

# Public-Private Partnerships in Horizon 2020

## Driving ICT research & innovation forward

Brussels, 8 November 2017

### INTRODUCTION

As one of the major new instruments under Horizon 2020, the European Commission launched the contractual Public Private Partnerships (cPPPs) in selected areas of strategic importance for European industry. The partnerships related to ICT that we are addressing in this paper have been initially allocated €4.9 billion<sup>1</sup> in the Horizon 2020 budget, with each euro of public funding expected to trigger additional investments to develop new technologies, products and services. Many DIGITALEUROPE members are active participants in the contractual PPPs, as well as in the related private associations and technology platforms (ETPs). For some of the cPPPs included, not enough time has passed yet to assess them meaningfully. Nevertheless, DIGITALEUROPE would like to contribute to the interim evaluation of Horizon 2020 and the definition of the next Framework Programme by sharing our members' experience and best practices as well as formulating recommendations across the PPPs in the ICT domain.

### REMARKS AND RECOMMENDATIONS

#### 1. Addressing Grand Challenges

The European Commission highlights the importance of funding for ICT research & innovation to fulfil the political objectives of the European Union in their mid-term review of the Digital Single Market strategy<sup>2</sup>. PPPs contribute to developing the key technologies that enable the digitisation of European economy and society. Examples include advancing the European data economy, developing the manufacturing processes of the future and creating the necessary infrastructure for the digital economy.

There is no doubt that PPPs help in translating the high-level challenges and policy objectives set by policy-makers into more specific projects and expected targets. The extensive discussion and network within the diverse membership of the private associations helps in reconciling the perspectives of short- to mid-term legislative and

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1 €1 150 million for Factories of the Future <http://www.effra.eu/>  
€700 million for 5G networks for the Future Internet <https://5g-ppp.eu/>  
€700 million for High Performance Computing <http://www.etp4hpc.eu/>  
€700 million for Robotics <https://www.eu-robotics.net/>  
€700 million for Photonics <http://www.photonics21.org/index.php>  
€500 million for Data <http://www.bdva.eu/>  
€450 million for Cybersecurity <https://ecs-org.eu/cppp>  
2 European Commission Communication "A Connected Digital Single Market for All"  
[http://ec.europa.eu/newsroom/document.cfm?doc\\_id=44527](http://ec.europa.eu/newsroom/document.cfm?doc_id=44527)

political goals with a more long-term and systemic view on Research & Innovation. Projects promoted under PPPs foster cooperation between different public and private actors and allow collaborative actions with ambitious research and innovation agendas (SRIA's). They are also key instruments to leverage the necessary funding needed for large-scale projects. For industry it is efficient that a commonly agreed SRIA can be formulated that defines the overall goals, the technical and non-technical priorities, and presents the PPP's research and innovation roadmap.

## Recommendations

The European Commission needs to ensure that this link between policy and research is acknowledged and further exploited, also within the next Framework Programme. It is necessary that the cPPPs will be connected to the "mission-oriented approach"<sup>3</sup> that is currently discussed for FP9. Internal coordination between different parts of the Commission must be improved to ensure that this link is strengthened. The European Commission needs to voice their public support of cPPPs also at the highest political levels, especially in the up-coming negotiations for the next Multi-Annual Financial Framework.

## 2. Including the entire Innovation Eco-system

Involving a diverse participation of larger companies, SMEs, research institutes and academia to set the strategic research & innovation agendas, contractual PPPs address the entire innovation and value chain. The associations constituting the private side are open and welcoming to new members. In many industrial sectors and cPPPs, the associations work closely with related ETPs to develop their strategies and roadmaps. These platforms are also open to new members and do not require a financial commitment, thereby opening up participation in particular to SMEs.

Calls in the cPPP areas are run under the same rules of participation as in other parts of the programme. For all the cPPPs agreed with the Commission, the percentage of EU funding allocated to non-members ranges from 47% to 77 %, depending on the partnership. The percentage of participations from non-members is above 50 % for all cPPPs, and in cases such as FoF, Photonics and Big Data, participation of above 75% is observed. On average, 33% of funding allocated through calls within these cPPPs goes to the Higher Education Sector and 23% to Research Organisations<sup>4</sup>.

