Future Internet Public Private Partnership (FI-PPP)
Response to the Interim Assessment
Following the publication of the Interim Assessment of the Future Internet Public Private Partnership Programme\(^1\) (FI-PPP) in May 2012, this report provides a follow-up on the recommendations presented therein.

The Interim Assessment of the FI-PPP was done by an independent panel of experts on the Future Internet Public-Private Partnership (FI-PPP). The objectives of the assessment were to

- evaluate the concept of the FI-PPP;
- assess progress in the first year;
- offer recommendations to the European Commission and to participants in the FI-PPP;
- bring forward proposals for how to further develop the FI-PPP;
- contribute to the guidelines for public-private partnerships in Horizon 2020.

This document comprises the responses to the recommendations of the Interim Assessment of the FI-PPP, which includes 14 recommendations towards three different target groups:

- 5 for the European Commission concerning Public Private Partnerships (PPPs) in Horizon 2020. The European Commission has answered them taking into account the state-of-play of the preparations for Horizon 2020 at the time of publication of this response, i.e. December 2012.

- 4 for the participants in the present FI-PPP. The European Commission has solicited a response from the current participants of the FI-PPP.

- 5 for the Commission concerning the present FI-PPP.

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INTERIM ASSESSMENT RECOMMENDATIONS AND THE COMMISSION RESPONSES

A. Recommendations for the Commission concerning Public-Private Partnerships in Horizon 2020

Recommendation 1: the Commission should establish clear guidance on the requirements for proper governance of PPPs and insist upon them being fulfilled. Public-private partnerships should be encouraged.

They (PPPs) engage industry to a greater extent than standard Framework Programme projects in both strategic input and in project participation. They therefore increase market focus and can, with appropriate management arrangements, offer a clearer mechanism for the programme to be coordinated so that the whole is more than the sum of the individual projects. But while Article 19 of the proposed future Regulation on Horizon 2020 provides an open framework for Public-Private Partnerships, clear rules of practice within that framework are required. Otherwise PPPs risk having a lack of strategic direction or the means to achieve that direction and to gain synergy between projects: it is extremely difficult if not impossible to correct inappropriate structures and behaviours once they have been established.
Response

Within the framework of the preparations for Horizon 2020, the Commission services launched an inter-service working group chaired at the level of Deputy Director General charged to develop the processes and guidance notes for the implementation of PPPs under Horizon 2020, including contractual PPPs, cf. article 19 of the proposed regulation for Horizon 2020. The working group drafted so far a list of the necessary elements in proposing a PPP (including the proposed governance) a process for submission, selection and approval of PPPs and how commitment by industry can be made visible and concrete.

More specifically on governance, the Commission services noted that governance aspects among on-going PPPs vary considerably. In assessing a future PPP proposal under Horizon 2020, the Commission services will scrutinise, inter-alia, governance aspects and their efficiency, effectiveness, openness and transparency (IPR regime), aiming to ensure both, a high standard of governance and operational flexibility. Specific governance models will still be tailored to the specific PPP and industry sector needs. After all, a suitable governance model of a certain PPP is first and foremost in the interest of that PPP's participants, who should have the freedom to choose the governance model they desire.

A first set of PPPs, likely those referred to in the Commission's proposal for the Specific Programme of Horizon 2020\(^2\), will build on experiences of PPPs under FP7 and they are likely to bring up new best practices for subsequent PPPs. Therefore, Commission services will encourage the exchange of best practices and lessons learnt between on-going PPPs and PPPs in preparation.

**Recommendation 2:** any public-private partnership must have an effective central internal governing body to manage its governance arrangements.

We now have experience of several forms of PPP and their governance. Good practices should be learned from them. The JTIs, for instance, have developed good models for governance, management and administration, and processes whereby the industrial participants are able to establish (and evolve) a collective strategic view on key issues and ensure that this view prevails within the partnership and guides the activities of the partnership. However, for the future the cumbersome 'Joint Undertaking' arrangement is an unnecessary and counter-productive burden on a PPP.

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Response

Joint Technology Initiatives are long-term initiatives where suitable governance models have more time to develop. PPPs, notably the Future Internet PPP, are programmes with an operational character, shorter life-times under FP7 and governance models that need to respond instantly to operational aspects.

