show at minimum approximately €5 billion aggregate research funding is provided annually by R&I foundations, that also possess estimated aggregate assets of at least €127 billion.

It is of great significance that the European Commission (EC), particularly the Directorate-General for Research and Innovation (DG RTD), has taken serious notice of the magnitude of this research commitment of the European foundation community.

The EC is committed to exploring different options within the research Framework Programme 9 (FP9) and post-Horizon 2020 programme for increasing the involvement of R&I foundations in the European Union (EU). The few existing opportunities to involve foundations in partnerships have required tailor-made solutions which have been resource intensive and thus only feasible for the largest foundations. Until now EC models of grant-making were mainly focused on public-private business partnerships. By including a focus on foundations and philanthropic actors, the Expert Group on "Foundations, Venture Philanthropy and Social Investments" hopes and expects to see this dual model opened up and enlarged in the development of FP9 and post-Horizon 2020 programmes. Foundations, however, bring much more than financial resources. They are rooted in society, and derive their legitimacy from the many contacts with the 'capillaries' in society that enable them to function as eyes and ears for research and innovation[7]. They possess extensive knowledge and expertise, and many are locally-based, a direct part of democracy and civic involvement. Inviting foundations and philanthropic institutions to join and share EC research policy signifies also the change towards 'Open Science', 'Open Access' and towards 'Science with and for Society' (SwafS)[8].

In contrast to the FP7 and H2020 models for research applications, the Expert Group recommends decentralization and philanthropic eligibility in the forthcoming programmes. Decentralization of research policy and decision-making from the EC to national and regional platforms could enhance the rootedness, embeddedness and legitimacy of research grants (and of the EC at large). Philanthropic eligibility should be promoted by allowing R&I foundations to become stakeholders in the decision-making and funding process, recognizing the potential of civic commitment to the European knowledge economy.

This Expert Group was appointed to help pave this new way. The Expert Group was encouraged even to formulate 'disruptive' ideas and recommendations. It was mandated not to limit its focus to FP9 and Horizon 2020 but to widen its scope to encompass specific framework conditions that can only be addressed at the level of member states.

[6] Gouwenberg, B.M. et al. (2015) *EUFORI Study. Synthesis report.* Brussels: European Commission, DG for Research and Innovation. Available at: www.euforistudy.eu
[7] Ibid.
[8] See: https://ec.europa.eu/programmes/horizon2020/en/h2020-section/science-and-society

The same open approach applied to the stakeholders to whom recommendations were to be addressed, and the final range included governments, foundations and their infrastructure and umbrella bodies, research institutes and businesses. In line with this, the Expert Group consisted of representatives from foundations, business and academia, in close contact with DG RTD officials and foundation and venture philanthropy umbrella organisations. The Expert Group was charged to formulate a set of policy recommendations under three main topic headings:

1. Identify the **framework conditions** that could unleash the potential of R&I Foundations and Venture Philanthropists supporting national and Pan-European R&I activities. The group should describe and prioritise the untapped opportunities and challenges that the different framework conditions, such as tax incentives, could present to R&I foundations.
2. Analyse the **policy actions and innovative financial tools** available to governments and other stakeholders to leverage support, especially from R&I foundations, to get R&I ventures established on the market.
3. Explore **collaborative approaches** between R&I foundations, governments and other stakeholders that could foster R&I activities. The group should analyse modes of collaboration, and describe how they added value to partners and could be replicated.

For this report, the Expert Group has chosen to adopt a functional definition of foundations as part of institutional philanthropy, based on *European Foundation Centre* (EFC) and academic sources[9]:

Foundations are philanthropic purpose-driven[10]*, separately constituted non-profit organisations. They have no members or shareholders. They have their own established and reliable source of income, usually but not exclusively from an endowment. They are private, self-governing, non-profit- distributing, serving a public purpose.*

Framework conditions

One of the first obstacles that the Expert Group had to tackle was - and is - the diversity in national legal regulations regarding foundations. There is no common legal definition of a foundation within the EU member states, nor are there common regulations with regard to the way foundations are allowed to operate or use their capital. In some countries, foundations invest in R&I by using their endowment and/or carrying out commercial activities; in others grant-making is the only legally accepted form. Therefore, the European Commission and the member states are encouraged to create an enabling legal environment for foundations.

As an important framework condition the Expert Group recommends the formulation of a common definition of what a European foundation is and stands for, in order to make

[9] Sources:
- Anheier, H., & Daly, S. (Eds.) (2007) *The Politics of Foundations: A Comparative Analysis,* London: Routledge.
- See: http://www.efc.be/news/the-efc-launches-the-institutional-philanthropy-spectrum/
- European Foundation Centre (2007) *Foundations' legal and fiscal environments. Mapping the European Union of 27,* Brussels: European Foundation Centre.

[10] To be distinguished from politically- driven and market-driven organisations.

it easier for foundations to partake in FP9. For the time being – regulatory change will take time - the status of legitimized public benefit foundation by national law in the member state of founding should be sufficient to be eligible. This is intended to ease and stimulate collaboration between foundations and the EC as well as create a level playing field with the private sector in entering partnerships and collaborating with EU funding.

Innovative financial tools and policy actions

In the second section, the Expert Group takes as its starting point the significant financing gap, or 'valley of death', which is holding back the progress of promising research and innovation. To cross the bridge from early-stage high-risk proof-of-concept phases, which cannot attract commercial investment, to the development of full social and market potential, research and innovation require access to a range of flexible funding options. Because of their independence and flexibility, R&I foundations have a unique opportunity to provide support for early-stage or experimental research and innovations which have great potential for social benefit but as yet uncertain outcomes. Foundations are well-placed to apply the innovative funding tools which have proved so successful in growing social enterprise to the growth of research and innovation. Through adopting innovative financial solutions such as grants blended with forms of debt and equity, high-engagement venture philanthropy or social investment (aimed at both social and financial return), foundations can enable innovations to prioritise social impact potential whilst also developing financial sustainability.

The Expert Group invites R&I foundations to learn new ways of achieving their mission, and to work with new partners. Governments are called on to take the lead in empowering and incentivising foundations and others to develop full spectrum funding and use innovative financial tools to help progress research and innovation, as the examples of the UK and Portugal show.

Collaborative approaches

In section three collaborative opportunities are presented and recommended for all actors involved. The EU foundation community comprises a small number of professionally-staffed and very large foundations; the majority however, consists of small, specialised and medium-sized institutions. Most smaller and specialised foundations use R&I as a means to address societal challenges. The smaller foundations in particular value their independence and autonomy and are often locally-based, rooted in and committed to their own communities. Incentives for achieving greater impact and efficiency, and for scaling-up the benefits of their funding, would be likely to heighten their motivation to collaborate with EC-funded projects or programmes, as well as with government or business.

If bringing different actors together is to lead to concrete actions, this has in many cases to be grounded in shared missions. Mission-driven alignments create opportunities for connecting different actors through new forms of partnerships.[11] Potential alignments

[11] See also the report: Mazzucato, M. (2018) *Mission-Oriented Research & Innovation in the European Union - A problem-solving approach to fuel innovation-led growth*, Brussels: EC DG Research and Innovation. Available at: https://publications.europa.eu/portal2012-portlet/html/downloadHandler.jsp?identifier=5b2811d1-16be-11e8-9253-01aa75ed71a1&format=pdf&language=en&productionSystem=cellar&part=

have to be made at different levels: alignment of the largest foundations at EC and or national levels and of the smaller and medium-sized foundations at national, regional or local levels.

The Expert Group recommends that foundations should be encouraged to play a role in initiating innovative R&I projects because of their independence and flexible private resources.

Favourable conditions

Europe has a long history of philanthropy and charity, stretching from ancient times through the Middle Ages to the 21st century. Today philanthropy, "private, voluntary action to serve the public good"[12] has a central place on stage, in Europe and globally. A first (incomplete) feasibility study of Europe's philanthropic contributions indicated that they amounted to an aggregate total of approximately €90 billion annually.[13] In a favourable context of private wealth, of demographic trends around increased longevity and foremost of a cultural shift towards greater civic social responsibility, popularly called the 'Do it Yourself' trend, individuals are increasingly motivated to launch foundations. Since the 1990s the number of new family or corporately-founded, private and community foundations, and donor advised funds has been growing fast. They join the existing EU foundation community, some of which dates back to the 14th century. Over the next twenty years the largest inter-generational financial transfer in EU history is expected to take place. Europe is entering a potential "Golden Age of Philanthropy" that will occur in many EU member-states.[14] The report of this Expert Group reflects and expresses this promising and hopeful future. There is a world to win, but if the EU – and the EU knowledge economy – is to profit fully from the opportunity, then its structures and cultures need to be adapted.

A European social model?

Europe harbours a strong civil society alongside government and market. A long history of philanthropic effort driven by religion and civic action has led to the creation of an institutionalized 'social midfield' of voluntary and philanthropic organisations which lie between the citizen and the state. It is important to be aware of the fact that "Philanthropy is a European invention"[15].

The policy of the EC to open its research programmes to the European foundation community, signifies a step beyond the dual model of the state as either 'government – or market'. By integrating philanthropy into the European welfare state model, a new 'diversified social model' will appear, echoing the slogan of the French Revolution: freedom (the market), equality (government) and fraternity (philanthropic commitment).

[12] Payton, R.L. (1988) *Voluntary Action for the Public Good.* New York: Macmillan.
Schuyt, Th.N.M. (2013). *Philanthropy and the Philanthropy Sector. An Introduction,* Burlington, USA: Ashgate
[13] Hoolwerf, B. and Schuyt, Th. (Eds.) (2017) *Giving in Europe; The State of Research on Giving in 20 European Countries,* Amsterdam: Lenthe Publishers. Available at: www.givingineurope.eu
[14] Schuyt, Th.N.M. (2010) ' Philanthropy in European welfare states; a challenging promise?' In: *Review of Administrative Sciences*. 76 (4) 774-789.
[15] Adam, T. (Ed.) (2004) *Philanthropy, Patronage and Civil Society. Experiences from Germany, Great Britain and North America,* Bloomington: Indiana Press., p.5.

1. FRAMEWORK CONDITIONS

Introduction

The purpose of the recommendations below is to improve, elaborate and enhance existing framework conditions so as to ease Research and Innovation (R&I) foundations' establishment, expansion of activities and (cross-border) operations at national and European levels, in the belief that this is ultimately of value to the EU. Finding ways of systematically exchanging information on the respective objectives and research and innovation agendas, as well as finding ways of cooperating and coordinating approaches between the EC and research and innovation foundations are of utmost importance. It is of course at the same time important to stress both the independence of the EU decision-making process as well as the autonomous and voluntary role of research and innovation foundations.

A specific context in which these recommendations have the potential to support the participation of R&I foundations is the next Framework Programme, FP9. They may enable participation of foundations in FP9 in a manner that respects their autonomy and does not position foundations as a replacement for public or private for-profit research funding. At the same time, there should be no compromise on the absolute transparency of processes through which public funds are accessible. Collaborative engagement of foundations should provide additional benefits for all parties beyond current arrangements.

The legal environment for foundations varies from country to country and reflects both legal traditions and philanthropic traditions in each specific country. And even though national legislation (both civil law and tax law) is often the most important factor, international legislation also has a strong effect on regulation of the philanthropic activities of foundations. This becomes all the more important as philanthropy becomes more international in scope and culture.

It is therefore challenging to give advice on how to create an enabling environment for foundations at EU level. By better understanding the legal context that foundations inhabit and looking at some common characteristics of the legislative landscapes across EU member states, the EC will be better placed to identify the issues and actions with which to create an enabling environment for foundations.

When it comes to national legislation there are two main legal traditions within Europe: the civil law system and the common law system. Most European countries adhere to a civil law system which recognises the foundation as a legal form itself. Common law systems focus on the public-benefit character of the activities of the foundation. The foundation, as long as it is considered public-benefit, can then take different legal forms such as incorporated or unincorporated association, trust or company limited by guarantee. Differences in legal system and organisational form will of course have an impact on which actions are possible, or even desirable, to take and therefore there must be awareness of these when trying to create an enabling environment for philanthropic foundations.

Recommendation 1

Commission a feasibility study exploring the possibility of implementing a supranational legal form for institutional philanthropy which can be used as an instrument for cooperation with the EC.

Addressed to the European Commission and the member states

A European Foundation Statute aims at easing public-private partnerships between the EC and foundations by creating a common definition of what a philanthropic foundation is as well as easing cross-border giving and philanthropic investment by philanthropic foundations through harmonising legal rules across member states. A European Foundation Statute would be an optional tool which would be instituted alongside domestic legislation. Such a tool would solve the same issues regarding public-private partnerships between the EC and foundations as a common definition of philanthropic foundations within the EU, with the added benefit of also easing problems regarding cross-border giving and philanthropic investment by philanthropic foundations.

There have been previous attempts at creating a European Foundation Statute and one of the main challenges has been the need to use Article 352 of the Treaty on the Functioning of the European Union (TFEU) (formerly Article 308 EC) since it demands unanimous agreement within the Council on the basis of a Commission proposal that has also received the consent of the European Parliament.[16] A recent report from EFC and DAFNE (2018)[17] suggests using Article 20 TFEU and its enhanced cooperation mechanism. This sets out that measures adopted under Article 20 TFEU are only applicable within the territory of the participating member states. The report suggests either creating regulation for a supranational legal form or considering the potential for an EU Directive that would create a new legal form for institutional philanthropy at the national level, with a minimum common denominator in all EU countries.

The Expert Group's suggestion is that the EC commissions a feasibility study tasked with exploring the possibility of using Article 20 TFEU to implement a supranational legal form for institutional philanthropy which can be used as an instrument for cooperation with the EC.

This Recommendation is important for Recommendation 9 as it would make clear the population of foundations that were eligible to make mission-related investments in research-based innovations. Further, it would facilitate Recommendation 14, on opportunities for programmatic cooperation between the European Commission and large European research foundations

Recommendation 2

Formulate a common definition in EU legislation which enables a greater understanding of what a foundation is and facilitates cooperation between foundations and the EC.

Addressed to the European Commission

The legal environment for foundations varies from country to country and reflects both legal traditions and philanthropic traditions in each specific country.[18] Regulation of

[16] Article 352(1) TFEU, see also: Hanf, D. (2011) *Adopting a Supranational European Foundation Statute: Which Legal Bases are available to the EU since the entry into force of the Lisbon Treaty?*, Brussels: EFC, p.21.
[17] Breen, O. B. (2018) *Enlarging the space for European philanthropy*, Brussels: EFC & DAFNE.
[18] European Foundation Centre (2015) *Comparative highlights of foundation laws. The operating environment for foundations in Europe*, Bussels: EFC.

philanthropy is primarily a matter for national legislators and harmonized laws on philanthropy may neither currently be sought nor may necessarily be seen as feasible.[19] However it is important for the EC to have a common working definition of foundation in order to better enable foundation and EC interaction within the next Framework Programme (FP9) as well as ensuring that foundations have a level playing field with the private sector in entering partnerships and collaborating with EC funding. When drafting such suggestions, it is important to make sure that foundations are clearly seen as not replacing but as complementing public or private for-profit research funding.

The current framework for public-private partnerships within Horizon 2020 has ill-fitting criteria for foundations and long lead times more suited to industry, something which makes it harder for foundations to take part in such collaborations. Since it is usually the case that each public-private partnership between the EU and a public-benefit foundation is crafted specifically for that specific collaboration, the process is time-consuming and administratively burdensome for both the EC and the foundation. The process might also exclude smaller foundations, regardless of their expertise, if they lack the administrative resources it requires. In the context of stimulating collaboration between foundations and the EC, a solution might be that a philanthropic organisation is allowed to collaborate with the EC as a public benefit foundation if it is recognised as such by national law in the member state where it is founded.

The Recommendation is thus that philanthropic organisations that are considered public-benefit foundations according to national law in one member-state should be treated as such by the EC. This is intended to ease and stimulate collaboration between foundations and the EC as well as creating a level playing field with the private sector in entering partnerships and collaborating with EU funding.

This Recommendation is important for all of the framework condition recommendations that follow, and also for each of the recommendations relating to innovative finance and enhanced collaboration. Most obviously, it facilitates Recommendation 14 as a common definition would underpin programmatic cooperation between the EC and large European R&I foundations.

Recommendation 3

Launch a study into how foundations can use their endowment and grants in a more flexible way.

