



DELIVERABLE D4.4

PPI/PCP STRATEGY FOR eHEALTH

(version for public distribution)

Project Acronym	EPP-eHEALTH
Issue Date:	December 2016
WP Number:	WP4
Author	BravoSolution
Contributor	All the partners
Status :	Released

DISEMINATION LEVEL	
X	PU = Public
	PP = Restricted to other programme participants (including the EC)
	RE = Restricted to a group specified by the consortium (including the EC)
	CO = Confidential, only for members of the consortium (including the EC)

Document History			
Version	Date	Author	Description
1	28/11/2016	BS	Template distribution
2	5/12/2016	BS	Submission of Consolidated version
3	13/12/2016	Procurers	Partners Contribution
4	16/12/2016	BS	Consolidated version
5	20/12/2016	OPTIMAT	Proof reading
6	21/12/2016	BS	Final version
7	21/03/2017	BS	Updated version according to the EvaluationReport

Disclaimer

The information in this document is provided as is and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and liability.

The document reflects only the author's views and the Community is not liable for any use that may be made of the information contained therein.

CONTENTS

CONTENTS	3
1 EXECUTIVE SUMMARY	4
2 PPI LEGAL AND POLICY CHALLENGES – LEASONS LEARNED - RECCOMMENDATIONS	7
2.1 IDENTIFIED PPI LEGAL AND POLICY CHALLENGES - LEASONS LEARNED	7
2.2 RECOMMENDATIONS TO OVERCOME LEGAL AND POLICY CHALLENGES	7
3 PPI SOCIAL CHALLENGES - LESSONS LEARNED - RECOMMENDATIONS	9
3.1 IDENTIFIED PPI SOCIAL CHALLENGES – LEASONS LEARNED.....	9
3.2 RECOMMENDATIONS TO OVERCOME PPI SOCIAL CHALLENGES	9
4 PPI FINANCIAL CHALLENGES - LESSONS LEARNED - RECOMMENDATIONS.....	10
4.1 IDENTIFIED PPI FINANCIAL CHALLENGES – LEASONS LEARNED	10
4.2 RECOMMENDATIONS TO OVERCOME PPI FINANCIAL CHALLENGES.....	10
5 eHealth CHALLENGES - LEASONS LEARNED - RECOMMENDATIONS.....	12
5.1 IDENTIFIED eHealth CHALLENGES AND LEASONS LEARNED.....	12
5.2 RECOMMENDATIONS FOR TECHNICAL (eHealth) CHALLENGES	12
6 PPI MANAGEMENT COMPETENCES - LEASONS LEARNED - RECOMMENDATIONS	15
6.1 RECOMMENDATIONS TO IMPROVE MANAGEMENT COMPETENCES IN PPI	15
7 UNMET NEEDS IDENTIFICATION CHALLENGES – LESSONS LEARNED - RECOMMENDATIONS.....	17
7.1 IDENTIFICATION OF UNMET NEEDS CHALLENGES AND LEASONS LEARNED.....	17
7.2 RECOMMENDATIONS TO FACILITATE THE IDENTIFICATION OF UNMET NEEDS	17
8 PPI TENDER EXECUTION SUCCESS FACTORS – CHALLENGES – LEASONS LEARNED	20
8.1 PPI TENDER EXECUTION CHALLENGES.....	20
8.2 RECOMMENDATIONS FOR THE PPI TENDER SUCCESSFUL EXECUTION	21
9 THE IMPORTANCE OF PPI TRAINING.....	24
9.1 RECOMMENDED PRACTICES.....	24
10 RECOMMENDATIONS TO THE EC TO IMPROVE PPI	25
11 CONCLUSIONS	28
12 USEFUL RESOUCE MATERIALS	31
13 REFERENCES.....	35

1 EXECUTIVE SUMMARY

Each year, public authorities across the European Union are spending around €2400 billion, some 19% of total EU GDP¹. The range of activities covered by these purchases is massive. It covers very large scale infrastructure and small community schools. It includes health, social services, education, and transport networks of all kinds. Public authorities are among the largest purchasers of IT systems and operators of web based services.

But it is not just the potential size and coverage that makes public procurement attractive. Its exploitation in public contracts has more power to produce sustainable results than any other innovation incentive. At the heart of innovative public procurement is the encouragement for customers to set demanding outcomes and technology challenges for prospective suppliers, either fully or co-funded, in order to generate the best results.