A lesson learnt, and to be implemented in Horizon 2020, is the need for a comprehensive Memorandum of Understanding (also known as PPP contract) signed prior to execution of PPP projects/activities. This will allow for governance to be put in place before operations start, reducing the risk of subsequent agreements to conflict with PPP agreements and creating more buy-in/commitment to programme execution.

**Recommendation 3: future public-private partnerships should be enabled to use the widest range of innovation oriented instruments in a coordinated manner.**

PPPs should not be restricted to FP7-like instruments, but should take advantage of the opportunity offered by Horizon 2020 to use the full range of EU instruments for the support of innovation. However in PPPs it is important that the use of such instruments be coordinated, rather than projects running independently.

Response

The Commission’s proposal for Horizon 2020 – *for the first time* – brings together instruments for research, technological development and innovation in a systematic fashion, including closer relations to other related policies proposed for the next programming period 2014-2020 (e.g. COSME\(^3\) or the Cohesion Policy\(^4\)). We propose that the Memorandum of Understanding (also known as the PPP contract) will spell out the vision, scope, commitment and tools to implement the PPP. It can then make use of all suitable instruments within Horizon 2020 but also beyond, provided the PPP strategic research and innovation agenda justifies their use.

The revised financial regulation to be applied as of 1 January 2013 will provide further simplification and flexibility. At the moment the so-called cascading grants (or sub-granting, i.e. grants awarded by a grant beneficiary) are capped by a maximum threshold for the total grant amount that can be sub-granted, thus

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limiting the scope for taking on board partners with specific expertise who had not been identified at the beginning. This cap will be abolished⁵.

**Recommendation 4: re-design the whole process of calls for and selection of proposals to better reflect a focus on achieving greater ‘impact’. The whole Framework Programme approach needs to be re-thought and restructured to move towards better identification and assessment of ‘impacts’.**

In particular, the scientific experts that perform proposal evaluations find it difficult to judge impact. The kinds of economic and social impacts that are desirable should be clarified along with the nature of the outcomes of research and innovation projects to achieve them.

**Response**

ICT Work Programme 2013\(^6\) shows an increased focus on impact and innovation, in view of bridging to the broader set of activities proposed for Horizon 2020 and implemented for instance through increased impact related Key Performance Indicators. Notably for proposals to be submitted in response to the 3\(^{rd}\) call of the Future Internet PPP, impact is a prime aspect since the last phase the PPP aims to widen participation and to attract innovators to take-up innovative Internet technologies for services and applications. It has to be noted though that for the ICT Work Programme 2013, the FP7 Rules for Participation are applicable along with their guidelines regulating the process and procedures for evaluation of proposals.

The Commission services devote significant attention to the selection of independent external advice for the evaluation of proposals and review of on-going activities. Indeed their qualifications and work are crucial in providing guidance to the Commission and the co-financed activities. A balance of expertise and background in light of the proposal to be evaluated or activity to be reviewed is indispensable.

In the preparations for Horizon 2020, the Commission services are reviewing the definition of the evaluation criteria.

**Recommendation 5: participation in programmes should be dependent on the agreement and actions of participants to collaborate fully, across the programme rather than just within their own project, so as to achieve programme objectives.**

This includes, for example, participation in coordination activities and governance bodies, willingness to adapt project direction to better fulfil programme objectives,

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provision of deliverables to other projects, and compliance with IP arrangements to facilitate sharing and wide-scale take-up.

Response

It is only human to think of one’s own interests before those of his/her organisation, project, programme, and third parties. A PPP culture must be established; participants need to be better aware that they are all together in a PPP (shared commitments – shared benefits). In this sense the on-going Future Internet PPP is an experiment, as multi-disciplinary, cross-industry, pan-European collaboration at such scale and intensity has not been tried before in the area of ICT. An early lesson-learnt is that interests of programme and projects need to be better aligned from the outset, nurtured via well-chosen incentives, and monitored via performance indicators; projects will only adapt to better fulfil programme objectives if there is a clear benefit to these projects.