Addressed to the European Commission

One of the goals of the FP9 programme is to increase the rate of innovations that reach the market and one of the identified obstacles is lack of funding in the early process of reaching the market.[20] Previous studies of foundations have shown that they are skilled at identifying and funding ground-breaking research in many areas but that a significant obstacle is the legal rules on how foundations may use their endowments, both in regard

[19] Breen, O. B. (2018) Op.cit.
[20] European Commission (2017) *LAB – FAB – APP — Investing in the European future we want. Report of the independent High Level Group on maximising the impact of EU Research & Innovation Programmes,* Brussels: EC, DG Research and Innovation. Available at: http://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/hlg_2017_report.pdf

to civil law and with regard to tax law.[21] Another significant obstacle is the legal rules on how foundations may engage in grant-making. One example is that foundations that want to use their grant funds to make below-market rate loans or invest in their grantees instead of giving a 'gift' to organisations working within the foundations field of purpose will be prevented from doing so in many EU member states.[22]

In most EU member states, there are prudency rules regarding the investment of the foundation's endowment that task the board of the foundation to safeguard the real value of the capital of the foundation.[23] In some member states endowment preservation is even seen as one fundamental characteristic of foundations. Many of these rules are put in place either to safeguard the wishes of the individual donor (who may no longer be alive) and to safeguard donor will and preserve the attractiveness to donors of foundation creation, or in order to keep a level playing field between for-profit companies and non-profit organisations in the marketplace. In some EU member states mission related investment (MRI) is not seen as part of fulfilling the mission of the foundation but part of investing the endowment and as such may be in conflict with both civil law (not being a prudent investment of the capital) and tax law (not being part of mission fulfilment of the foundation and thus not eligible for preferential tax treatment).

These restrictions place limits on the degree of risk that foundations can take when investing their endowment and therefore may restrict the possibilities of funding innovations in their early stage of marketisation and make certain types investments problematic for foundations. For example, endowed foundations that seek to use their capital to invest in or give loans to companies and organisations that support their purpose would be prevented from doing so by prudency rules. Further, foundations that want to use their endowment to make below-market rate loans to organisations working within the foundation's field of purpose will be prevented from doing so in many EU member states. This is because the 'loss' that would be made would be seen as at odds with mission fulfilment and would thus risk the tax-exempt status of the foundation. This also makes using the endowment to invest in social impact bonds or working with venture philanthropy methods problematic for foundations in some EU member states.

In almost all European countries foundations are allowed to engage in income-generating activities[24], although the majority of those countries impose some limits on the nature of activities permitted. The most common limitations are that any income-generating activity be related (i.e. it must facilitate the foundation's purposes) and/or ancillary (i.e. it should be supplementary, and subordinate) to the foundation's core activities. As it is often unclear whether an economic activity is allowed according to the respective foundation law and tax laws, this situation has become an issue for foundations seeking to be active in this way.[25]

To these external restrictions on the allocation of grant funds must also be added the internal restrictions of individual foundations. Many foundations are restricted by their founding documents as to which kind of purposes they can fund, in which geographical areas they are allowed to be active, in which ways (for instance only by certain types of

[21] European Foundation Centre (2015) *Comparative highlights of foundation laws. The operating environment for foundations in Europe*, Brussels: EFC.
[22] Ibid
[23] Ibid
[24] Economic activity is here understood as "trade or business activity involving the sale of goods and services".
[25] European Foundation Centre (2015) *Comparative highlights of foundation laws. The operating environment for foundations in Europe.* Brussels: EFC.

grants) they can support R&I, etc. and this also needs to be considered in partnership discussions between the EU and R&I foundations. When considering ways of loosening this up it is important to remember that many of these rules are put in by the original funder and that too much flexibility might lessen the attractiveness to donors of foundation creation.

The Expert Group's suggestion is that the EC launches a study into the legislation regarding how foundations are able to use their grants, their endowment as well as how they may spend their income and how the legislation on civil law and tax law could become more flexible.

Recommendation 3 provides a framework context for Recommendations 8 and 9 on developing, sharing information about and stimulating the use of innovative financial solutions. Similarly, they support Recommendation 11 on engagement with the private finance sector. It is also relevant to Recommendation 15 on pooling foundation research funds for greater impact.

Recommendation 4

Enhance policy coherence on the EU level regarding philanthropic foundations.
Addressed to the European Commission and philanthropic organisations such as EFC, DAFNE and the Global NPO Coalition on FATF[26]

Besides national civil- and tax law that directly target and impact foundations, there are several other laws and regulations that have an impact on the regulatory environment of foundations. The majority of these regulations are drafted for good reasons but are not always implemented in a way that suits the philanthropic sector or by experts knowledgeable about foundations and their specific characteristics. Taken together these laws and regulations place significant administrative burdens on the foundation sector as well as hampering new and innovative ways of working.[27]

New legislation with impact on the philanthropic sector should be risk-based, proportionate and evidenced-based, and adapted to the philanthropic sector. It is therefore important to involve relevant philanthropic organisations within the foundation sector when legislation that affects philanthropic foundations is drafted so that unintended consequences and unnecessary administrative burdens can be minimised.

The Expert Group's suggestion is that EC engages in policy dialogue with relevant philanthropic organisations into how the policy landscape for foundations within the EU could be made more enabling, supportive and coherent.

The relevance of this recommendation is highlighted by the recommendations that follow. Recommendation 9 calls for creation of a dedicated guarantee instrument with straightforward conditions for foundations making mission-related investments in research-based innovations. The policy dialogue recommended here would facilitate the development of straightforward conditions. Recommendation 15, on the creation of pooled foundation research funds already noted above as being linked to Recommendation 3, would be facilitated by this recommendation. Finally,

[26] The Financial Action Task Force
[27] Breen, O. B. (2018) *Enlarging the space for European philanthropy*, Brussels: EFC & DAFNE.

Recommendation 18, on stimulation of cooperation and partnership between RPOs, foundations and the business sector, is underpinned by this recommendation.

Recommendation 5

Enhance cross-border giving and philanthropic investment by philanthropic foundations.
Addressed to the European Commission, EFC and DAFNE

Even though in theory there should be minimal problems with cross-border giving between EU member states given the Maastricht Treaty regarding the free movement of capital and the non-discrimination principles in the field of cross-border philanthropy taxation, issues still persist. Obstacles include instances where different national legislations within the EU regarding civil law and tax law may impede supporting organisations and causes in other countries.[28] One report estimates the costs of the barriers to cross-border giving by philanthropic foundations are as high as €90 million to €101.7 million per year, not including incalculable costs such as costs of changing the legal residence of the foundation, costs of reduplication, psychological costs, costs of failure, etc. [29]

Foundations, especially large research and innovation (R&I) foundations, are becoming more internationally oriented and their ability to operate cross-borders becomes increasingly important.[30] Even though most member states allow domestic foundations to fund projects outside of their country of origin there are some member states where doing so may jeopardize the tax status of the foundation.[31] There are also examples of member states that do not recognise the legal personality of foreign-based public-benefit foundations and do not treat them in the same way as domestic foundations if they fund activities or invest capital.[32] Even more worrisome is that some EU member states, such as Hungary, are implementing foreign funding restrictions to non-governmental organisations (NGOs) thus challenging the freedom of capital with the EU and cross-border giving by philanthropic foundations.

The recent EFC / DAFNE report on European philanthropy highlights the lack of clarity and lack of publicly available information around comparability processes operated by member state tax authorities when faced with cross-border philanthropy cases. The report recommends the creation of a website resource and the pooling of national knowledge and knowhow, providing details on existing or emerging member state tax authority procedures, coupled with the explanatory guidance or links to the relevant application forms.[33]

Addressed to the European Commission and the national governments:

- Ensure full implementation of the non-discrimination principle of philanthropic foundations across the EU.
- Ensure full implementation of the freedom of capital for philanthropic foundations across the EU.

[28] Breen, O. B. (2018) *Enlarging the space for European philanthropy*, Brussels: EFC & DAFNE.
[29] Hopt, K.J., et al. (2009) *Feasibility Study on a European Foundation Statute - Final Report*, Brussels: European Commission. Available at: http://ec.europa.eu/internal_market/company/docs/eufoundation/feasibilitystudy_en.pdf
[30] Gouwenberg, B.M. et al. (2015) *EUFORI Study. Synthesis report.* Brussels: EC DG for Research and Innovation. Available at: www.euforistudy.eu
[31] European Foundation Centre (2015) *Comparative highlights of foundation laws. The operating environment for foundations in Europe*, Brussels: EFC.
[32] Ibid.
[33] Breen, O.B. (2018) op.cit.

Addressed to the European Commission, EFC and DAFNE:

- Create a website resource which pools national knowledge and knowhow, providing details on existing or emerging member state tax authority procedures as well as rules on cross-border giving and philanthropic investment by philanthropic foundations.

This Framework Conditions recommendation supports Recommendation 6 on education and capacity-building and is directly relevant to Recommendation 16 on development of joint funding initiatives across borders.

2. INNOVATIVE FINANCIAL TOOLS AND POLICY ACTIONS

Introduction

The need for innovative funding approaches

The European Commission (EC) has identified the need for 'a true European Union (EU)-wide innovation policy that creates future markets' as a priority, with Europe lagging behind countries such as Japan and the US in innovation, patent creation and access to venture capital.[34] A vital strand of policy is to ensure that innovations have smooth access to appropriate funding to support their development from initial concept to realisation of full potential. Foundations could make an invaluable contribution to the growth of innovations if they adapted and applied high-engagement innovative funding approaches which have proved successful for social enterprises. This chapter proposes ways of encouraging and helping more foundations to adopt social investment, venture philanthropy and innovative 'hybrid' finance which blends grants with other funding and investment tools, and which combines philanthropic with commercial and public partners, to progress innovation in the EU.

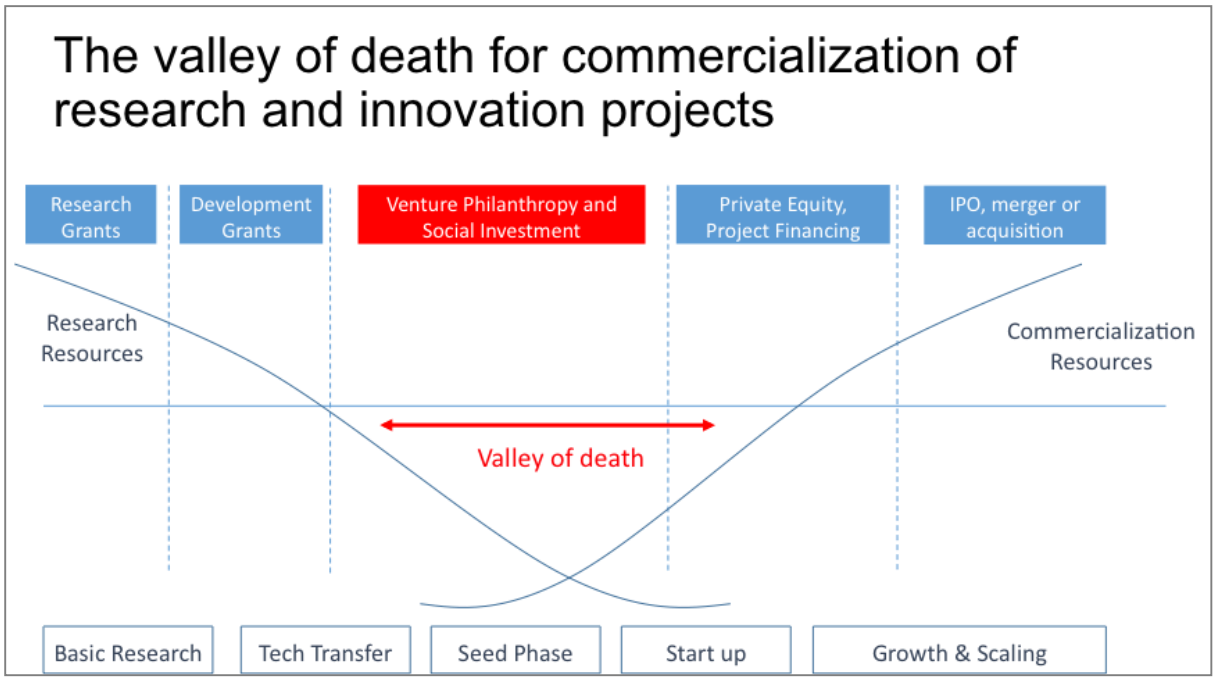

Figure 1: The valley of death for commercialisation of research and innovation ventures; based on a figure from "la Caixa" Foundation

Many innovations have potential for great public benefit, but their incubation and establishment on the market needs long-term, patient financing and they can be a high-risk investment. Like social enterprises, research and innovations need non-financial expertise and flexible combinations of philanthropic and investment funding in their early stages if they are to maintain a focus on maximising social value and avoid mission drift towards prioritising income generation. They face similar if not even more challenges to

[34] See http://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/hlg_2017_report.pdf

social enterprises in bridging the funding gap between experimental early stages and the full development of social solutions and marketable applications which can attract commercial investment. The 'valley of death' funding gap[35] can hinder innovations at different stages in the growth trajectory from initial basic research to achievement of full-scale social and commercial potential. Innovative financing models and approaches which have emerged in recent years to address the varying needs of innovative ventures include:

- mixed packages of non-returnable grant funding and returnable investment on suitable terms, to maximise potential for environmental, scientific, technological or social returns while also generating some financial return;
- matched/ complementary grants and technical assistance which allow for flexibility and adjustment in the financing of innovations aiming at high quality outcomes and change, particularly in complex or challenging contexts;
- funding for the 'proof of concept' phase in research and innovation to establish scalable solutions and sustainable investment opportunities;
- social and Development Impact Bonds (SIBs and DIBs) in which investor returns are related to the achievement of successful outcomes by innovations and are generated through a 'pay-for-success' approach;
- mobilization of private investment through providing some catalytic 'first loss' capital or smart subsidies to de-risk and reduce the uncertainty of financial returns in an innovative venture[36]; catalytic funding might take the form of guarantees, grants, debt or investment on patient terms, revenue enhancement and pay-for-success instruments like Social Impact Incentives (SIINC);
- various other forms of hybrid financing instruments that combine elements from the palette of grants, equity and debt financing such as profit share agreements, reimbursable grants or forgivable loans.

Special role for research and innovation foundations

Research funding foundations have the opportunity to play a unique and potentially transformative role in supporting innovative ventures through this widely-recognised 'valley of death' funding gap[37], where innovations struggle to get support and are vulnerable. The independent governance and assets of foundations mean they can deploy their funds in flexible ways to pursue their mission. They could provide dedicated growth support for research and innovation ventures at the point where they need to supplement grant funding with loans or patient investments, but are not yet sufficiently developed to attract full-blown commercial finance.

The practical financing instruments and policy actions developed in the field of social enterprise represent valuable precedents for how foundations could play a key catalytic role in bridging funding gaps for research-based innovations. Foundations could also use

[35] Based on a figure from "la Caixa" Foundation.

[36] Bouri, A. and A. Mudaliar (2014) *Leveraging Impact with Catalytic First-Loss Capital. Excerpt from Global Impact Investing Network briefing.* Available at: https://www.ncrp.org/wp-content/uploads/2014/01/Responsive_Philanthropy_Winter13-14_first-loss-capital.pdf

[37] 1) UK Parliament House of Commons Science and Technology Committee (2013) *Bridging the valley of death: improving the commercialisation of research,* Eighth Report of Session 2012-13. HC 348. London: The Stationery Office Limited.
2) European Commission (2009) *Bridging the Valley of Death: public support for commercialisation of eco-innovation*, Brussels: EC DG Environment.

their philanthropic resources specifically as a bridge to leveraging private sector capital and expertise, as the European Investment Bank (EIB) has indicated.