The competitive environment, with a possibility of a major contract at the end, does not just drive good results. The investment and engagement with customers that the contracting authorities provide comes at the most difficult stage for any innovative company. This support underpins the crucial stage where a new technology is being evolved, developed and tested, as it moves to a fully competitive offering. This stage in an innovation journey is often dubbed “the Valley of Death”. Innovative procurement offers a clear bridge across.

But the bridge is opened not just for the winning contractor. The research available on pre-commercial procurements indicates that all companies involved, even where they are unsuccessful in gaining the final order, gain benefits. For example, many have gone on to exploit the developed solutions and found other customers for their product or service.

For small and medium enterprises (SMEs) in particular, participation can be particularly attractive. Tendering should encourage SMEs to work with the public sector. The prospect of a significant contract from a public authority makes it easier for SMEs to raise capital from outside sources. If they are appointed as a lead contractor, their company becomes much more attractive and a much less risky proposition for investors.

¹ Opportunity now: Europe’s mission to innovate, Robert Madelin and David Ringrose, European Commission, 2016. https://issuu.com/departementewi/docs/europe_s_mission_to_innovate

From the perspective of the contracting authority, the ability to work closely with the supplier is likely to lead to better outcomes as products or services can be much more closely aligned with the customers' requirements.

The aim of the EPP-eHealth project is to **transform the market for eHealth solutions through dialogue and innovation procurement**. The project made progress towards this aim by **creating a network of procuring organisations** that understand the opportunities that eHealth can offer and have competence in innovation procurement and the capacity to pioneer new approaches to collaborative procurement. As well as stimulating demand for eHealth goods and services and **creating a robust framework for practical procurement** (public procurement of innovation – PPI –and pre-commercial procurement – PCP –) outcomes within the period of the project, it will also serve as a leading procurers group for the wider population of European Hospitals.

The infrastructure of the project will enable the stakeholders to come to a **common understanding of the barriers to widespread take up and replication of eHealth solutions** and determine how these needs will be overcome through practical policy and procurement actions. The network will begin with a core group of leader hospitals and stakeholders and widen through the course of the project through advocacy, engagement and regular web-based dissemination actions. A key outcome will be the **identification and communication of common unmet needs** and the development of a **practical implementation plan** for PPI and PCP projects that address these needs.

This report constitutes the final project output. It presents the 'PPI/PCP Strategy for eHealth'. It summarises the lessons learned from the project and identifies the demand-side measures that are needed to enable the healthcare sector to accelerate the development and adoption of 'market-ready' eHealth solutions – and thus help to address the major challenges that are facing the healthcare sector in Europe.

The strategy outlines the challenges which have been identified within the EPP-eHealth project tasks including: quantitative and qualitative surveys; desk research studies; action learning programme, project workshops; community of learning visits; networking and co-creation sessions.

The ability of the healthcare sector to accelerate the development and adoption of 'market-ready' eHealth solutions through Innovation Procurement is affected by a number of challenges, including:

- Legal and policy
- Social
- Financial
- Technical and competence
- Difficulties associated to the identification of the eHealth unmet needs.
- Difficulties associated with the implementation of Innovation Procurement practices.

Together with the challenges identified above, the strategy presents the demand-side measures that are needed to facilitate the faster adoption of eHealth solutions through the implementation of Innovation Procurement tools. Since some of the recommendations apply to several challenges, they are presented in an independent way.

In addition to the challenges and the demand-side recommendations, the strategy **signposts useful resource materials in the form of guidelines, templates, regulatory reference framework, factsheets, case examples and reference action groups of stakeholders, which may assist in overcoming some of the challenges identified by the EPP-eHealth project.**

2 PPI LEGAL AND POLICY CHALLENGES

2.1 IDENTIFIED PPI LEGAL AND POLICY CHALLENGES - LESSONS LEARNED

- **Compliance with the legal aspects of the procurement procedures is deemed too burdensome due to bureaucracy inertia.** The process is believed to be tedious, and time consuming. This challenge was validated by Public Procurers EPP-eHealth consultation surveys. PPI is generally perceived as difficult to use and, for this reason, the rate of adoption remains slow. Consequently, Public Procurers tend to work with standard and well-known tools to the detriment of new approaches.
- **The Political Environment does not favor PPI.** Short-term strategies continue to dominate the procurement process and as such there is lack of alignment with long-term investment. This is worsening as result of political turnover at both a regional and national level, which complicates the decision making process even further. Additionally, there is no real connection between the political agendas and the PPI implementation process.
- **The Procurement Control and Audit process are perceived as punitive tools to prove guiltiness.** This prevents PPI adoption and inhibits PPI implementation

2.2 RECOMMENDATIONS TO OVERCOME LEGAL AND POLICY CHALLENGES

KEY QUESTIONS ADDRESSED

How could public organisations be encouraged to start using PPI?