Indeed the current FP7 instruments are very much project-centred. Special clause 417 to the grant agreement was designed in order to bring the programme notion into the project grant agreements. It introduces a programme-wide IPR arrangement and the obligation to define a programme agreement in addition to single project consortium agreements regulating notably the programme governance. However, the value of the programme agreement, which in itself can be seen as suitable, has been compromised by its lower priority in view of the projects’ consortium agreements and their possibly conflicting provisions.

For phase 2 of the Future Internet PPP, the Commission will either encourage PPP participants to revise the programme agreement and propose that it takes precedence over the consortium agreement in case of conflicting provisions, or all programme aspects, including governance, will become part of the annex I to the individual grant agreements of all phase 2 projects, making sure that all projects under the programme are based on the same legal framework. In fact discussions have already started on this and negotiations are expected to take place during the December 2012 – February 2013 timeframe.

B. Recommendations for present partners in the Future Internet PPP

Recommendation 6: the industrial participants in the FI-PPP should recognise the role expected of them in a public-private partnership and reconstitute the Steering Board and its membership to perform that role effectively.

In particular (but not only) the Steering Board should:
- put in place processes for much closer liaison between the Steering Board and both the Architecture Board and the Working Groups;
- ensure that there is within the programme a process for horizon-scanning and proper revision of programme strategy and steering of the programme in response to external developments;
- ensure that the programme has output oriented Key Performance Indicators derived from the desired programme level impacts and that these are used to measure progress and to steer the programme and the projects within the programme.

Response

The Commission services invited the senior managers of the major industrial actors\(^8\) in the Future Internet PPP to present their views on the Interim Assessment and notably on this recommendation in a meeting on the 3\(^{rd}\) of July 2012.

The group acknowledged its leadership in the initiative and was ready to express this in a strengthening of the industrial steering by proposing revised programme governance. They have prepared a proposal with a list of options to improve the FI-PPP governance.

A key element is the creation of an Executive Industry Board as a new element of the FI-PPP strategic governance structure. It will elaborate the Program strategy and perform high level communication.

At the operational governance level, the Steering Board and the Architecture Board should monitor the progress of the FI-PPP program based on overall planning and a set of performance indicators. Board decisions would constitute an obligation for the projects concerned to implement. Furthermore, the overall programme planning and alignment of milestones and deliverables shall be easily revisable by the Steering Board according to the progress of the programme.

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\(^{8}\) Alcatel-Lucent, Atos Origin, Deutsche Telekom, Engineering, Ericsson, France Télécom, Nokia Siemens Networks, SAP, Siemens, Technicolor, Telecom Italia, Telefónica, and Thales
The proposal also suggests strengthening the projects' links to the overall programme objectives and management structure. The negotiation phases for new projects are critical to achieve this and several suggested actions are put forward.

A final key suggestion is to create the function of a Program chairman, a Technical Advisor, and a Dissemination manager to be selected by the FI-PPP Steering Board.

This proposal has been submitted to the FI-PPP Steering Board and discussed in its meeting on 27th of September 2012. The Steering Board mostly agrees that the “strategic governance issues” as listed in the major industrial actors' proposal are largely relevant issues, and whereas the Steering Board did not agree on all its details or conclusions, the proposed actions were considered to be in the right direction. Each board member was asked to comment on the proposed solutions and the content so that the SB could formulate a stance, point by point, at the next meeting.

The forthcoming negotiation of FI-PPP Phase 2 projects provides an opportunity to improve the programme governance aspects and the major industrial actors' strategic governance proposal will contribute to this process.

**Recommendation 7: the participants in the FI-PPP should appoint as chairman of the Steering Board a senior executive of a company that is not a co-ordinator of any FI-PPP project.**

*This would avoid a conflict of interest. The chairmanship of the Steering Board is due soon to be renewed: this presents an opportunity.*

**Response**

In its meeting on the 30th June 2012, the FI-PPP Steering Board decided to reappoint its current chairman until the end of Phase 1 of the FI-PPP. The Steering Board will pay attention to this recommendation in due time in light of the Phase 2 reconfiguration.