"The European (public) funding landscape for R&D and innovation is changing rapidly. The future availability of grants (especially core funding) is becoming increasingly uncertain but at the same time new opportunities and sources of (repayable) financing are becoming available to the RTO (Research and Technology Organisations) community. These changes provide the option to use grants even 'smarter', i.e. even further, for the financing of non-commercially viable activities, and leverage them even better towards the attraction of complementary sources of return-based financing (as provided by the EIB Group, for example). This is expected to further strengthen the growth-driven funding models ("1+1=3") of several RTOs".[38]

Challenges and expectations for early stage ventures

Blended, hybrid, Social Investments (SI) and Venture Philanthropy (VP) financing models reach beyond the more restricted 'impact investing' which, though a promising source of innovation capital in Europe, adopts a straightforward investment model, limiting risk, requiring scale and targeting a narrow field of business ventures. This approach to investing excludes early stage innovations which may be highly promising in terms of potential future impact. A model of typical venture profiles and the contrasting challenges and expectations linked to each in early stage development are set out in Annex 4. The model illustrates the challenges and risks for investment in research and innovation ventures compared with social enterprises or with commercial business. Future financial returns in (often ground-breaking) innovations are more uncertain and unpredictable, and lie anywhere on the spectrum between the short-term profitability expected from traditional business and the nil return of non-profit ventures. The likelihood of low or moderate returns with high real or perceived risk is why innovative funding solutions which mix grant subsidies with an element of debt or equity finance or other types of innovative financing are needed. This is particularly the case for research-based innovations which often need individual support and patient, experimental and risk-taking types of funding.

Policy and action to strengthen innovative financing

Only a small number of foundations are as yet making use of these innovative funding approaches, mainly in the social sector where there have been some exciting developments, such as the Social Impact Bond (SIB). Existing research and experience show that to progress research and innovation needs a thriving social finance market which offers a full spectrum of appropriate funding and investment options to innovations, at all stages of growth[39] (see the previous chapter for framework and legal barriers). To incentivise foundations to play a strong part and build an effective innovation funding platform will require a broad front of government, EU and foundation

[38] European Investment Bank (2017) *Access to finance for Research and Technology Organisations (RTOs) and their academic and industrial partners*, Luxemburg: Innovation Finance Advisory - European Investment Bank Advisory Services. Available at: http://www.eib.org/attachments/pj/access_to_finance_conditions_for_rto_en.pdf

[39] See for example: Ludlow J. and J. Jenkins (2011) *Twenty Catalytic Investments To Grow The Social Investment Market*, NESTA. Available at: https://www.nesta.org.uk/sites/default/files/twenty_catalytic_investments_to_grow_the_social_investment_market.pdf

Varda E. and M. Hayday (2016) *A Recipe Book for Social Finance,* Brussels: EC DG Employment, Social Affairs and Inclusion. Available at: *http://ec.europa.eu/social/main.jsp?catId=738&langId=en&pubId=7878*

policy and implementation strategies. These should address four distinct and closely inter-related areas:

- skills-building and easing access (market entry) amongst foundations;
- building the pipeline (demand) of investment-ready research innovations;
- developing a full range of innovative financial options responding to investment need from initial concept and start-up to full commercial growth ('full spectrum finance');
- capitalising (strengthening the supply of appropriate funds for) the whole social finance market.

Some national governments, foundations and private finance providers already contribute to all of these four development areas, playing multiple roles from supplying or seeking investment to developing financial options and capitalising the whole innovative finance market. Examples include *Portugal Inovação Social* created by the Portuguese government to catalyse social innovation and investment through addressing the funding gap experienced by smaller or non-profit enterprises in mobilising public and private capital; and *Big Society Capital* established by the UK with the UK's largest high street banks. These show the way for others focusing on research-based innovations and the interest of research and innovation foundations in this subject has already been demonstrated.[40] Foundations already have multiple roles and could be further involved in the four action areas, and roles are modelled in Annex 4. The action areas and the recommendations attached to each are described below.

2.1. Facilitate market entry

Recommendation 6

Support skills-building and mentoring programmes to strengthen expertise amongst research and innovation foundations in using innovative funding such as Venture Philanthropy and Social Investment to achieve their mission.

Addressed to the European Commission, national governments, foundations, member and umbrella bodies

Foundations are well-placed to provide the vital support needed by research and innovation initiatives at different stages if they are to develop in sustainable ways and achieve their full potential to bring social and economic gains. A key challenge is that the majority of foundations are principally grant-makers, and do not yet see this as an important role for them or if so, how to implement it effectively and legally. A further significant challenge for foundations in adopting Venture Philanthropy and Social Investment approaches is the uncertainties surrounding the social or financial returns on investment, and the higher risk to which foundations either may feel exposed or which is legally permissible within their national laws (Chapter 1, Framework Conditions). Financial risk would be particularly true of the support for some research innovations. Previous research has captured the challenges clearly, arguing that traditional foundation investment management aims at stewarding assets and maximising the income from financial returns to spend on mission, principally through grants. To generate greater

[40] European Foundation Centre (2018) *Research Forum Workshop – Innovative forms of Achieving Research Goals: Beyond Grants,* Brussels: EFC. Available at*:* http://www.efc.be/event/research-forum-workshop-innovative-forms-of-achieving-research-goals-beyond-grants/

interest and confidence in innovative funding approaches means addressing cultural and knowledge as well as legal barriers.[41]

"When the costs and additional complexity of making social investments is taken into account, it often appears simpler just to give the money away rather than construct a social investment vehicle…….Addressing this challenge is not straightforward …The construction of co-investment vehicles that blend grant and investment finance is likely to be one avenue worth exploring".[42]

The three core practices of venture philanthropy and social investment are:

- tailored financing;
- organisational support; and
- impact measurement and management.[43]

Through such innovative approaches, some foundations are beginning to forge successful pathways to new funding models, tools and opportunities. These challenge the traditional organisational and ideological boundaries, as well as legal obstacles, which separate the functions of investment management from philanthropic grant-making. They combine the principles of each, opening up the possibility of re-thinking and re-engineering grants and assets within more holistic and integrated approaches, as resources or 'puzzle pieces' that can be combined in different ways to achieve the foundation's mission.

Such new ways of creating financial solutions require additional access to business and finance expertise which lies beyond traditional grant-making, and new ways of thinking around risk assessment and management. Foundations have some history of social investment in, for example, social housing, but the approach to risk is generally conservative and aimed at preserving the value of assets. To encourage foundations and other philanthropic funders to experiment with adopting innovative funding approaches means ensuring access to appropriate expertise, skills, information-sharing and support. Smaller and specialised foundations particularly may be reluctant to divert scarce resources from their mission towards new developments of this kind. There is an important policy opportunity for governments, the EC and others to stimulate innovative funding amongst foundations and other philanthropic funders through providing skills-building and mentoring programmes which bridge knowledge gaps and build new expertise.

The inclusion of practical case studies of innovative funding would provide experimental learning opportunities and examples which could be publicly-shared. They could cover under-researched areas such as the comparative impacts of different financing options, key success factors, potential markets or effective cross-sector sharing of resources. This would help reduce uncertainty and incentivise investors. Besides such collaborative, experiential and on-site learning programmes, an 'open library' for Venture Philanthropy

[41] Bolton, M. (2016) *Foundations and Social Investment in Europe*, Brussels: European Foundation Centre. http://efc.issuelab.org/resources/16021/16021.pdf

[42] Brown, A. and Norman, W. (2011) *Lighting the touchpaper - Growing the Market for Social Investment in England.* The Boston Consulting Group and the Young Foundation. https://youngfoundation.org/wp-content/uploads/2012/10/owing_the_market_for_social_investment_FINAL.pdf

[43] See https://evpa.eu.com/about-us/what-is-venture-philanthropy

and Social Investment (VP/SI) should be set up, providing wide access to effective online and more traditional educational opportunities. Through boosting access to knowledge, expertise and skills in VP/SI, governments, engaged foundations and the EU are well-placed to increase general foundation interest and confidence and interest in adopting innovative financial approaches. There are already some excellent precedents for this, and further details and examples can be found in Annex 5.

Suggestions:

- Introduce a grant programme for events to raise foundation awareness of the new opportunities offered through VP/SI.
- Introduce a grant programme for foundation training and skills enhancement in the use of innovative financial tools, including risk and its management, and strategic implementation.
- Provide funding for creating an open knowledge pool for VP/SI.
- Provide grants and matching funds to intermediaries and foundations to implement demonstration projects with R&I ventures and promote experimental learning.

2.2. Strengthen the pipeline of innovations seeking investment and the demand for capital

Recommendation 7

Set up a business, finance and investment-readiness programme to build the capacity and ability of research and innovation ventures to attract growth funds.

Addressed to the European Commission, national governments and foundations

There is a significant mismatch between the funding needed and the funding available for the growth of research and innovation.[44] This arises from the classic 'chicken and egg' trap which has hindered energy-efficient technology[45], for example, where the demand for a product has to be demonstrated before it can attract investment, while investors wait till the product established before they will commit funds. Research and innovation initiatives, including in university departments and research institutes, often stall in this 'valley of death' investment gap because they lack the expertise or maturity to develop promising ideas into marketable applications and products which could attract commercial investment. A further challenge is that commercial investors are not interested in supporting innovations of potential benefit but aimed at low-volume markets, such as treatments for rare diseases or small populations.

[44] See for example,
Institute for Voluntary Action Research (2016) *Small Charities and Social Investment,* London: IVAR. Available at: https://www.ivar.org.uk/wp-content/uploads/2016/11/IVAR_Small-charities-and-social-investment-29.11.2016.pdf;
UK government (2016) *Social Enterprise Market Trends,* Cabinet Office. Available at: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/507236/SOCIAL_ENTERPRISE-_MARKET_TRENDS_2015.pdf;
UnLtd (2017) *Mind the Gap -Solving the challenges of accessing Capital for early stage social ventures.* Available at: https://unltd.org.uk/wp-content/uploads/2017/05/UnLtd-Spotlight-Paper-Mind-the-Gap-Digital-FINAL.pdf; Social Impact Investment Task Force (2014) *Impact Investment: The Invisible Heart of Markets.* *http://socialimpactinvestment.org/reports/Impact%20Investment%20Report%20FINAL[3].pdf*

[45] Cate, A. ten, et al (1998) *Technology Procurement as a Market Transformation Tool.* Available at: https://www1.eere.energy.gov/femp/pdfs/techproc.pdf

Governments, foundations and venture philanthropists could make an invaluable contribution to promoting research and innovation through policy action to support for 'investment-readiness' programmes. This would aim at building organisational capacity and enabling ventures to develop market-based solutions which could attract further and commercial investment. As well as financial support, promising early stage innovations need non-financial and entrepreneurial expertise to strengthen their capacity in governance and management, business development, planning and impact measurement. The combination of research and innovation with business goals means that individual ventures often benefit most from flexible, individual, tailor-made funding solutions. 'Unforgettable', an innovation aimed at providing better access to dementia care and support (see Annex 5), is an example demonstrating how early-stage growth and development philanthropic funds incubated an e-commerce venture to the point where it could attract larger-scale investment for growth.

Some governments, foundations and innovative finance investors have flexible funding programmes specifically dedicated to incubating early-stage research and innovation. VINNOVA[46] is a Swedish government initiative dedicated to promoting sustainable growth in Swedish innovation by financing needs-driven research. The UK government has supported a large 'investment-readiness' funding programme for capacity-building, business incubation or acceleration and impact management in early-stage innovative ventures.[47] Examples of such best practices which governments, the European Commission, and foundations could follow can be found in Annex 5. Foundations and governments could stimulate a flourishing pipeline of investable research innovations through providing the funding which enables them to grow their capacity. Financing could include funding for intermediaries which support enterprises in structuring and raising mixed or hybrid packages of grant and investment funding, bringing together finance partners from public, private and non-profit sectors.

Suggestions:

- Introduce a grant programme for accelerator initiatives and intermediaries focusing on investment-readiness for research and innovation ventures.
- Provide funding for research and innovation ventures to build capacity and expertise in organisational management, business development and financial planning.

2.3. Provide innovative 'full spectrum finance' instruments

The availability of a full spectrum range of financial approaches and instruments, from the -100% financial return on traditional grant funding to the above-inflation rates which can attract mainstream loans or equity, is crucial to enabling promising research-based innovations, to cross the 'valley of death' and progress to full potential. Most financial instruments currently in use lie only at the extreme ends of this spectrum, while the most interesting innovations live in the space between them, clashing with the expectations of traditional donors and investors alike. (See diagram, Annex 4, 'Typical venture profiles and associated challenges and expectations in the early stage of their development').

[46] See https://www.vinnova.se/en/
[47] Impact Readiness Fund. See Annex 5, Section 2 for further details

Recommendation 8

Incentivise the creation of blueprints for using and replicating innovative financing models by providing support for demonstration projects.

Addressed to the European Commission, national governments and umbrella or member bodies for foundations

To stimulate the use of new financing models to progress research and innovation, the European Commission (EC), national governments and foundation member bodies should support pilot demonstration projects developing funding solutions, with an emphasis on research and shared learning. Knowledge dissemination could be achieved by providing grants to the intermediaries and foundations who structure and implement these financing packages and commit to creating blueprints, open guidelines and lessons learned to be shared publicly for learning purpose and adoption.

A good example of the value of dedicating funds specifically to develop and test prototypes or models for innovative finance is the Social Impact Bond (SIB). This is an investment product aimed at raising funds for innovation where risk is switched from the innovation providers, often small ventures, to the investor. Financial returns are generated through a 'pay-for-success' approach, and linked to the measurable achievement of improved outcomes which lead to public savings. Initially launched as a pilot project targeted at reducing criminal re-offending rates, the SIB model is now widely adopted across different services and countries. The SIB resulted from a three-year publicly-funded research and development process, spanning initial idea to fully-tested market investment product.

The introduction of the SIB model inspired other financial innovations like Development Impact Bonds (DIBs) or Social Impact Incentives (SIINC). A Development Impact Bond is designed for use in international development and applied in areas including treatment and prevention of HIV and Tuberculosis, access to high quality primary and secondary education, and energy efficiency implementation.[48] Social Impact Incentives (SIINC) is a funding instrument that rewards high-impact enterprises with premium payments for achieving social impact. The additional revenues enable them to improve profitability and attract investment to scale. Thus SIINC can effectively leverage public or philanthropic funds to catalyse private investment in underserved sectors or markets with high potential for social impact.[49]

Suggestions:

- Provide grants to intermediaries and foundations who structure, implement and test innovative financing packages that could be shared and disseminated as best practices.
- Create national and European platforms to share blueprints, open guidelines and lessons learned, as well as links to existing venture philanthropy and social investment advisory platforms.

[48] See: https://www.socialfinance.org.uk/sites/default/files/publications/cgd-sf-dibreport_online.pdf

[49] See: http://www.roots-of-impact.org/siinc/

Recommendation 9

Create a dedicated guarantee instrument with straightforward conditions adapted to foundation requirements which would enhance their capacity to make mission-related investments in research and innovation ventures.

Addressed to the European Commission and the European Investment Fund (EIF)

Foundations have traditionally kept management of investment assets separate from grant-making activities.[50] Increasingly foundations want to make mission-related investments, allocating assets to new or start-up mission-related ventures in ways which complement and leverage their grant-making more strategically. An additional financial facility to help foundations whose national regulations are not supportive of such higher-risk investment strategies which prioritise impact on mission over optimisation of risk and return, would be a European foundations' guarantee instrument. The *European Investment Fund* (EIF) offers guarantees and counter-guarantees to financial intermediaries to support impact investing in Europe.[51] As foundations are not regulated like financial intermediaries, a dedicated guarantee instrument should be created with features specifically adapted to suit the characteristics of foundations, and which also has straightforward conditions.

Extending the guarantee programme specifically for foundations which are seeking to expand their investment in mission-related research and innovation ventures would help create a level playing field[52], and stimulate foundations to start deploying significantly more capital for these purposes. A dedicated guarantee instrument would enable foundations to make fuller use of their unique opportunities to progress higher-risk early stage ventures with high potential impact. They could, for instance, provide growth capital where research innovations are on the edge of market-readiness, or provide catalytic finance to release other funding. *Compagnia di San Paolo* for example is developing the concept for a fund that will be able to provide equity and convertible loans to a number of ventures.

Suggestions:

- Set up an Expert Group for defining the conditions for the guarantee vehicle.
- Commission the *European Investment Fund* to evaluate the feasibility of the guarantee vehicle.

2.4. Strengthen the supply of funding

Recommendation 10

Create a 'Catalytic Research & Innovation Fund for Europe' for foundations, venture philanthropists and other financial stakeholders, which can apply the full spectrum of innovative finance.