Especially in the ICT domain, the contractual PPPs play a crucial role in connecting the ICT industry to researchers and innovators in vertical sectors – contributing to the digital transformation of European economy through the identification of use cases and the development of business opportunities. In addition, cPPPs help to structure international collaboration in their domains and support the European Commission's objective to be "Open to the World" (e.g. the 5G Global Events that are organised every six months on a region / country rotating basis).

## Recommendations

Individual cPPPs already try to collaborate where necessary and relevant. However, it would be appreciated if the European Commission could facilitate coordination on specific topics. Strengthening cross-cutting activities

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3 High Level Group Report on maximising the impact of EU funding for Research & Innovation,

[https://ec.europa.eu/research/evaluations/pdf/archive/other\\_reports\\_studies\\_and\\_documents/hlg\\_2017\\_report.pdf](https://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/hlg_2017_report.pdf)

4 DG RTD, Horizon 2020 Interim Evaluation, July 2017,

[https://ec.europa.eu/research/evaluations/pdf/book\\_interim\\_evaluation\\_horizon\\_2020.pdf#view=fit&pagemode=none](https://ec.europa.eu/research/evaluations/pdf/book_interim_evaluation_horizon_2020.pdf#view=fit&pagemode=none)

across cPPPs would create more explicit linkages among pillars and areas. That also includes links to the “missions” that are expected to be established in FP9. More cooperation would also help to avoid duplication of efforts between the innovation activities of the PPPs and e.g. the newly developed Digital Innovation Hubs.

The mid-term evaluation has shown that the participation of SMEs in cPPPs is largely aligned with their participation in Horizon 2020 overall. Thus, the most effective tool to improve SME participation would be a general simplification of the process for funded research projects, especially regarding proposal procedures, speed of evaluation and grant as well as reporting burden.

### 3. Ensuring efficient cooperation between the Public and Private partners

The collaboration between the private association and the responsible European Commission unit is crucial for the success of cPPPs. Their priorities and activities build on an agreed relationship between the European Commission and the private sector in defined areas, and on specific roadmaps with KPIs and a commitment to additional investments on the private side. On the basis of these roadmaps, cPPPs provide direct input into the preparation of priorities for Horizon 2020 Work Programmes in pre-defined areas.

However, in our experience, there is a disconnect between the governing body of a PPP and the actual H2020 projects funded by the European Commission. The PPP has no control over what is being submitted to Calls published under the PPP “umbrella” or over what projects are selected for funding. After the projects are funded, depending on the PPP’s implementation, they can potentially proceed their own way without programmatic reporting to the PPP. On the other hand, the EC officials expect the PPP to show the impact of these projects on the European economy and on the participating companies involved in the PPP.

#### Recommendations

Obviously independent evaluation based on objective criteria of excellence and impact needs to be guaranteed. Nevertheless, there should be a mechanism to ensure a tighter connection between the PPP governance and the H2020 projects funded out of the funding bucket associated with a specific PPP. It is especially crucial that gaps in the portfolio of selected projects are avoided.

In line with our general recommendation for more agility and flexibility in FP9, the partnerships should be able to develop operational models beyond the traditional call-based approach. As explained in a study<sup>5</sup> commissioned by the Estonian Council Presidency, that would allow them to be more ambitious and establish new and explorative innovative environments and platforms.

### 4. Overall added value and the future of cPPPs in FP9

The general benefits outlined above are crucial and include the creation of networks and collaboration, innovation take-up and standards development beyond the projects in the Framework Programme. According to the High Level Report<sup>6</sup>, it is estimated that each Euro of EU investment in Research & Innovation would bring a GDP increase of between EUR 6 and 8.5 between 2014 and 2030. In addition, cPPPs are also expected to

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5 Technopolis, Increased coherence and openness of European Union research and innovation partnerships, [https://www.hm.ee/sites/default/files/technopolis\\_eu\\_ri\\_partnerships\\_final\\_report.pdf](https://www.hm.ee/sites/default/files/technopolis_eu_ri_partnerships_final_report.pdf)