**Recommendation 8: the Advisory Board should focus their advice on helping the participants in the FI-PPP bring the results of the FI-PPP to market most effectively.**

*This will help the participants in the FI-PPP to understand how best to steer the programme to achieve impact. Since members of the Advisory Board are ‘renewed’ after two years there are implications for Advisory Board membership: their replacements should be familiar with the relevant markets and with bringing technology to the market.*
Response

Among other tasks, the mandate of the Advisory Board\(^9\) includes advising the FI-PPP on how to bring results to the market. On the 30\(^{th}\) May, 2012 - the Advisory Board provided a set of recommendations including some related to bringing results to the market. At the second Advisory Board meeting on 29th October the FI PPP Steering Board Chairman presented the actions already taken and planned by the FI-PPP to act on the recommendations. The Advisory Board provided further advice to the FI-PPP planned dissemination activities and reiterated the continued priority to create sustainable impact.

**Recommendation 9: the participants in the FI-PPP should pro-actively seek to engage significantly more with the wider community.**

The Use Case projects, for example, are meant to be catalytic in encouraging many other potential customers for infrastructures to get involved as part of the drive to accelerate take-up. They should engage with other users of infrastructures, regulators (where appropriate to overcome barriers to adoption and interoperation), and ‘added value service suppliers’ (often SMEs). They should also specifically seek the involvement of the community in countries that are not so far well-represented in the FI-PPP. INFINITY should clarify its role as the interface to owners and users of existing infrastructures, infrastructure providers and regional innovation, and make more determined and visible efforts to promote their engagement with the FI-PPP.

Response

Following the meeting between the European Commission services and the major industrial actors of the FI-PPP, the latter came up with the following proposal:

- The engagement of a wider community is an objective of the programme communication strategy that will be carried out under the responsibility of the Dissemination Manager.

- To stimulate market take-up and adoption of technologies and services developed in the FI-PPP by bring-in on-board innovation actors and their ecosystem earlier than what is foreseen in phase 3, notably through the FI-WARE open call.

This proposal was discussed at the Steering Board meeting on 27 September, 2012. They proposed that each Use Case project, together with FI-WARE and INFINITY

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\(^9\)The members of the FI-PPP Advisory Board Members are: Arturo Azcorra, Dave Carter, Jean-Charles Hourcade, Willem Jonker, Robert Kahn, Yrjö Neuvo, George Percival, Wolfgang Wahlster
should evaluate these needs separately and report during the 18-month review planned before end 2012.

The INFINITY project preliminary reports that:

- There is on-going work towards engaging with a wider community. The engagement so far shows promising results but additional effort is needed.

- The engagement with infrastructures and their stakeholders in several countries has been enhanced. INFINITY is including more actions with them to promote their engagement in the FI-PPP.

- In the last meeting of the Future Internet Forum of EU Member States, it was agreed that members would organise meetings at national level to promote Future Internet, showing the offering of the FI-PPP and allow networking among Future Internet developers and experimenters. INFINITY will be in charge and support this engagement with the infrastructures / Future Internet experimentation.

- Although INFINITY is not in charge of the interface to the regional innovation within the FI-PPP programme, the engagement with regional infrastructures that INFINITY is doing may help the programme.
C. Recommendations for the Commission concerning the present FI-PPP

Recommendation 10: calls for tender should be considered for future ‘horizontal’ actions.

The functions provided by the horizontal projects - specifically programme facilitation and support and infrastructure support, but possibly also the technology foundation - are critical to the success of the programme. The conventional calls for proposals and evaluation processes of the Framework Programme do not allow for iteration to gradually ‘down-select’ offers and to clarify the requirements. The public procurement process using calls for tender would be more likely than the Framework Programme process to yield effective ‘horizontal’ projects whose actions are well defined in advance and critical to the performance of the programme. This would also give greater opportunity for negotiation so as to achieve more efficient and cost effective programme management.

Response

Notably in those cases where the objectives of the ICT Work Programme are defined in great detail and where a single project will be selected, the action could indeed be considered similar to a public procurement action. Open calls give significant degree of freedom to proposers in preparing the contents of their proposals, which will be evaluated with the help of external experts. Contrary, public procurement focusses on selection of the best bid matching the Terms of Reference at lowest cost.