Addressed to the European Commission

[50] Associated Press (12.02.2006) *Gates Foundation to separate assets from grant-making* https://www.hollywoodreporter.com/news/gates-foundation-separate-assets-grant-144973

[51] European Investment Fund (December, 2016). *EaSI Guarantee Instrument.* http://www.eif.org/what_we_do/microfinance/easi/easi-guarantee-instrument/index.htm

[52] Breen, O. B. (2018) *Enlarging the space for European philanthropy*, Brussels: EFC & DAFNE. Available at: http://www.efc.be/wp-content/uploads/2018/01/Enlarging-the-Space-for-European-Philanthropy-joint-EFC-DAFNE-study-2018.pdf

To help overcome internal and external barriers to foundations in making use of innovative financial tools and extend partnership opportunities, a new and accessible vehicle to implement new financing models and provide additional resources would be of great benefit to philanthropic institutions and other investors. This 'Catalytic Research & Innovation Fund for Europe' should be structured specifically to meet foundations' requirements and operating conditions. It would be explicitly empowered to deploy its funds with 'whatever it takes' tailored approaches to developing research and innovations with a high probability of achieving significant research, technological, environmental or social impact.

The fund would aim to develop the full spectrum of funding options and provide innovations with the financial solutions which offered them the best opportunity to grow their social and economic potential. A challenge for investors is that research and innovations often generate substantial impacts for society or positive external benefits which have not been given a full monetary value, and, like many public goods, may be difficult (if not impossible) ever to monetize fully. This means they may require other forms of economic contribution or subsidy, such as grants and donations, tax reliefs, long-term or discounted rates of investment return, or other flexible financing agreements. The choice of specific financial solutions would be related to foundation or funder preferences, and could involve smart combinations of grants and different sources of capital, incentives linked to impact or innovation in the financial instrument itself. A popular example of how innovative financial instruments have been used is the *Cystic Fibrosis Foundation* (CFF), which adopted a venture philanthropy model to combat rare diseases. Further details and examples can be found in Annex 5.

The proposed 'Catalytic Research & Innovation Fund for Europe' would open up many new opportunities for foundations and other funders across the European Union, providing a flexible additional vehicle for foundations to achieve their aims through hybrid and blended financing structures specifically adapted to mission-related research and innovations. It could also follow a model like Donor Advised Funds managing charitable grants for funders. Transferring or awarding grants and assets into the fund for deployment on their behalf would provide foundations with a route to making more use of innovative financing structures where this is currently held back by country-specific restrictions around uses of assets and taxation, or by the lack of an explicit investment policy or framework for mission-related and social investment.

The 'Catalytic Research & Innovation Fund for Europe' would need a governance structure which ensures that all funds are used for generating and catalysing significant research and innovation, technological, environmental and other social impacts. The UK's Big Society Capital fund, for example, protects its mission through a two-tier governance structure in which the charitable Big Society Trust is a major shareholder of *Big Society Capital*. In the proposed new Fund for Europe, achievement of the mission would be pre-eminent and apply whether the Fund were:

- funding or investing in not-for-profit, hybrid or for-profit entities;
- blending different philanthropic, public and private sources of capital;
- de-risking projects with exceptional growth potential and value to society; or
- deploying finance fully or partly paid back to the Fund.

Assessing, monitoring and managing the impact of the investees would be an integral and essential feature of the fund.

The EC should make budget available in accordance with its priorities for seeding the fund as well as matching funds provided by foundations. Besides incentivising foundations (and other funders) to use the fund for developing appropriate hybrid, blended or layered funding solutions, the matching would create leverage for supporting the most promising initiatives in terms of beneficial impact on society and the environment, and in line with the EC's mission-driven approach to Research and Innovation in the EU.[53]

The Fund shall be structured to promote access to foundation and private sector expertise as well as funding. It should be complemented with research focusing on the question of how the fund and the foundations involved assess and balance social and economic returns, and the nature of risk associated with each. It will provide important insights about the correlation between financial returns and impact, including the risk perspective of each.

Effective transactions with potential for replication should be publicly shared and used as case studies for education and capacity-building programmes (see Recommendation 6). Furthermore after successful piloting in the field of research and innovation the fund could be replicated or expanded to other areas with high priority for the Commission.

Suggestions:

- Commission a feasibility study for the 'Catalytic Research & Innovation Fund for Europe'.
- Set up an expert group for defining the design elements of the fund.
- Create a pilot fund.

Recommendation 11

Set up an expert forum with the private finance sector to increase its engagement with foundations and research stakeholders and identify research and innovation development opportunities using social investment and venture philanthropy.

Addressed to the European Commission, the R&I foundation community and the private finance sector

Engaging the private finance sector is essential to building a full-scale thriving innovative finance market, and ensuring that innovations maximise their reach and potential benefit to society. The private finance sector can bring financial and business expertise, access to potential philanthropic as well as business investors, and only the private finance sector has sufficient capital where research innovations are ready for the market, and require significant investment for commercial expansion. A few private banks and other wealth managers including family offices are already involved in venture philanthropy and philanthropic investment in various ways, but few are directly involved as investors, for example setting up charity social bonds, or share issues, or linking the investment-portfolios of private clients to foundation (research) projects. Examples include the *Dutch*

[53] Mazzucato, M. (2018) *Mission-Oriented Research & Innovation in the European Union - A problem-solving approach to fuel innovation-led growth,* Brussels: EC DG Research and Innovation. Available at: https://ec.europa.eu/info/sites/info/files/mazzucato_report_2018.pdf

Kidney Foundation which invites private investors to take shares in the development of the "portable dialysis apparatus", and *ABN AMRO* which has supported the Amsterdam *Royal Concertgebouw Orchestra (RCO) Foundation* through a share issue for enlarging and upgrading the Concert Hall. Innovative financing solutions are not fully understood or regarded as core business by many in the private finance sector, leading to a loss of both financial and research and innovation opportunities. There is a need for stronger links between the banking community and stakeholders in the European Research Area (ERA) to exchange understanding, expertise and information on investment opportunities in research projects (national and/or European).

Suggestions:

- Organize a kick-off meeting with interested private finance organisations, foundations, academia and other interested stakeholders.
- Conduct a survey among participants to define future focus topics.
- Establish a regular expert forum.
- Establish communication channels to disseminate examples, developments and opportunities.

3. COLLABORATIVE APPROACHES

Introduction: 'When different worlds meet'

Although foundations' programmes and courses of action follow their own institutional mission and vision, in recent years several initiatives have appeared which explore innovative ways of collaboration between research and innovation (R&I) foundations and other stakeholders to further increase the impact of their funding and actions. On the European policy level we see a movement towards a *mission oriented approach* to addressing global challenges. The report "LAB – FAB – APP — Investing in the European future we want"[54] recommends setting research and innovation missions that address global challenges and mobilize researchers, innovators and other stakeholders to realise them. By focusing on issues whose solution requires the involvement of multiple sectors and actors, a mission oriented approach creates opportunities to connect different actors through new forms of partnerships for co-design and co-creation.[55] Other policy trends such as 'Open Science', 'Open Innovation' and 'Science with and for Society' (SwafS)[56] also have the potential to help to bridge the gap between different stakeholders in the R&I development cycle.

Many foundations are already heavily involved in networking and collaborating, and they provide examples of best practice which should be extended to and strengthened within the field of R&I. Foundations can create synergy through collaboration with different stakeholders (other foundations, government, business sector and Research Performing Organisations (RPOs) in the research arena). Collaboration should be interpreted in the broadest sense, ranging across information-sharing, networking, co-funding, sequential funding and partnerships. Mutual advantage can be derived from pooling expertise, sharing infrastructure, expanding activities, combining scarce funding, avoiding duplication of efforts and creating economies of scale.[57] In general, the diversity and autonomy of foundations requires taking a *principle based approach* towards interaction[58] with other stakeholders, characterized by voluntary agreement rather than strict rules and rigid structures. When different worlds meet mutual trust needs to be built, which is an ongoing and sometimes long-term process.

This section provides 8 recommendations to stimulate further collaboration between R&I foundations and other stakeholders in R&I activities on the national and European levels. The recommendations are structured along three themes:

1. *Improve infrastructure and information-sharing* (Recommendations 12-13), which is an important requisite for connecting different stakeholders and exploring and stimulating opportunities for collaboration.

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[54] European Commission (2017) *LAB – FAB – APP — Investing in the European future we want. Report of the independent High Level Group on maximising the impact of EU Research & Innovation Programmes,* Brussels: EC DG Research and Innovation. Available at: http://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/hlg_2017_report.pdf

[55] Mazzucato, M. (2018) *Mission-Oriented Research & Innovation in the European Union - A problem-solving approach to fuel innovation-led growth,* Brussels: EC DG Research and Innovation. Available at: https://ec.europa.eu/info/sites/info/files/mazzucato_report_2018.pdf

[56] See https://ec.europa.eu/programmes/horizon2020/en/h2020-section/science-and-society

[57] Gouwenberg, B.M. et al (2015) *EUFORI Study. Synthesis report,* Brussels: EC DG Research and Innovation. Available at: www.euforistudy.eu

[58] Wellcome Trust (2017) *Discussion Paper: Foundations-European Commission Collaboration*.

2. *Exploit effective multi-stakeholder partnerships* (Recommendations 14-18), which could increase the funding opportunities for research and innovation projects.
3. *Stimulate collaboration to generate impact on society* (Recommendation 19), with an important intermediary role for foundations in bridging the gap between the scientific community and society at large.

In contrast to the previous section on innovative financial tools for research and innovation projects that have the potential to reach the market, this section has a broader scope. It is not limited to collaborative approaches that stimulate market-oriented solutions for global challenges but aims to encompass the whole R&I value chain, including basic research.

3.1. Improve infrastructure and information sharing

An enabling infrastructure for information-sharing, networking and collaboration on European and national levels has proved important and successful in stimulating partnership-building, convening and knowledge-sharing between stakeholders in the research domain.[59] A collaborative infrastructure is an important prerequisite for other actions and approaches recommended in this report. Increasing the visibility of collaborative approaches amongst frontrunners could motivate others to follow. If different stakeholders in the research arena become more aware of each other's activities, the effects and impact of their contributions can be increased. Recommendations 12 and 13 stress the importance of 'get to know each other, meet and see where to reinforce each other's efforts' in addressing solutions for global challenges with research and innovation.

Recommendation 12

Stimulate the infrastructure for information-sharing, networking, policy dialogue and collaboration between R&I foundations and other stakeholders at national and European levels.

Addressed to national governments, the European Commission, R&I foundations (and umbrella organisations of foundations) and the research community

In Europe, the Research Forum of the *European Foundation Centre* (EFC)[60] provides a platform for large and well-established research funding foundations to learn, collaborate and advocate together. Its Steering Committee meets regularly and organizes open peer learning and networking activities, notably a major biannual stakeholders' conference, to discuss subjects of common interest. The EUFORI Study (2015), however, revealed a lack of platforms and networks on the national level where R&I foundations, beneficiaries and other stakeholders can find each other and exchange ideas and best practices as well as co-fund activities. There are a few exceptions in some countries, for example the Spanish *Consejo de Fundaciones por la Ciencia*[61] and the German *Stifterverband*[62]. One of the main reasons for the limited infrastructure on the national level is the lack of a common research identity among small and medium-sized foundations supporting R&I in many countries. Research and innovation is often not seen as a purpose/field in itself but

[59] Gouwenberg, B.M. et al (2015). *EUFORI Study. Synthesis report*. Brussels: EC DG for Research and Innovation. Available at: www.euforistudy.eu
[60] See: http://www.efc.be/thematic_network/efc-research-forum/
[61] See: https://www.fecyt.es/es/info/consejo-de-fundaciones
[62] See: https://stifterverband.org/english

instead used as an instrument for other purposes and areas in which foundations specialise (such as health, technology, society). A lot of foundations therefore do not identify themselves as an R&I foundation and are not visible as such, which makes it difficult for researchers to find them. This lack of research profiling could also be a barrier for potential collaborations between foundations that have mutual goals but are not able to find other like-minded foundations. The conclusions of the EUFORI Study indicated a need for improved dialogue, information exchange, networking and cooperation between the foundations supporting R&I, as well as between foundations, national governments, business and research institutes (researchers). In order to stimulate further the infrastructure for information-sharing, networking, policy dialogue and collaboration between national governments, the European Commission (EC) and foundations, the following concrete suggestions are made:

Addressed to national governments and the European Commission:

- Start focusing on informal ways of (mission driven) aligning with foundations: e.g. sharing best practices, networking and starting a policy dialogue on topics of mutual interest.
- Create an inter-Directorate-General (DG) working-group of policy officers (engaged in topics related to philanthropy) in different policy areas of different DGs.
- Assign points of contact and contact persons within different DGs for foundations supporting R&I.
- Organize regular meetings between foundations supporting R&I and the inter-DG working-group, and invite umbrella organisations. On the national level: national forums, networks or associations of foundations supporting research and innovation. On the European level: the EFC (Research Forum), Donors and Foundations Networks in Europe (DAFNE) and the European Venture Philanthropy Association (EVPA).
- Create (online) communication tools (e.g. newsletter) to exchange information across the R&I foundation sector, and co-operate with umbrella organisations simultaneously to create a digital network of relevant professionals.

Addressed to foundations supporting R&I and umbrella organisations:

Suggestions to stimulate synergy between foundations supporting R&I:

- Foundations interested or involved in R&I could join or help establish networks to share information, best practice, and collaborative opportunities.

Recommendation 13

Assess the feasibility of a two-sided online platform for matching R&I with Venture Philanthropy and Social Investment.

Addressed to the European Commission

There is a bi-directional knowledge gap between the Research and Technology Organisations (RTO) and the foundations and investor community that needs to be addressed. In addressing this gap, RTOs could provide technological know-how to investors and as such develop new services and associated income streams.[63] A similar

[63] European Investment Bank (2017) *Access to finance for Research and Technology Organisations (RTOs) and their academic and industrial partners*, Luxemburg: Innovation Finance Advisory - European Investment Bank Advisory Services. Available at: http://www.eib.org/attachments/pj/access_to_finance_conditions_for_rto_en.pdf

conclusion was drawn in a report on access to finance for Key Enabling Technologies (KET) companies.[64]

A matching platform for connecting demand and supply would facilitate the promotion, discovery, filtering/vetting, interaction/execution, follow-up, and optimisation of the currently fragmented and inefficient 'Philanthropy and Social Investment' marketplace. This two-sided platform would on the one hand integrate philanthropy, venture and social investment, venture capital, grant-givers, and other related stakeholders; on the other hand it would bring together researchers, entrepreneurs, NGOs, and other related stakeholders.

Any useful initiative in integration of this type would need to take into account data formats/ models/ Application Programming Interfaces (APIs)[65] to integrate existing platforms (ImpactSpace, Research Professional, European Investment Portal, etc.), and to have an international reach, while allowing for regional segmentation. It would rely on crowd-sourcing for data entry/ keeping, therefore making it vital to leverage existing data integration. Incentives to participate would include the creation of simple and accessible data entry systems suitable for multiple stakeholders, as well as the ability to publish/discover, filter, collect, and interact directly.

Trust is a key element of this system, so having the backing and oversight of the EU (or another designated international body/agency) would greatly improve its chances of success. That trust can be leveraged to include needed features[66], like 'certification' or 'endorsement' by highly qualified and experienced reviewers for peer review assessment processes. At the same time, transparency, in line with the 'Open Innovation' focus, becomes a key differentiating feature compared with existing approaches.

Finally, the aggregated data entered and additional data generated and gathered as the system is used ('interaction metadata'), should eventually allow the leveraging of advanced technologies like Machine Learning/Artificial Intelligence. Such an advance should ultimately lead to new insights and optimisation of matching between R&I and Venture Philanthropy and Social Investment.

The first step would be a feasibility assessment of the proposed new platform, that would consider key aspects like risks, requirements, regulations, participants and financing.

3.2. Exploit effective multi-stakeholder partnership

In the post-2020 world 'multidisciplinarity' means crossing boundaries not only between academic fields but also creating unconventional partnerships and beneficial cooperation between various sectors of society. In R&I funding, creating positive engagement among all the stakeholders of the research community is the key to real impact. Research funders should concentrate on building active communities around their work and thus catalyse real-world solutions which empower society. For this to materialise, there should

[64] European Investment Bank (2016) *Access to finance conditions for KETs companies*, Luxemburg: InnovFin Advisory - European Investment Bank Advisory Services. Available at: http://www.eib.org/infocentre/publications/all/access-to-finance-conditions-for-kets-companies.htm

[65] Application Programming Interfaces: a set of functions and procedures that allow the creation of applications which access the features or data of an operating system, application, or other service.