6 High Level Group Report on maximising the impact of EU funding for Research & Innovation, [https://ec.europa.eu/research/evaluations/pdf/archive/other\\_reports\\_studies\\_and\\_documents/hlg\\_2017\\_report.pdf](https://ec.europa.eu/research/evaluations/pdf/archive/other_reports_studies_and_documents/hlg_2017_report.pdf)

leverage investment from the private sector according to a factor between 3 and 5 per each Euro of funding invested. Obviously, the overall leverage effect of each cPPP can only be assessed after the Programme has ended. For example, the photonics industry has leveraged public investment in the PPP projects by a factor of 4.37 and other cPPPs (e.g. Big Data or Photonics) report to be on track to meet their targets for private investment<sup>8</sup>. Furthermore, cPPPs must report on the development of new types of high-skilled jobs and new curricula. The Interim Evaluation of Horizon 2020 shows that projects within the cPPPs have reported a wide range of results regarding new types of high-skilled jobs, the highest average being in Factories of the Future, with 3.5 new job profiles per project. The available data<sup>4</sup> gives a first indication that PPPs had a better leverage effect for private investment, increased industry participation and more close-to-market activities than regular FP7 projects.

## Recommendations

In their report, the High Level Group on maximising the impact of EU Research & Innovation Programmes emphasised that “partnerships (public-private and public-public) with industry, foundations and public authorities should be taken forward in as far as they mobilise joint investment in established missions, through a simple and flexible co-fund mechanism.” DIGITALEUROPE agrees that Public-Private Partnerships must be one of the elements in the design of the next Framework Programme. That includes both the continuation of current cPPPs, several of whom still need time to really show their clear impact, as well as the setup of new PPPs in market-relevant areas of the digital domain. cPPPs must be a vital ingredient to a continuing industrial leadership agenda where the essential ICT technologies of the future are developed, for and by industrial actors.

We agree with the report<sup>9</sup> of the independent expert group on cPPPs that the Key Performance Indicators need to be reviewed. There should be a common understanding between cPPPs on how their impact is measured and what criteria are used to evaluate the success and added value of their activities. More guidance especially needs to be given to the PPPs on how to calculate the leverage factor, also in case different cPPPs topics are combined in the same call. This review should be embedded in the broader discussion to develop more meaningful and measurable KPIs for FP9 both at the macro-economic / political level and for individual projects. By conceptually aligning and focusing the different KPIs, the overall monitoring could be significantly improved, for instance better data quality can be achieved, less effort is needed for data collection, and more specific reliable and comparable insights can be derived.

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7 Jobs and Growth in Europe – Realizing the Potential of Photonics, PPP Impact Report 2017,  
<http://www.photonics21.org/img/PPP-Impact-report.pdf>

8 Annex 2 of the interim evaluation of Horizon 2020, July 2017,  
[https://ec.europa.eu/research/evaluations/pdf/archive/h2020\\_evaluations/swd\(2017\)221-annex-2-interim\\_evaluation-h2020.pdf#view=fit&pagemode=none](https://ec.europa.eu/research/evaluations/pdf/archive/h2020_evaluations/swd(2017)221-annex-2-interim_evaluation-h2020.pdf#view=fit&pagemode=none)

9 Report of the independent expert group, Mid-term review of the contractual Public Private Partnerships (cPPPs) under Horizon 2020, <https://publications.europa.eu/en/publication-detail/-/publication/6de81abe-a71c-11e7-837e-01aa75ed71a1/language-en>

## ABOUT DIGITALEUROPE

DIGITALEUROPE represents the digital technology industry in Europe. Our members include some of the world's largest IT, telecoms and consumer electronics companies and national associations from every part of Europe. DIGITALEUROPE wants European businesses and citizens to benefit fully from digital technologies and for Europe to grow, attract and sustain the world's best digital technology companies.

DIGITALEUROPE ensures industry participation in the development and implementation of EU policies. DIGITALEUROPE's members include 60 corporate members and 37 national trade associations from across Europe. Our website provides further information on our recent news and activities: <http://www.digitaleurope.org>

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