The recommendation to open a procurement action instead of open calls in some well-justified cases is interesting, as indeed it may better align proposals/tenders received with the Terms of Reference, thus increasing efficient and effectiveness of the action aimed at.

However, procurement actions are generally not subject to negotiation or revision, i.e. being less flexible during execution.

While the route of public procurement might have been an option to select the Future Internet PPP Programme Facilitation and Support Action, it appears as not practical in the case of the Technology Foundation (as referred to in the recommendation). The Technology Foundation is a research initiative, co-financed by the European Commission under FP7 in which the organisations carrying out the research retain the ownership of the generated intellectual property for further exploitation.

The European Commission might consider a call for tender for the Future Internet PPP Programme Facilitation and Support Action, if the performance of the selected project is not up to an acceptable level.
**Recommendation 11: future calls should seek not just trials but real efforts to stimulate take-up.**

In phases 1 and 2 the Use Cases are intended to develop real solutions based on Future Internet technologies for a number of selected market segments while the ‘large-scale trials’ intended in Phase 3 are intended to stimulate and encourage market take-up. The panel recommends that greater effort should be made in future phases to achieve market take-up. For instance, the Use Cases should be encouraged in phase 3 to come up with sustainable innovative business models. In particular the industrial partners in the Use Cases should be stimulated to launch innovative business solutions, using all their industrial resources, not only their research and technology development departments. The Use Cases should also be encouraged to try to gain synergies between Use Case solutions and to combine innovative Future Internet solutions from two or more separate Use Cases. Industrial participants should also be encouraged to involve their existing ecosystem of SME partners to develop Future Internet solutions to the market. Moreover, efforts should be made in this direction as early as possible - in Phase 2 as well as Phase 3.

**Response**

The Commission recognises that often the participation of an industrial company in a research project does not automatically mean that the company has a business interest in the research outcome, let alone any form or degree of commercial commitment to its outcome. Very often, the corporate boundaries between research departments and business units are all too real, and rigid. Research departments may conduct research projects without consideration of future business plans; likewise, business departments may devise market strategies without knowing what is in the research pipeline.

The Future Internet PPP was set up to increase the effectiveness of business processes and to derive possible innovative business models. Its objectives are relatively close to market, and a genuine interest in the programme and its results can be expected, not only from the beneficiaries but also by third parties. The Commission, supported by external experts in evaluations and reviews, continuously puts great emphasis on actual exploitation and take-up of the PPP results. This emphasis will increase in later phases and towards the end of projects.

Since Phase 2 and Phase 3 projects will build upon Phase 1 results, in particular the results of the Technology Foundation project FI-WARE, the Commission is in discussion with FI-WARE to guarantee that its results will be available under clear conditions for Phase 2 and Phase 3 participants as well as for third parties. For instance, there is a need for clarity on access to FI-WARE results. Owners of FI-WARE results (mainly reference implementations) need to provide clarity and commitment on the access conditions, constraints, and timing of their results, and a back-up strategy (e.g. donation to an open source foundation) in case the owner
decides not to commercialise its result. This clarity was requested before the submission deadline of Phase 2 proposals, but not received.

Furthermore, in 2013 the Commission will seek an active dialogue with some industrial participants that have existing ecosystems of SME partners. Since such organisations are prime candidates for phase 3, it is essential to know their expectations and requirements for a possible successful participation in phase 3, and to take corrective actions where necessary.

**Recommendation 12: future calls should explicitly seek the engagement of industrial associations, public-sector associations and, where appropriate, regulators.** Cf. recommendation 9

**Response**

The main role in Phase 3 of the FI-PPP is reserved for intermediaries, i.e. organisations that serve the interests of a community of other organisations. The role of such intermediaries in Phase 3 is to organise open calls for small and innovative ICT players to develop services/applications. These intermediaries are expected to connect to existing communities of innovative ICT developers, and to be able to bring together partners providing a full ecosystem to involve SMEs and web-entrepreneurs. Industrial associations, regional development authorities, and public-sector associations are well positioned to take up such roles.