[66] European Science Foundation (2010) *European Peer Review Guide. Integrating Policies and Practices into Coherent Procedures,* Strasbourg: ESF. Available at: http://archives.esf.org/fileadmin/Public_documents/Publications/European_Peer_Review_Guide_01.pdf

be a genuine will for candid cooperation based on mutual understanding, trust and openness.

The recommendations in this section (14-18) aim to stimulate a multi-stakeholder approach in R&I funding. They are based on a selection of different *collaborative funding approaches*, tools and instruments that have proved effective, replicable and implementable.

Recommendation 14

Increase the visibility, share best practices and raise awareness of existing mechanisms of cooperation between the European Commission and R&I foundations in Europe.[67]

Addressed to the European Commission and the R&I foundation community

Collaboration for R&I between foundations and the EC can be classified as project or programmatic (strategic). Programmatic collaboration is more far-reaching and involves systematic exchanges of information on respective objectives and research and innovation agendas, possibly leading to a coordinated approach (e.g. regarding timing/topics) in certain areas where the objectives of both sides coincide.[68] Existing mechanisms enable productive interactions but there is room for improvement. Foundations' capacity to be flexible, and their local knowledge and visibility could join forces with the EC's availability of resources to implement impactful initiatives both at local and at European levels.

Collaboration on project level

Examples of European R&I foundations collaborating with the EC at project level through mutual participation in existing schemes are not isolated, but are generally confined to large European foundations. Further opportunities for synergies between the EC and other foundations could be realised if those best practices were more widely spread. Smaller foundations and other philanthropic organisations could, for example, join forces to access co-funding schemes which would enable them to increase their potential impact at local or international levels. Initiatives which have taken place in different R&I areas range from the promotion of scientific careers and researcher mobility to the establishment of new research infrastructures.

The 'Seal of Excellence' (SoE)[69], for instance, offers a unique opportunity for foundations to make use of the high quality H2020 evaluation process. The SoE is a high-quality label awarded to projects submitted to Horizon 2020 which were deemed to deserve funding but did not receive it due to budget limits. It recognises the value of the proposal and supports the search for alternative funding.[70]

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[67] This recommendation is inspired (but complemented) by the work done by a group of foundations, coordinated by the Wellcome Trust, and the EC, to discuss about future synergies between foundations and the EC.

[68] Wellcome Trust (2017) *Discussion Paper: Foundations-European Commission Collaboration*.

[69] See https://ec.europa.eu/research/soe/index.cfm?pg=what

[70] SoE started with the H2020 SME instrument; recently the SoE has been extended to Marie Skłodowska-Curie Actions (MSCA), the EC funding scheme that provides grants for all stages of researchers' careers, and further extensions (e.g. ERC) are planned. The *Compagnia di San Paolo* (CdSP) is exploring how to use the SoE to support local applications. A grouping in which CdSP participates has included SoE as a strategy to identify and fund projects within the context of a collaboration with the European Investment Bank and the Italian Ministry of Education and Research to fund research and innovation projects (TRL 2-8) in South Italy. See http://www.compagniadisanpaolo.it/eng/

In the field of researcher careers, the INPhINIT programme[71] run by *"la Caixa" Foundation,* is recruiting 114 early-stage researchers of any nationality willing to join an excellent host organisation in Spain. The *"la Caixa" Foundation* brings €15 million to the programme which receives co-funding for implementation of €5 million from the EC through the 'Marie Slodovska Curie Actions' (MSCA).

The *Foundation for Polish Sciences* (FNP) runs the programme 'International Research Agendas'[72] based on the 'Teaming for Excellence' programme of Horizon 2020. The programme provides support for highly specialised, independent research organisations in Poland to conduct innovative R&D activities in strategic cooperation with renowned scientific institutions from other countries. FNP plans to provide funding for at least 10 scientific units that should lead to the creation of world-class research centres in the country.

Foundations' main objective in participating in EC schemes is to complement the economic resources they have for fulfilling their missions, but other aims include increasing peer learning capacity from the European R&I ecosystems and others' high quality programmes, through valuable international collaborations. On their side, foundations have significant expertise to help realise the goals of the European Research Area (ERA) and are excellent partners for implementing programmes at the local level. Furthermore they usually have high prestige locally and a strong capacity to generate visibility and disseminate results. Existing project-based cooperation schemes enable multiple potential synergies between the EC and foundations around increasing the efficiency and impact of public and private R&I funding.

Collaboration on programmatic level

Programmatic cooperation between foundations and the EC is scarce and restricted to a few examples led by the world's major foundations. The *Bill and Melinda Gates Foundation*, one of the major philanthropy actors in the world, signed a Memorandum of Understanding (MoU) with the EC in 2013 for strategic cooperation to identify and support opportunities for common R&D global health objectives. It aimed to provide mutual support and technical assistance and to encourage global actors to collaborate. This MoU has provided a framework for several joint initiatives between the two institutions. For example, the *European & Developing Countries Clinical Trials Partnership* (EDCTP) aims to accelerate the development of new or improved drugs, vaccines, microbicides and diagnostics to tackle poverty-related infectious diseases in sub-Saharan Africa. The scheme allows other foundations to participate, as in the case of the *Fundaçao Calouste Gulbenkian* from Portugal.

In spite of the potentially wide benefits of co-funding relationships between governments and foundations which have been described above, barriers to the implementation of such alliances for foundations are imbalances in the scale of resources available from governments and foundations, fear of losing their independence, the compatibility of the rules of operation between the institutions and the local focus of many foundations.

Suggestions addressed to the European Commission:

- Increase visibility of existing joint programmes and best practices between foundations and the EC.

[71] See https://obrasociallacaixa.org/en/investigacion-y-becas/programa-de-becas-de-posgrado/inphinit/about-inphinit

[72] See https://www.fnp.org.pl/en/oferta/irap/

- Organize meetings between foundations that support research and the EC.
- Consider creating specific schemes for foundations at the European level which enable and facilitate foundations to collaborate both singly and collectively with EC programmes.

Suggestions addressed to foundations supporting R&I:

- Explore potential synergies between medium-sized and smaller foundations with the aim of joining forces to access co-funding EC schemes.

Recommendation 15

Stimulate the creation of pooled research funds between foundations to fund R&I.

Addressed to the R&I Foundation community and national governments

Encouraging the formation of pooled foundation research funds could help tackle the practical challenges R&I is facing on the ground. A pooled fund is a collective funding vehicle in which a number of contributors invest and from which financial backing is provided. Pooled funds formed by foundations can generate additional impact for research funding through streamlining the processes. Pooled foundation funds could streamline and help make traditional funding processes more efficient and effective. Typically, individual R&I foundations receive numerous applications from the same bodies, which try to maximise their chances of funding by making multiple applications, all of which have to be individually prepared, assessed and, if successful, monitored. Three Finnish experiences have proved successful in coordinating granting processes of senior researchers: *The Foundations' Post Doc Pool*, the *Foundation's Professor Pool* and *Skolar Award* are grant resources and funding instruments each of which was set up by 6–20 foundations supporting research and innovation.[73]

Post Doc Pool offers young scholars flexible funding from one source. *Post Doc Pool's* research and science policy objective is to improve the level of national research by encouraging newly graduated doctorates to have a postdoctoral period in one of the top international universities in their field. The funding of the pool covers, in full and in a flexible manner, the costs of a foreign study period of at least one academic year. Researchers have been encouraged to take their families with them through scholarships including relocation costs as well as childcare and school fees.[74]

Foundations' Professor Pool finances the work of a professor together with the university offering a research period of 12 months. During this high-intensity research leave, the university pays 55% of the professor's gross salary, whereas the grant awarded by the foundation covers the loss in net salary. The instrument is novel in the way in which salary paid by the employer and foundation grants are linked. The Pool finances professors from all disciplines who work permanently at national universities and are guaranteed relief from administrative and teaching duties by the university for one year.[75]

[73] Based on examples of research pools in Finland, where the Foundations Post Doc Pool was created in 2009 and the Professor Pool in 2012 among members of the Council of Finnish Foundations. See www.postdocpooli.fi.
[74] Seppälä, M. (2013) 'Säätiöt rohkaisevat tutkijoita ulkomaille' (Foundations encourage postdocs to study abroad), *Tieteessä tapahtuu 3/2013*, 47–48.
[75] Seppälä, M. (2015) 'Neljäsataa professoria tutkimusvapaalle' (Four hundred professors get study leave), *Tieteessä tapahtuu 6/2015*, 37–38.

Skolar Award is a science competition funded by a pool of private foundations, and it offers an alternative approach to funding research proposals. To win a €100 thousand grant from R&I foundations, postdoctoral researchers pitch novel research ideas on stage within *Slush*[76], the world's biggest start-up event. Ideas must include societal relevance, novelty and uniqueness, and scientific courage. Instead of measuring impact by the number of experts who refer to an applicant's papers in papers of their own, it asks how a scientist's work can help solve a significant real-world problem. For foundations, the competition brings new solutions to the recognised need to provide more funding for 'wild ideas' from young researchers, and helps narrow the gap between the start-up community and academia. Last but not least, it boosts researchers' skills in summarizing and communicating their research to wider audiences.[77]

The pooled funds serve all disciplines equally, and increase cooperation not only between foundations but also between other stakeholders and foundations. It is not surprising that pooled funds have proved to be important funding channels valued by – but not only by – the academic community.[78]

Suggestions addressed to the R&I Foundation community

- Map out gaps in research policy and funding in your country. Make a strategic choice of the most outstanding objectives to fund within your mission.
- Identify overlapping effort and exchange best practices with foundations and other stakeholders in your field of operation.
- Create pooled research funds with other funders (which do not necessarily have to be working in the same field) and focus on impact through lean processes.

Suggestions addressed to national governments

- Incentivise the pooling of research funds on a national level by supporting foundation networking and matching pooled private contributions with public funding.

Recommendation 16

Develop joint initiatives to stimulate cross-border R&I funding.

Addressed to the R&I foundation community

Science is an international endeavour. Global societal challenges such as climate change, mass migrations or the health of our aging societies require global approaches. There are multiple examples of voices advocating for more cross-border collaboration in R&I. For example, The Scientific Panel for Health, 'Better Research for Better Health' (EC, May 2016), suggests that we should "facilitate high quality cross-border collaboration within Europe and beyond" as a priority on how to advance and boost health research. Organisations such as the European Molecular Biology Laboratory are fostering debate on

[76] See www.slush.org

[77] See more in http://www.slush.org/sciencetrack/. Read also *Times Higher Education, December 5, 2017*, in https://www.timeshighereducation.com/news/postdoc-pitching-competition-funds-wild-research-proposals#survey-answer; *Science, February 7, 2018*, in http://www.sciencemag.org/careers/2018/02/hot-opportunity-early-career-scientists-wintry-finland.

[78] For example, the Finnish Foundation's Post Doc Pool has in seven years organised fifteen application rounds, received 2837 applications and granted 475 personal grants. In total, the Pool has allocated approximately €20 million in grants for postdocs. *Report spring 2017 of Foundation's Post Doc Pool*, Council of Finnish Foundations.

this issue through conferences including the "European Conference of Life Science Funders and Foundations".[79]

Although there is a great consensus on the need for cross-border giving it raises conceptual, operational and legal difficulties for most charities and foundations (see also Recommendation 5 of Chapter 1, Framework Conditions). Many have a local or national focus carved into their missions and their rules of operation limit or even impede them from funding internationally. However some institutions are working together in a cross-border fashion. In 2017 three of Europe's biggest philanthropic foundations joined together to award €5 million to tackle some of the most pressing global challenges of our time. The *Wellcome Trust*, *Riksbankens Jubileumsfond* and *Volkswagen Foundation* funded six research groups from across Europe to drive action through cross-border collaboration.[80] The 'Europe and Global Challenges' initiative was started in 2009 and today several foundations are participating in a working-group to evaluate the possibility of joining this and other similar cross-border research funding initiatives to create a new dimension of transnational research cooperation. Another excellent example comes from three Mediterranean area foundations, *Agropolis Fondation*, *Fondazione Cariplo* and *Fondation Daniel & Nina Carasso* that launched the 'Thought for Food'Call for Proposals in 2015. The call aims to advance understanding of the sustainability of food systems and explore innovative solutions that could help actors involved to achieve it.[81]

Although existing barriers to transnational cooperation should not be underestimated, the will to achieve cooperation based on mutual understanding, trust and openness could foster initiatives with greater impact and transformative capacity.

Suggestions addressed to foundations

- Analyse the barriers to cross-border giving.

Suggestions addressed to the European Commission, Research Performing Organisations (RPOs) and umbrella organisations

- Foster debate around cross-border giving.

Recommendation 17

Stimulate foundation donations to universities and other Research Performing Organisations (RPOs) by matched funding schemes.

Addressed to national governments

Funding of universities and other Research Performing Organisations (RPOs) is highly dependent on governmental (both national and EC) grants. These grants are strictly regulated including strong accountability rules. They leave little or no room for matched funding and a multi-stakeholder funder constituency. Universities in particular have adopted organisational structures, cultures and human resource management which accommodate these granting conditions. Several university medical research centres, however, have begun to find solutions to dealing with industrial partners and philanthropic income, though universities as a whole are lagging behind in this respect.

[79] See https://www.embl.de/training/events/2018/LSF18-01/
[80] See https://www.volkswagenstiftung.de/nc/en/news-press/news/news-details/news/detail/artikel/european-foundations-unite-to-tackle-global-challenges-1/marginal/5382.html.
[81] See http://www.agropolis-fondation.fr/fr/soutenir-la-science/les-types-d-action-de-financement/appels-a-projets/appel-a-propositions-2015-thought-for-food.html.

The EUA's report "Financially Sustainable Universities II. European universities diversifying income streams" (2011) drew attention to the central barriers within universities' ability to diversify and renew their funding streams and thus exploit their potential. The main obstacles can be considered as 1) inadequate governance structures, 2) inability to change them, 3) financial restrictions of the funding cycle, and 4) inflexible staffing regulations. To improve the situation, universities should adopt a structured approach to stakeholder management.[82]

The most important independent funding partners for universities and other RPOs are foundations. They offer inventive, diversified and cross-disciplinary funding. In these economically difficult times it is of utmost importance to motivate more foundations to finance RPOs, and motivate more private individuals to donate to charities and foundations financing RPOs![83] Matched funding is an effective, valuable, beneficial method to the research community for increasing external funding for RPOs from foundations (and even citizens). Matched funding also attracts donations from foundations that would not conventionally finance R&I.[84]

It can be argued that participating in a matched funding programme is both a duty of and benefit to R&I foundations following good governance principles and seeking best possible impact, since the leverage of the matched funds can be very substantial. Matched funding incentivises foundations to finance RPOs with unusually large donations, because foundations are attracted by the impact of 'matched euros'. As an added value, the mutual commitment and dialogue between RPOs and foundations increase as they negotiate the aims and amount of the planned donation.[85]

The model of matched funding is simple. Governments allocate funds to RPOs that have managed to attract private donations to a certain level. Governments can match private contributions with a pre-determined amount or match the funds allocated to research projects through foundations' open calls.[86]

A good example of a matched funding scheme comes from the Netherlands: the PPP Allowance is a simple financing tool to incentivise different stakeholders to find ways of cooperating to achieve better results. It is a bottom-up approach in which PPP Allowance applicants put together a consortium through which research organisations, businesses and foundations jointly carry out a project, based on a clear division of tasks and risks. Applicants should consist of teams of experts and institutes that combine interdisciplinary

[82] Estermann, Th. and E. Bennetot Pruvot (2011) *Financially Sustainable Universities II. European universities diversifying income streams,* Brussels: *EUA publications 2011*, 9, 12. Available at: http://www.eua.be/Libraries/publications-homepage-list/Financially_Sustainable_Universities_II_-European_universities_diversifying_income_streams.pdf?sfvrsn=2.

[83] Heikkilä, T. and I. Niiniluoto (2016) *Humanistisen tutkimuksen arvo – kuusi murrettavaa myyttiä ja neljä uutta avainta* (The value of humanities research – six breakthrough myths and four new keys), Opuscula Instituti Romani Finlandiae V, Helsinki. Also in http://irfrome.org/wp/wp-content/uploads/2016/12/humanistisentutkimuksenarvo.pdf, English summary p. 117–120.

[84] "Laillisuustarkastuskertomus. Valtion vastinrahan maksaminen yliopistoille". *Valtiontalouden tarkastusviraston tarkastuskertomukset 9/2012* (Legal Audit Report of the Finnish National Audit Office 9/2012).