As mentioned under recommendation 11, the Commission will seek an active dialogue with some industrial participants that have existing ecosystems of SME partners. The same will happen with industrial associations and regional development authorities in an open and transparent approach. Such organisations are prime candidates for the above intermediary roles in phase 3, and scenarios for implementation of phase 3 will be discussed.

Furthermore, the Commission will target specific types of organisations in raising awareness about Phase 3, notably through workshops in all Member States interested. Not all organisations are suitable to take up the intermediary role in phase 3; for example, not all organisations have access to a community of developers. Standard awareness raising mechanisms such as Brussels-based information days might not suffice to reach suitable organisations. Dissemination of call 3 will target organisations such as industrial associations, regional development authorities, and companies with (SME) ecosystems.
**Recommendation 13: in Phase 3, specific SME-oriented actions should be taken so as to engage the innovative SME community better.**

Pro-active planning needs to start now drawing on best practice from other programmes on all legal options available to enable effective and efficient participation of innovative SMEs. Examples include working with regional innovation organisations and with public actors, such as cities, on the basis of their procurement of services from innovative SMEs, and requiring large organisations to commit to engaging their supply chains (and specifically SMEs in their supply chains) to an agreed level.

**Response**

The responses to recommendations 11 and 12 outline the role of industrial participants with existing ecosystems of SME partners, industrial associations, and regional development authorities in phase 3, and the Commission’s plans to raise awareness about Call 3 within such organisations. Such intermediaries are the prime channel to SMEs.

The Commission’s early contacts with industrial participants with ecosystems and with regional development authorities will be formalised in 2013 in a small working group. The objective of this working group is to clarify the requirements from such actors for a successful role in phase 3, and to prepare the ground for phase 3, e.g. by defining rules for the open calls and contract templates for open call winners.

In addition, the Commission will build on on-going initiatives to support Web entrepreneurs and raise awareness among them about the opportunities in Phase 3.

Finally, the FI-PPP beneficiaries will be stimulated to enhance the visibility of their results, not only in European research-oriented communities, but also among Web entrepreneurs, SMEs, etc. Beneficiaries need to bring results out of the FI-PPP nursery and have them validated by the market.

**Recommendation 14: the Commission should make even greater effort to achieve co-ordinated, co-operative behaviour of participants to achieve programme objectives rather than just project objectives.**

The purpose of a programme is to achieve selection and conduct of projects with a view to achieving collective as well as individual goals against the backdrop of a common strategic framework. The basis of the FI-PPP is that the Future Internet is a market in which coordination between users and suppliers could be critical. A programmatic approach can give European actors an accelerated start in understanding each other’s needs.
Specific measures for future phases and future calls for proposals might include:
- introduction of co-operation requirements for projects during the negotiation stage once the likely selection of projects after an evaluation is known (with advance warning in the call that this would happen);
- educating (even more) proposal evaluators and project reviewers in the expectations of the programme so as to ensure better alignment of proposal selection with the aims of the programme and better mid-course correction;

Response

The response to recommendation 5 reflects on PPP culture, aligning interests of programme and projects, and incentives.

The Work Programme contains various pointers on collaboration between projects, e.g. links to other activities include providing members to boards, providing scenarios, specifications, etc. The Commission will ensure that future, individual grant agreements will contain resources, budget, and activities for collaboration with other parts of the programme. New mechanisms are being studied for collaboration, for instance the possibility of putting project resources under the control of programme boards.

For upcoming evaluations, the Commission will brief evaluators on the specific aspects of the Future Internet PPP, in particular the programme notion and collaboration aspects. For the Phase 2 evaluation, a dedicated webinar was organised to brief evaluators 3 weeks before consensus meetings took place. This webinar focused on the programme only and taught experts that the PPP is not ‘business as usual’. Another briefing at the start of the consensus meeting week reiterated the message, and project officers reminded evaluators during consensus meetings.

The Commission will also re-enforce the programme and collaboration message to reviewers. There is some diversity in the attention paid by project review teams to collaboration with other PPP activities, and some review teams have encouraged projects to take a clear ‘project-first’ approach, to the possible detriment of the overall programme. Reviewers will be reminded about the importance of programme and collaboration. The review report template has been changed to include questions about programme collaboration.