[85] Suvikumpu, L. (2014) '150 miljoonaa euroa vastinrahaa yliopistojen varainkeruulle' (€150 million matched funding for the universities), *Sarana 4/2014.* See: http://www.saatiopalvelu.fi/juttuarkisto/150-miljoonaa-euroa-vastinrahaa-yliopistojen-varainkeruulle.html.

[86] The Portuguese government, for example, has committed matched funding for the Health Research Call for Proposals of "la Caixa" Foundation in 2018.
See https://www.dn.pt/lusa/interior/fct-vai-igualar-investimentos-da-la-caixa-em-projetos-de-investigacao-9121339.html

knowledge bases, creativity and resources in robust, long-term, intra- and inter-sector collaborations. All parties make a financial and substantive contribution to the project. The national government can financially support a collaborative project by awarding a PPP Allowance topping up the investments of private partners by 25%.[87]

A matched funding scheme motivates foundations, even the smaller and specialised ones; increases the number of small donations and of donations altogether; increases the proportion contributed by foundations both to society and to research and science policy; helps to sharpen the profile and strategy of donating foundations; leads RPOs to reach out, communicate with stakeholders and improve the tools of fundraising.[88]

Suggestions addressed to national governments

- Encourage donations for RPOs through matched funding schemes by allocating public funds for this purpose.
- Promote partnerships between RPOs and foundations to learn from each other and develop new and innovative ideas through requiring an element of external private funding as a prerequisite for receiving public funding.
- Disseminate the model of matched funding schemes among all RPOs and encourage RPOs to develop or upgrade stakeholder management strategies and action plans to enable matched funding.

Recommendation 18

Seek unconventional partnerships between Research Performing Organisations (RPOs), foundations and the business sector to spur a win-win innovation infrastructure.

Addressed to the business sector, RPOs and the R&I foundation community

In research and innovation progress is best made by multidisciplinary approaches and an enabling atmosphere. Novel ideas, a wide range of perspectives, critical analyses and concrete solutions beneficial to society are needed both for business and for academic development. In the post-2020 world 'multidisciplinarity' does not mean crossing boundaries only between academic fields, but also creating unconventional partnerships and profitable cooperation between various sectors of society.

In successful business, maintaining and strengthening competitiveness requires constant monitoring and analysis of new trends. However, companies too often lack the time or capability for strategic reviews which look beyond the known horizon. The business sector – as well as society as a whole – needs young talented people and candid foresight to embrace and exploit emerging trends and developments. Sufficient funding is essential for assembling the best and most talented teams but it has become increasingly difficult to get funding for R&I. For example, not all funding options are feasible for the most promising applicants due to the strict eligibility criteria. This has had a wide range of negative effects on the whole process. The situation could be changed by creating a shared, consolidated innovation infrastructure.

[87] For more concrete details of the Dutch PPP Allowance see https://www.health-holland.com/public/downloads/kia-kic/knowledge-and-innovation-agenda-2018-2021.pdf.

[88] Based on the Finnish experience of two schemes (2009–2011 & 2014–2017). See e.g. "Valtioneuvoston päätös 30.11.2017, Päätös yliopistoille osoitettavasta valtion vastinrahoituksesta suhteessa niiden keräämiin yksityisiin rahalahjoituksiin" (the government's decision on matched funding from the state for the universities--), http://minedu.fi/paatos?decisionId=0900908f80571448.

Providing a financial instrument for collaboration stimulates research organisations, companies and foundations to build multi-faceted consortia to translate innovative ideas into practical effects. Where regulation is compatible, companies and research organisations are encouraged to invest jointly in research and innovation. Adding foundations to the 'team' guarantees an element of independent, flexible and risk-tolerant complementary funding to help ensure good outcomes.

One successful example of this co-creation is *Post Docs in Companies* (PoDoCo) programme in Finland. It is a programme supporting long-term competitiveness in companies and increasing the employment of young post-doctoral candidates in the private sector. The PoDoCo programme is funded by a pool of foundations as well as companies participating in the programme. The *PoDoCo* foundation pool offers research grants for a one-year research period. After the research period, the company hires the postdoc to deepen the research results and to create company specific insight for a period equivalent to the grant period. The aim of the *PoDoCo* programme is to create a win–win situation, in which academic research supports the long-term competitiveness and strategic renewal of companies while young post-doctoral researchers get valuable experience outside traditional academia and on areas of direct business relevance.[89]

Suggestions addressed to the business sector and RPOs

- Arrange a briefing or event for different stakeholders in your field (e.g. NGOs, academic community, start-ups, companies) to raise awareness of your R&I activities and find possible interfaces for co-creation.
- Contact foundations working in your field to scan their knowledge and willingness to start joint programmes to support R&I. Think of foundations as powerful and experienced mentors rather than only as financiers.

Suggestions addressed to the R&I foundation community

- Make your foundation's regulation and application conditions very clear and flexible to attract the most promising and outstanding applicants.
- Switch your funding strategy from 'fund and forget' to 'partnership' by including staff to advise and support grantees, creating new partnerships and co-creating actively with stakeholders (for example with programmes like *PoDoCo*).

3.3. Collaboration to generate impact in society

One of the priorities of the Directorate-General for Research and Innovation of the EC is to bridge the gap between the scientific community and society at large. 'Science with and for Society' (SwafS)[90], one of the areas of the EC's work programme H2020, aims to build effective cooperation between science and society, to recruit new talent for science and to pair scientific excellence with social awareness and responsibility. 'Science with and for Society' is about connecting all societal actors (researchers, citizens, policy makers, business, third sector organisations etc.) to work together during the whole research and innovation process. This approach to research and innovation is called 'Responsible Research and Innovation' (RRI).[91] One of the remaining challenges,

[89] See http://www.podoco.fi.
[90] See https://ec.europa.eu/programmes/horizon2020/en/h2020-section/science-and-society
[91] Responsible Research and Innovation (RRI) represents a step forward in the debate on Science for and with Society. RRI is a) Involving society in science and innovation 'very upstream' in the processes of R&I to align its outcomes with the values of society. b) A wide umbrella connecting different aspects of the relationship between R&I and society: public engagement, open access, gender equality, science education, ethics, and

identified in the mid-term evaluation of H2020[92], is bringing research results to citizens and involving them more in R&I agenda-setting. This is clearly reflected in the report "LAB-FAB-APP Investing in the European future we want" that recommends R&I European systems adopt a mission-oriented approach to address global challenges and to mobilize and involve citizens.[93]

Recommendation 19

Increase the involvement of R&I foundations in further stimulating 'Science with and for Society' in Europe to contribute to a more open and responsible R&I system.

Addressed to the R&I foundation community, RPOs, national governments and the European Commission

Philanthropic organisations, such as foundations, could play an important role in further stimulating 'Science with and for Society'. The foundation community could help to bridge the gap between governments, researchers, the private sector and citizens in the R&I development cycle, an objective clearly aligned with the *3 O's* strategy of Commissioner Moedas ('Open science', 'Open innovation', 'Open to the world'). Foundations could play an important intermediary role in bringing citizens and researchers together. This is illustrated in the 'Meeting of Minds' initiative[94] (a European project coordinated by the *King Baudouin Foundation* and supported by the EC), which proved to be successful in getting citizens directly involved in discussing developments in neurological research.

Furthermore, the EUFORI Study reveals that foundations play an important role in raising awareness of the importance of research in society, in disseminating research, science communication, agenda-setting and raising the public's interest. "Foundations are rooted in society, established by 'founders with a passion', work with dedicated professionals and volunteers, and are strongly committed to the goals of the foundation. Foundations derive their legitimacy from the many contacts with the 'capillaries' in society that offer them the opportunity to function 'as the eyes and ears' for research and innovation. This makes foundations well equipped to disseminate research results in a broader public debate. When it comes to research-related activities, informing the public at large about the findings of basic or applied research is a common activity of foundations in Europe (mentioned by 77% of the EUFORI foundations)".[95] Due to their independence, philanthropic foundations favour two specific characteristics, particularly valuable where it comes to SwafS, namely 1) the power of agenda-setting of new issues, and 2) the power of the stranger. In the case of agenda-setting, foundations exert their expertise to innovate; as 'strangers' they are able to play intermediary roles as brokers bringing all kind of stakeholders together. Both features allow foundations to foster 'mission-oriented alignments'. The involvement of the role of the broker "brings about a change in the

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governance. c) A cross-cutting issue in Horizon 2020, the EU Programme for Research and Innovation 2014-2020. See https://www.rri-tools.eu/about-rri

[92] See https://ec.europa.eu/research/evaluations/pdf/brochure_interim_evaluation_horizon_2020_key_findings.pdf#view=fit&pagemode=none

[93] European Commission (2017) *LAB – FAB – APP — Investing in the European future we want. Report of the independent High Level Group on maximising the impact of EU Research & Innovation Programmes,* Brussels: EC, DG Research and Innovation. Available at: http://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/hlg_2017_report.pdf

[94] See https://www.kbs-frb.be/en/Virtual-Library/2005/294856

[95] Gouwenberg, B.M. et al (2015). Op.cit. (page 87)

existing social relations…..but also the third party can introduce new elements to these relations".[96]

The role of philanthropy in the promotion of 'Responsible Research and Innovation' (RRI) was already addressed in 2014 by the members of a participatory workshop organized by the European Commission and with the participation of *"la Caixa" Foundation* and the Research Forum of the *European Foundation Centre*. From 2014-2016 *"la Caixa" Foundation* led the 'RRI Tools' project (financed by the European Commission within FP7), carried out by a multi-disciplinary consortium. The 'RRI Tools' project developed a package of digital tools, the RRI Toolkit, a set of online tools aimed at training, disseminating and applying responsible research and innovation in Europe, which is still updated regularly and accessible.

In order to increase the involvement of R&I foundations in further stimulating 'Science with and for Society', we have formulated the following concrete suggestions:

Addressed to governments

- Encourage policy-officers (implementing science policies to funding programmes) to incorporate the different components of Swafs/RRI in their strategic thinking and operations.
- Create opportunities in government research programmes for foundation co-creation through citizen involvement.

Addressed to foundations

- Stimulate the programme managers of R&I foundations to incorporate the different components of SwafS/RRI in their strategic thinking and operations.
- Stimulate other foundations to use the RRI Tools kit.
- Increase co-design and co-creation through citizen involvement.

Addressed to RPOs

- Stimulate RPOs to incorporate the different components of SwafS/RRI in their strategic thinking and operations.

[96] Leene, G.J.F. and Th.N.M. Schuyt (2008) *The Power of the Stranger. Structures and Dynamics in Social Intervention. A Theoretical Framework,* Hampshire/ Burlington: Ashgate

ANNEX 1 MEMBERS OF EXPERT GROUP

Experts	
Theo Schuyt (chair)	Professor Philanthropic Studies, Centre for Philanthropic Studies, Vrije Universiteit Amsterdam
Jorge Cortell	Innovator/Entrepreneur; Founder and CEO Kanteron Systems
Gemma Donnelly-Cox	Assistant Professor in Business and Co-Director, Centre for Social Innovation, Trinity Business School, Trinity College Dublin
Stefan Einarsson	Affiliated Researcher at Stockholm School of Economics
Barbara Gouwenberg	Researcher, Centre for Philanthropic Studies, Vrije Universiteit Amsterdam
Ignasi Lopez Verdeguer	Director Department of Science, "la Caixa" Foundation
Elinor de Pret[97]	Policy Advisor at European Venture Philanthropy Association (EVPA)
Cathy Pharoah	Visiting Professor of Charity Funding and Co-Director, Centre for Charitable Giving and Philanthropy, Cass Business School
Bjoern Struewer	Founder and CEO, Roots of Impact
Liisa Suvikumpu	PhD, adjunct professor; Managing Director, The Council of Finnish Foundations
European Commission	
Ignacio Puente González	Policy Officer, DG RTD - B.3 SMEs, Financial Instruments and State Aids

[97] Part of the Expert Group on "Foundations, Venture Philanthropy and Social Investments" until November 2017.

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Stakeholder organisations	
Alberto Anfossi	Head of Fundraising, Compagnia di San Paulo
Max von Abendroth	Executive Director, Donors and Foundations Networks in Europe (DAFNE)
Priscilla Boiardi	Knowledge Centre and Policy Director, European Venture Philanthropy Association (EVPA)
Daniela Deuber	Programme Manager, BMW Foundation Herbert Quandt
Ben Jupp,	Director, Social Finance
Sara Llewellin,	Chief Executive, Barrow Cadbury Trust
Mark O'Kelly	Head of Finance, Barrow Cadbury Trust
Stewart Pritchard	EU & Public Affairs Manager, Wellcome Trust
Danyal Satter	Head of Social Investment, Joseph Rowntree Foundation
Hanna Surmatz	Enabling Environment Manager, European Foundation Centre (EFC)
European Commission	
Robin Edme	Senior Policy Officer, DG FISMA - 0.1 Green and Sustainable Finance
Georgia Efremova	Policy Officer, DG ECFIN - L.1 Coordination with the EIB Group, EBRD and IFIs
Robert Jan-Smits	Senior Adviser, EPSC
Jean-David Malo	Director, DG RTD - Open Innovation and Open Science
Armando Melone	Policy Officer, DG GROW – H.3 COSME Financial Instruments
Ignacio Puente González	Policy Officer, DG RTD - B.3 SMEs, Financial Instruments and State Aids
Keith Sequeira	Cabinet Expert, Cabinet of Commissioner Carlos Moedas
Gianpietro van de Goor	Policy Officer - Policy Assistant to the Director, DG RTD – E Health

ANNEX 3 GLOSSARY

Accelerator
A programme through which an organisation supports investment-ready social enterprises by providing them with business development support, mentoring, infrastructure, and access to relevant networks in order to help them grow.

Blended Finance
The strategic use of philanthropic or public funds (including investments with concessional terms) to attract and mobilize capital flows to impact-oriented initiatives. In development finance it is used to mobilize private capital flows to emerging and frontier markets. Blended finance and hybrid finance are almost similar with the difference that blended finance has the objective of mobilizing additional commercial capital. The *Organisation for Economic Co-operation and Development* (OECD) defines blended finance as "the strategic use of development finance and philanthropic funds to mobilize private capital flows to emerging and frontier markets".
(Source: www3.weforum.org).

Capacity-building (also known as organisational support)
Approach aimed at strengthening organisations through providing support to develop skills or improve structures and processes to increase their overall performance.

Convertible loans and convertible debts
Convertible loans and convertible debts are "two different circumstances in which the loan may be converted into equity." In both cases it is "a loan that has to be repaid. However, in one circumstance, because the lender is willing to vary the loan terms in the borrower's favour, the borrower gives the lender rights to exchange its creditor position for an ownership in the enterprise at a later date. In another, more challenging circumstance, a loan is converted into equity either because the borrower's regulator requires the intermediary to bolster its capital, or upon the occurrence of a future funding round. It is particularly useful where the enterprise is so young that a valuation is not possible and an equity price cannot be set".
(Source: Varga, E., and Hayday, M., (2016), "*A recipe book for social finance. A practical guide on designing and implementing initiatives to develop social finance instruments and markets*", Brussels: European Commission).

Debt instruments
Debt instruments are loans that the venture philanthropy organisation (VPO)/social investor (SI) can provide to the social purpose organisation (SPO), charging interest at a certain rate. The interest charged can vary depending on the risk profile of the investee and on the securitisation and repayment priority of the loan (senior vs subordinated loan).

Donor Advised Funds (DAF)
A DAF is a vehicle for making charitable donations established by a charity. It allows donors to make a charitable contribution, receive an immediate tax benefit and then recommend grants from the fund over time.

Endowment
A donation of money or property to a non-profit organisation, which uses the income resulting from the investment of the endowment for public-benefit purposes. Endowments are either designated to be held in perpetuity or to be expendable (spent down over time). 'Endowment' can also refer to the total investable assets of a non-profit

institution, also known as 'principal' or 'corpus', which is meant to be used for operations or programmes that are consistent with the wishes of the donor.

Equity instruments
Equity instruments are investment contracts through which a VPO/SI provides funding to SPOs and in return acquires ownership rights on part of the SPO's business. This can be appropriate when the prospect of a loan repayment is low or non-existent. If the SPO is successful, the equity share holds the possibility of making dividend payments from the profits to the investor. In addition, it allows for the possibility of a transfer of ownership to other funders in the future.

Financial Instruments (FIs)
Financial instruments are the methods of funding or financing and contract agreement through which, in the VP/SI space, venture philanthropy organisations and social investors financially support social purpose organisations.

Foundation
Foundations are philanthropic purpose-driven, separately constituted non-profit organisations. They have no members or shareholders. They have their own established and reliable source of income, usually but not exclusively from an endowment. They are private, self-governing, non-profit-distributing, and serving a public purpose.

Fund
A fund is a financial vehicle created by an individual or alternatively by a group of individuals to enable pooled investment by a number of investors and which is usually managed by a dedicated organisation.

Grant-maker
Grant-makers include institutions, public charities, private foundations, and giving circles, which award monetary aid or subsidies as grants, voluntary gifts or donations to organisations or individuals.

Grants
Grants are a type of funding in the form of a cash allocation that establishes neither rights to repayments nor any other financial returns or any form of ownership rights on the donor.

Guarantee
A guarantee is a promise by one party (the guarantor) to assume the debt obligation of a borrower if that borrower defaults. A guarantee can be limited or unlimited, making the guarantor liable for either a portion or all of the debt. In the Venture Philanthropy (VP) context, guarantees are one of the financial instruments available for VPO/SIs to support SPOs. The VPO/SI in this case does not need to supply cash up-front, but it opens up access to bank funding by taking on some or all of the risk that the lender would otherwise incur.
(Source: https://en.wikipedia.org/wiki/Loan_guarantee).

Hybrid Finance
Allocation of financial resources to impact-oriented investments combining different types of financial instruments and different types of risk/return/impact profiles of capital providers.
(Source: Gianoncelli, A. and Boiardi, P. (2017), "*Financing for Social Impact. The Key Role of Tailored Financing and Hybrid Finance*", Brussels: EVPA).

Hybrid finance and blended finance are very similar with the difference that blended finance has the objective of mobilizing additional commercial capital.

Hybrid Financial Instruments (HFIs)
HFIs are monetary contracts that combine features of the traditional FIs (grants, debt instruments and equity instruments) in order to achieve the best possible alignment of risk and impact/financial return for particular investments.
(Source: Gianoncelli, A. and Boiardi, P., (2017), "*Financing for Social Impact. The Key Role of Tailored Financing and Hybrid Finance*", Brussels: EVPA).

Hybrid Financing Mechanism
Financing schemes developed to increase the resources brought to impact-oriented investments by de-risking traditional capital (i.e. retail, commercial or public).
(Source: Gianoncelli, A. and Boiardi, P., (2017), "*Financing for Social Impact. The Key Role of Tailored Financing and Hybrid Finance*", Brussels: EVPA).

Hybrid Financing Vehicles
Funds developed to provide finance to SPOs in a more efficient way, while satisfying different risk/return/impact profiles of investors.
(Source: Gianoncelli, A. and Boiardi, P., (2017), "*Financing for Social Impact. The Key Role of Tailored Financing and Hybrid Finance*", Brussels: EVPA).

Hybrid structure/nature
The hybrid structure of the SPO is a combination of a for-profit entity and a not-for-profit entity. The hybrid structure is an innovative way to address the issue of access to finance. By setting up a hybrid structure, the SPO can attract grants through the non-profit entity and social investment through the for-profit entity, hence increasing the pool of resources available while channelling them in the most effective way.
(Source: Gianoncelli, A. and Boiardi, P., (2017), "*Financing for Social Impact. The Key Role of Tailored Financing and Hybrid Finance*", Brussels: EVPA).

Impact Investing (II)
Impact investing is a form of investment that aims at generating social impact as well as financial return.

Impact Measurement/ Assessment (IM)
Measuring and managing the process of creating social impact in order to maximise and optimise it.

Incubator
A programme through which an organisation supports very early-stage social enterprises by providing them with business development support, mentoring, infrastructure, and access to relevant networks in order to make them investment-ready.

Investee
The social purpose organisation that is the target of the VPO/SI activity and the recipient of financial and non-financial support.

Investment
An investment is the use of money with the expectation of making favourable future returns. Returns could be financial, social, and/or environmental.

Long-term investment
A long-term investment is made over a period of five years or more.

Mezzanine finance
Mezzanine finance is a hybrid of debt and equity financing, usually used to fund the scaling of an organisation. Although it is similar to debt capital, it is normally treated like equity on the organisation's balance sheet. Mezzanine finance involves the provision of a high-risk loan, repayment of which depends on the financial success of the SPO. This hybrid financial instrument bridges the gap between debt and equity/grant through some form of revenue participation. Examples include a loan that is only repayable through royalties based on the future sales of a product or service; or a royalty-sharing agreement that can be activated once an agreed profitability threshold has been reached. These hybrid financial instruments can offer an appropriate balance of risk and return. (Source: Balbo, L., Boiardi, P., Hehenberger, L., Mortell, D., Oostlander, P., and Vittone, E., (2016), "*A Practical Guide to Venture Philanthropy and Social Impact Investment*". Brussels: EVPA).

Mission-related investing (MRI)
The dedication of the portfolio of assets and investments of a foundation to its social mission.

Non-Financial Support (NFS)
The support services VPO/SIs offer to investees (SPOs) to increase their societal impact, organisational resilience and financial sustainability, i.e. the three core areas of development of the SPO.

Organisational resilience
The assessment of the degree of maturity of an SPO, in terms of the degree of development of the management team and organisation (governance, fund raising capacity etc.).

Patient capital
Patient capital is another name for long term capital. With patient capital, the investor is willing to make a financial investment with no expectation of returning a quick profit.

Pay for Success
An approach to contracting that ties payment for service delivery to the achievement of measurable outcomes.

Pay for Success Financing
A public-private partnership in which investors provide upfront capital to scale prevention-focused social interventions. Government re-pays the upfront capital plus a return only if the intervention produces measurable social impact. Pay for Success Financing is often used as the synonym for Social Impact Bonds.

Philanthropy
Philanthropy stands for contributions in the form of money, goods and/or time (expertise), offered voluntarily by individuals and organisations (foundations, churches, companies and charity lotteries), which primarily serve goals for the common good, with the intention of serving that public good.
(Source: Schuyt, Th.N.M. (2013). *Philanthropy and the Philanthropy Sector; an Introduction*. Surrey: Ashgate.)

Private equity
Ownership in a firm which is not publicly traded and which usually involves a hands-on approach and a long-term commitment for the investors.

Reimbursable/recoverable grants
Reimbursable or recoverable grants are grants that can be returned to the VPO/SI, under certain terms and conditions agreed in advance by the VPO/SI and the SPO. Recoverable grants are "designed to focus the recipient on sustainability and reduced risk of grant dependence".
(Source: Varga, E., and Hayday, M., (2016)), "*A recipe book for social finance. A practical guide on designing and implementing initiatives to develop social finance instruments and markets*", Brussels: European Commission).

Research Performing Organisations (RPO)
Classification

1) Scientific research Institutes
    a. Doing 'big' science that is dependent upon large-scale or expensive equipment;
    b. Doing 'little' science that could also be carried out in universities;
2) Government Labs
    a. Producing knowledge needed for legislation and regulation;
    b. Producing public goods on behalf of the State;
3) Publicly-funded Research and Technology Organisations (RTOs), whose primary aim is to produce industrially relevant knowledge and support innovation in business. In Europe, they are organised through the European Association of RTOs (EARTO);
4) Large-scale Research Facilities (LRFs), which are typically intergovernmental arrangements to establish and share research facilities.

(Source: https://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/dgrtd-rto_final_report_3.pdf page 6)

Research and Technology Organisations (RTO)
Research and Technology Organisations (RTOs), also known as industrial research institutes, are mainly dedicated to the development and transfer of science and technology to the private sector and society; although some of them are owned by government, in general, the administrative links between RTOs and governments tend to be looser than those of other RPOs.
(Source: http://www.oecd.org/innovation/policyplatform/48136051.pdf (page 1)

Results-based financing
Results-based financing (RBF) is an approach to providing finance to social programmes that have successful measurable outcomes. In a Results-based financing model, a "payer" (a foundation, international donor, or government) places conditions on its payment to a service provider (an NGO or private company) dependent on desired outcomes.

Social Bond
A financial investment product through which investors can specifically invest their capital in organisations with social purposes.

Social enterprise
A social enterprise is an operator in the social economy whose main objective is to have a social impact rather than make a profit for owners or shareholders. It operates by providing goods and services for the market in an entrepreneurial and innovative fashion and uses its profits primarily to achieve social objectives. It is managed in an open and

responsible manner and, in particular, involves employees, consumers and stakeholders affected by its commercial activities.

The Commission uses the term 'social enterprise' to cover the following types of business:

- Those for whom the social or societal objective of the common good is the reason for the commercial activity, often in the form of a high-level of social innovation.
- Those where profits are mainly reinvested with a view to achieving the social objective.
- Those where the method of organisation or ownership system reflects the enterprise's mission, using democratic or participatory principles or focusing on social justice.

There is no single legal form for social enterprises. Many operate in the form of social cooperatives, some are registered as private companies limited by guarantee, some are mutual, and many are non-profit-distributing organisations like provident societies, associations, voluntary organisations, charities or foundations.
(Source: European Commission http://ec.europa.eu/growth/sectors/social-conomy/enterprises_it).

Social Investment (SI) (also known as Social Finance)
Social investment is the provision and use of capital to generate social as well as financial returns. The social investment approach has many overlaps with the key characteristics of venture philanthropy, however social investment means investment mainly to generate social impact, but with the expectation of some financial return (or preservation of capital).

Social Impact Bond (SIB)
Results-based contracts between governments/public entities and social investors that enable federal state, and local governments to partner with high-performing service providers by using private investment to develop, coordinate, or expand effective programmes
(Source: Dear et al., (2016), *Social Impact Bonds. The early years*, London: Social Finance. Available here: http://socialfinance.org/content/uploads/2016/07/SIBs-Early-Years_Social-Finance_2016_Final.pdf).

Social Innovation
Social innovations are new ideas that meet social needs, create social relationships and form new collaborations. These innovations can be products, services or models addressing unmet needs more effectively. The European Commission's objective is to encourage market uptake of innovative solutions and stimulate employment.
(Source: European Commission:
http://ec.europa.eu/growth/industry/innovation/policy/social_it).

Social investment intermediaries
Organisations that aim at increasing the pool of financial resources available for SPOs to reach and scale their social impact by bridging the demand and the supply side of capital, channelling funds towards SPOs in a more efficient way and bringing more resources into the VP/SI space.

Social Impact Incentives (SIINC)
Social Impact Incentives (SIINC) incorporate rewards for achieving social impact into the financing of high-impact enterprises. Through SIINC, enterprises can earn additional revenues to attract investment in order to scale.

Social Purpose Organisation (SPO)
An organisation that operates with the primary aim of achieving measurable social and environmental impact. Social purpose organisations include charities, non-profit organisations and social enterprises.

Tailored financing (TF)
The process through which a venture philanthropy organisation or a social investor (VPO/SI) finds the most suitable financial instrument(s) to support a social purpose organisation (SPO), choosing from the range of financial instruments available (grant, debt, equity, and hybrid financial instruments). The choice of the financial instrument(s) will depend on the risk/return/impact profile of the VPO/SI and on the needs and characteristics of the SPO.

Venture Philanthropy (VP)
VP is a high-engagement and long-term approach to generating social impact through three practices:

- Tailored financing: using a range of financial instruments (including grants, debt, equity and hybrid financial instruments) tailored to the needs of organisation supported.
- Organisational Support: added-value support services that VPO/SIs offer to investees (SPOs) to strengthen the SPO's organisational resilience and financial sustainability by developing skills or improving structures and processes.
- Impact measurement and management: measuring and managing the process of creating social impact in order to maximise and optimise it.

Venture Philanthropy Organisation/Social investor (VPO/SI)
An organisation pursuing a venture philanthropy/social investment approach.

ANNEX 4 VENTURE PROFILES

A. Typical venture profiles and associated challenges and expectations in the early stage of their development*

	Not-for-profit organisation	Traditional venture	Social enterprise	Research & Innovation venture
Profitability	No profits	Expected short-term profitability	Expected long-term self-sufficiency	Potential long-term self-sufficiency, with high uncertainty around return
Investor Returns	No return** to investors	Returns** to investors in line with the overall financial market	Moderate returns** to investors	Low returns** to investors
Financing	Grants and donations	Equity - expected exit from investment with high return	All forms of innovative finance	Most patient forms of innovative finance

* This is a simplified description for demonstration purpose and does not cover the full range of possibilities; e.g. There are also social enterprises that either do not reach self-sufficiency or that are highly profitable
** In this description return is always meant as the return in relation to the associated risk - also known as risk-adjusted return

B. Model of foundations' multiple roles in venture philanthropy and social investment market

Foundations ***>>Demand***	• Supporting development of investment-readiness, building pipeline • Finding co-funders and/ or raising further capital for own investment interests • Co-designing, funding, co-delivering projects and initiatives • Research and development partnerships
Foundations ***>>Market Intermediation***	**Financial Tools and Products** • Buying existing social investment products • Investing in existing financial intermediaries • Contributing to design/ financing of tailored financial products **Non-financial Support** • Providing project development/ governance/ business advice • Supporting other intermediaries/ social ventures to provide above • Connect investees/ investors with their networks
Foundations ***>>Supply***	• Capitalisation of social investment market/ financial intermediaries • Provision of finance to research-based innovations and service-providing organisations • Provision of innovative/blended finance for higher-risk projects and initiatives appropriate subsidies and/or de-risking • Support for outcome/ results measurement
Government, others to build framework to enable foundation participation in all aspects	

ANNEX 5 GOOD PRACTICES FOR INNOVATIVE FINANCIAL TOOLS AND POLICY ACTIONS

Important note regarding examples

There are significant similarities as well as overlaps between the broader field of social innovation/social entrepreneurship and the area of research-based innovation. Both share similar challenges when it comes to funding and bridging the gap between the seed phase and commercial self-sufficiency that enables them to scale. Market-based social enterprises as well as research-based innovations need non-financial support from a broad range of partners as well as patient, flexible and in many cases hybrid forms of capital in its early stages to enable a focus on maximising the value for society rather than on generating early or stable profits. Moreover, research-based innovations in the seed and growth stage often need even more individual support and patient, experimental and risk-taking types of funding than solutions implemented by social enterprises. There is a huge opportunity for foundations to adapt the innovative financial tools that have already proven to be effective for social enterprises to support research-driven innovations in getting ready for the market.

The examples of financing instruments and policy actions from the broader field of social innovation can guide the way for foundations on how to act as catalysts in bridging the funding gap until commercialization and establishment of research-based innovations.

The examples presented here were selected because they are effective in terms of expected impact but they are not necessarily well-known.

1. Facilitate market entry

Examples from social innovations: knowledge dissemination platforms for venture philanthropy (VP) and social investment (SI)

Where can foundations and other funders go for knowledge about VP and SI? Where can they find best practices and ready-to-use guidelines for foundations willing to learn about social finance? There are several knowledge dissemination platforms already in existence which address the needs of foundations and other actors and provide guidance in different formats. Good examples include:

- The *European Venture Philanthropy Association* (EVPA) Training Academy offers a range of venture philanthropy and social investment learning opportunities, both online and offline, designed to help practitioners at each stage of their learning journey.
- The *Social Finance Academy* combines practice-driven, open and free online education with targeted, personal on-site training for public and philanthropic funders, impact investors and social entrepreneurs.
- The *Social Impact Investors' Group* (UK) (SIIG) is a voluntary group of trusts and foundations interested or involved in social investment, organized under the umbrella of the *Association of Charitable Foundations*, which meets several times a year to provide help, guidance, ideas and some practical tools and information on social investment opportunities and existing funding collaborations.

2. Strengthen supply of innovations (demand for capital)

Example: "la Caixa" Foundation[98]

The 'Caixa Impulse' – a programme of "*la Caixa" Foundation*, which provides funding of up to €70 thousand to develop a valorisation and commercialisation plan aiming at making use of assets resulting from research. Additionally, the programme provides non-financial support in the form of (i) mentors (such as industry experts, consultants and entrepreneurs) who provide feedback to the project team, (ii) contact with companies, entrepreneurs and investors to facilitate growth and scale, and (iii) training in key areas such as project management, tech transfer, assessment, finance and commercialisation tools, negotiations, etc. The 'Caixa Impulse' programme was developed by "*la Caixa" Foundation* together with the venture capital branch *Caixa Capital Risc*.

Examples from social innovation: public investment and impact readiness programmes and platforms

The UK government is continuously supporting programmes to build capacity amongst social venture organisations and incubators, supporting early stage organisations in raising investment or applying for public contracts. Past and current programmes include the following:

- *The Investment and Contract Readiness Fund*[99] provided grants to 155 social ventures that received £13.2 million between 2012-2015, enabling them to access new forms of investment and compete for public service contracts. The Fund offered grants to help these ventures purchase specialised investment and contract readiness support. Working in partnership with an approved provider was crucial to the success of each application. Grants between £50 thousand and £150 thousand were available on a rolling basis to ambitious social ventures which aimed to raise at least £500 thousand investment, or bid for contracts over £1 million. A recent report for the G8 identified the Fund as a vital tool to grow the UK social sector. The 'successor programme Big Potential'[100] was funded by the *Big Lottery Fund*.
- The *Impact Readiness Fund*[101] was a UK government Cabinet Office initiative delivered by Social Investment Business (SIB) in two rounds in 2015-16. It provided £3.8 million in total to 99 projects with an average grant size of £39 thousand, enabling them to build up impact management systems. Ventures were based across England and the majority had turnovers of £100 thousand - £5 million. There was an approved list of 26 consultancy providers, and it was by selecting from this list and contacting their chosen provider that ventures applied to the fund.
- The £10 million *Social Incubator Fund*[102]*,* delivered by the *Big Lottery Fund* on behalf of the UK government Office for Civil Society, aims to drive a pipeline of start-up social ventures into the social investment market through incubation support. The Fund provides grants to social incubators, a portion of which forms an investment book which must be invested in social ventures using non-grant financial structures.
- The *European Commission* is supporting the capacity-building ecosystem for social investment in EU member states. It aims at building up the institutional capacity of selected financial intermediaries that have not yet reached sustainability, or are in need of risk capital to sustain their growth and development. EUR 16 million is available through 'EaSI Capacity Building'. It covers equity and, in exceptional cases, loans. The Commission has selected the 'European Investment Fund' implement the 'EaSI Capacity Building Investments Window'.[103]

[98] See: https://fundacionbancarialacaixa.org/corporate/home_en.html
[99] See: https://www.gov.uk/government/publications/investment-and-contract-readiness-fund-interim-review-report
[100] See: http://www.bigpotential.org.uk/
[101] See: https://access-socialinvestment.org.uk//wp-content/uploads/2017/07/irf_review_2017-Final.pdf
[102] See: https://www.biglotteryfund.org.uk/socialincubatorfund
[103] See: http://www.socialinvestment.eu/en/investor/programmes/easi-capacity-building-investments-window-5420

- The UK *Connect Fund* [104] is an initiative of the government-established *Access - the Foundation for Social Investment* and delivered in partnership with the *Barrow Cadbury Trust*. It is providing £3 million in grants and social investment for social investment capacity-building in infrastructure and member bodies, so that they can in turn train and support potential social ventures in their own sub-sectors.

3. Provide innovative 'full spectrum finance' instruments

Example: Compagnia di San Paolo (CdSP)
Compagnia di San Paolo (CdSP)[105] is an Italian banking foundation that works to promote cultural, civil and economic development with the income from its assets investments. CdSP works in a wide range of areas, including research, arts, culture, healthcare, social policy, and research and innovation.

Being a highly-engaged grantmaker, CdSP already adopts a venture philanthropy approach, providing both financial support (through grants) to the social purpose organisations it supports and non-financial support in the form of a transfer of competences. The foundation uses a matrix model or grid to assess organisational needs, in which the areas of action (for example, R&I, culture, healthcare et.) are cross-tabulated with a number of organisational competencies (for example, funding, capacity-building, communication etc.), and these are provided if and when needed to the specific projects.

CdSP realised recently that a number of organisations working on research and innovation might need to be supported through financial instruments other than grants, and more specifically through equity. In order to be able to support such SPOs, CdPS is currently developing the concept for a fund that will be able to provide equity and convertible loans to a number of SPOs. The fund will provide funds for the seed and proof-of-concept phases to projects that will be selected by partnering with universities. CdSP will be a minority shareholder in such funds. For example, a project could be receiving €150 thousand for developing a prototype which, if successful, could be converted into a patent and a start-up created. This would allow SPOs with the right potential to become financially sustainable, freeing grant money for other activities of the foundation.

Example: Cystic Fibrosis Foundation
The *Cystic Fibrosis Foundation* (CFF)[106] adopted a venture philanthropy model to combat rare diseases and as a result, took an active role in new drug development, stewarding the commercialization process from initial basic research to market introduction, bringing together diverse partners to form a community of common interest, reducing risk through financial incentives and bridging the valley of death that adversely affects many promising technologies

A striking example of its initiative is the development of Kalydeco®, a cystic fibrosis therapeutic, which became available in the spring of 2012 and provides a new model for conducting research that can be used as a counterfactual example when compared against more traditional funding sources.

[104] See: https://access-socialinvestment.org.uk/connect-fund-launches-eoi-process/
[105] See: http://www.compagniadisanpaolo.it/
[106] See: https://www.cff.org/About-Us/About-the-Cystic-Fibrosis-Foundation/CF-Foundation-Venture-Philanthropy-Model/

Partly due to CFF's aggressive approach, the life expectancy for children with cystic fibrosis has increased drastically over the years, reaching 18 years by 1980 and 37 years by 2007. The transition to venture philanthropy has turned CFF into a 'virtual drug company' by funding more research, forming partnerships between industry and academia, and putting the majority of the foundation's budget into drug development.

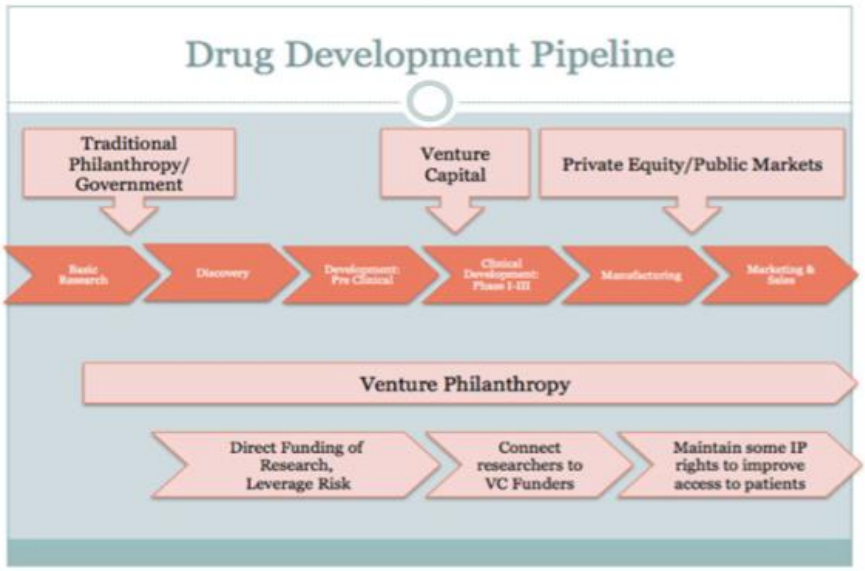

Fig. 2 Drug Development Pipeline. Adapted from: Institute for the Study of Aging & The Alzheimer's Drug Discovery Foundation (2008), Finkbeiner (2010), and Ministry of Commerce & Industry Task Force (2008)

Examples from international development and social innovation: hybrid and blended financing instruments

In recent years a broad range of innovative financing instruments and strategies have evolved in the field of social innovation as well as international development. These flexible funding models make use of the full spectrum of financing options, from traditional grant-making to investing for financial returns at either discounted or full market rates.

The following examples from the broader field of international development and social innovation can serve as inspiration for the adoption of effective instruments and approaches to research-based innovations to bridge the funding gap until commercialization and establishment.

A) Hybrid financing instruments and vehicles that are able to invest in concessionary ways

- The *Global Innovation Fund (GIF)*[107] is a non-profit innovation fund that invests in the development, rigorous testing, and scaling of innovations targeted at improving the lives of the world's poorest people. The GIF invests with a needs-based approach through grants, loans (including convertible debt) and equity investments ranging from $50 thousand to $15 million and backs innovations with the potential for social impact at a large scale, whether they are new

[107] See: https://globalinnovation.fund/

technologies, business models, policy practices, technologies or behavioural insights.

- *Team U* (Germany)[108], a social business for turnaround consultancy for entrepreneurs threatened by bankruptcy, used a conditional revenue share agreement for its first financing round. This structure entitles the investor to a pre-defined amount of the revenues of the company, up to a pre-determined maximum. It provides the company with financial flexibility, especially in the start-up phase. Through flexible repayment options and by limiting payouts, valuable liquidity for the company is secured, to re-invest in the expansion of its business activities.

B) Structured (layered) funds and other blended finance models leveraging different sources of capital with different risk/return expectations

- The *European Fund for Southeast Europe* (EFSE)[109] aims to foster sustainable economic development mainly through financing micro and small enterprises as well as strengthening local financial markets. The fund invests long-term funds in qualified financial institutions including local commercial banks, specialised microfinance banks, microcredit organisations, leasing companies and investment companies or funds with a regional orientation. The fund has taken development financial institution and multilateral development bank investment to crowd in private sector investment.
- *Power to Change*[110] have been working with *Key Fund* and *SASC* to use their grant funding to unlock extra investment for individual community businesses which would not otherwise have been possible. One example of such an investment is in *Storeroom 2010*, a social enterprise situated on the Isle of Wight that enables deprived families to affordably furnish their homes, strengthen their quality of life and preserve their dignity. *Storeroom* received a blend of a loan from *SASC*'s 'Community Investment Fund' and a grant from *Power to Change* to purchase their warehouse and develop corporate partnerships. By the end of 2016, *Power to Change* estimate that £2 million of grant funding will have allowed another £6 million of additional social investment to be accessed.
- *Fair For You (UK)[111],* a not-for-profit online lending company, has received structured loan finance for set up costs and a loan from the *Barrow Cadbury Trust* to provide affordable credit to low income households to buy household goods. In its third annual report[112], *Fair For You* states that for every £1 invested it has delivered at least £4.56 in social value.

C) Incentive structures for attracting private capital

- The *Advanced Market Commitment* (AMC) uses funds from donor governments and the *Bill & Melinda Gates Foundation* to provide pharmaceutical companies with incentives for research and development on new products for the developing world. AMC is embedded in the *GAVI Alliance*[113], a global private-public partnership of developing and donor governments, multilateral and civil society

[108] See: https://www.team-u.de/en/index
[109] See: https://www.efse.lu/
[110] See: https://www.biglotteryfund.org.uk/powertochange
[111] See: https://www.fairforyou.co.uk/
[112] Gibbons, D and Nixon B. (2017) *The Social Impact of Fair For You,* CfRC. Available at: https://www.barrowcadbury.org.uk/wp-content/uploads/2017/03/The-Social-Impact-of-Fair-for-You-Report-2017.pdf
[113] See: http://www.gavi.org/library/news/press-releases/2013/advance-market-commitments-promising-solutions-to-global-health-challenges/

organisations, the vaccine industry, and private donors collaborating to make vaccines affordable and accessible to poor countries. It introduced new funding mechanisms to speed up the introduction of vaccines in poor countries. The *GAVI Alliance* business model fosters a competitive vaccine market by pooling demand from developing countries and providing predictable financing to meet demand, attracting new manufacturers from emerging economies and increasing competition to drive down prices.

- *Social Impact Incentives* (SIINC)[114] is a funding instrument that rewards high-impact enterprises with premium payments for achieving social impact. The additional revenues enable them to improve profitability and attract investment to scale. Thus SIINC can effectively leverage public or philanthropic funds to catalyse private investment in underserved markets with high potential for social impact. Unlike Social Impact Bonds, Social Impact Incentives focus on market-based solutions (enterprises) and are seeking to scale the 'supply' of impact. SIINC where piloted early 2017 within the scope of a pilot project of the *Swiss Agency for Development & Cooperation* and the *Inter-American Development Bank.*

4. Strengthen supply of funding

Examples from social innovation: 'wholesale' funding vehicles

Public actors are already taking action to strengthen the supply of capital and build the market for social innovation and social impact investment. This approach can be adapted to research-based innovations as well.

- *Big Society Capital* (UK)[115] was established to provide returnable finance to intermediary social investment finance providers. It was capitalised with a total of £600 million, £400 million from unclaimed cash left dormant in bank accounts for over 15 years and £200 million from the UK's four largest high street banks including *Barclays, Lloyds, HSBC* and *RBS*. *Big Society Capital* provides finance to socially-oriented financial intermediary investment organisations that support charities and social enterprises with the ability to repay an investment through the income they generate. An example is its investment in *Key Fund*[116], providing bridge finance to support the intermediary while it was waiting for its own capital to be repaid and recycled, and providing loans under £150 thousand to SMEs in the less well-off Midlands and North of England that cannot secure finance from traditional lenders.
- Another example of how funds from *Big Society Capital* are used by finance providers to promote social ventures is *Unforgettable*[117], a pioneering social business set up to improve the lives of those living with dementia and of their careers. It offers a one-stop e-platform for in-depth information on changes in behaviour, cognitive function and physical abilities that dementia can bring; community support for dementia carers, and practical, product-based solutions to the daily challenges of the illness. Unforgettable researches available products, and also in turn seed funds other entrepreneurs in the development of new products for dementia sufferers. Following original seed funding from the *Bridges Charitable Trust*, the venture brought in board experience of scaling innovative e-commerce business, and received investment to a total of £1.5 million from

[114] See: http://www.roots-of-impact.org/siinc/
[115] See https://www.bigsocietycapital.com/
[116] See: https://thekeyfund.co.uk/apply/
[117] See: https://www.unforgettable.org/?utm_source=bing&utm_medium=cpc&utm_campaign=B%20-%20Unforgettable%20-%20Exact&utm_term=unforgettable&utm_content=Unforgettable

Bridges' Ventures' Social Sector Funds and *Impact Ventures UK* (IVUK). Both *Bridges Social Sector Funds*[118] and *IVUK*[119] have been supported with investment from *Big Society Capital.* To safeguard the company's explicit social purpose, Unforgettable has set up a charitable foundation in parallel which has 'golden share' rights to protect *Unforgettable's* social mission and ensure the business remains focused on its beneficiaries.

- The *European Investment Fund (EIF) Social Impact Accelerator Fund*[120] aims to achieve social impact by being a market builder of sustainable funding for social enterprises that are finding solutions to social issues based on scalable models promoting social inclusion and creating employment opportunities for marginalised social groups. The fund is a fund-of-funds investing in social impact funds in the EU. The fund supports European Union policy to stimulate innovation, entrepreneurship, economic growth and re-employment. By providing equity financing, the fund is a leading actor in the social enterprise market, allowing social impact investing funds to scale and widen their scope of supported ventures.
- *Portugal Inovação Social*[121] acts as a market catalyst promoting the social investment sector in Portugal through the mobilisation of EU structural funds. Its funding programmes support innovative financing instruments tailored to the needs of both social enterprises and investors. The ecosystem building consists of 4 phases: (1) Capacity-Building for Social Investment (€15 million), (2) Venture Philanthropy co-financing (€20 million), (3) Social Impact Bonds payer (€20 million), (4) Fund for Social Innovation (€95 million).

[118] See: http://www.bridgesfundmanagement.com/bridges-social-sector-funds-honoured-catalytic-impact/
[119] See: http://www.impactventuresuk.com/
[120] See: http://www.eif.org/what_we_do/equity/sia/index.htm
[121] See: http://inovacaosocial.portugal2020.pt/

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The objective of the Expert Group on "Foundations, Venture Philanthropy and Social Investments" is to unleash the potential of R&I foundations and other providers of capital and expertise, such as venture philanthropists and social investors, through:

- Advising on suitable framework conditions that will ease R&I foundations' establishment, expansion of activities and (cross-border) operations at national and European levels.
- Guiding governments and other stakeholders on policy actions and financial tools to support R&I activities funded by R&I foundations.
- Stimulating the collaboration of R&I foundations and other stakeholders (i.e. governments, business sector, research performing organisations, R&I umbrella organisations) in R&I activities at national and European levels.

The Expert Group has formulated recommendations for each of the three areas, addressed to different stakeholders at the national and European levels.

Studies and reports

Publications Office