What practices would enable the necessary mind-shift to promote PPI?

How could market uncertainty for eHealth be reduced?

- **Government providing best Practice Guides and ‘tender templates’** to instruct public organizations on how to comply with the legalities of Innovation Procurement and assist procurers in understanding Innovation Procurement and overcome bureaucratic inertia. **Additionally, both national/regional and EU legal frameworks need to be simplified and made easier to work with.**
- **PPI should be included in the Political Agendas.** It is recommended that **key staff within organisations support the inclusion and uptake of Innovation Procurement, within normal procurement practices.** Involvement and alignment with the Procurement and the Legal Department is a success factor. Lack of alignment between departments typically results in project failures.

-
- Define a **coordinated national/regional action plan** on Innovation Procurement in the healthcare sector as a way to identify the national thematic priorities for investment and innovation; **to establish strategic policy goals and long-term investments. Involvement of PCP/PPI experts is key** in the process of defining the long-term strategies targeting the unmet needs. The **eHealth plans should be aligned with the Procurement Strategy of the healthcare institutions as this will boost the implementation of eHealth solutions.**
 - These countries where the structure results in regional policies rather than national, **a network on PCP/PPI among regions could be developed or be promoted** to facilitate sharing experiences, knowledge and examples of good practices. One approach may be to develop Communities of Practice and/or Communities of Learning.
 - **Early demand maps which highlight the areas of demand (unmet needs) should be developed to prioritize and support** the allocation of funding in the long-term. This will assist in defining the Procurement Strategy of the healthcare organisation.
 - **Specific events such as workshops** that bring together policy makers and technicians could be sponsored. At hospital level **innovation platforms could help to increase interaction** between procurement, management, clinicians and patient. However, these entities should be “empowered” in order to effectively manage PPI actions. **These workshops will promote the “cultural change and necessary mind-shift” and facilitate the training for key staff on PCP/PPI.** The Key staff should be understood as persons in charge of procurement, end users of the products/services within the institution, technical staff in charge of deployment, maintenance and running of products/services as well as system auditors.
 - **Auditors should be trained to understand the risks associated with the implementation of PPI by taking into account the PPI Directive; thus allowing for flexibility**
 - **Develop supportive guidelines, standards and accreditation schemes** for the eHealth products and services under development. **Widen the use EU standards** to scale the idea up.

3 PPI SOCIAL CHALLENGES

3.1 IDENTIFIED PPI SOCIAL CHALLENGES – LESSONS LEARNED

- **The attitude of healthcare service providers and funders inhibits PPI adoption and implementation. Fear of change, user resistance and risk aversion** typically characterize public officials and environments that they operate with.
- The Public sector is known to procure the safest options which **mean that innovative products or services that have not yet been tested in an operative environment are less likely to be accepted by the contracting authority** than products with proven and documented reliability.

3.2 RECOMMENDATIONS TO OVERCOME PPI SOCIAL CHALLENGES

KEY QUESTIONS ADDRESSED

How to mitigate risk aversion?

How to improve confidence in innovative solutions?

How to overcome user's resistance to new developments?

- Innovation represents an investment risk; consequently, **tolerance for mistakes and trials is required from healthcare service providers and funders**. A change in attitude and mind-set towards innovation should be championed and promoted at the highest level. A clear commitment should be shown within the healthcare organisations and adequate resources committed to efficiently deal with the procurement of innovation of eHealth solutions and its associated risks.
- **Providing case examples and demonstrators to support the case and provide evidence of success for innovation procurement across Europe**. These examples need to be consolidated and shared between stakeholders as this will influence levels of awareness and ultimately adoption. One approach could be to develop a database of case examples and demonstrators. Specific events such as workshops that put together policy makers, procurers, users and technicians should be sponsored.
- **Best Practice Guides providing 'tender templates' distributed by the Governments** to encourage public organizations to start using innovation procurement and overcome resistance.

4 PPI FINANCIAL CHALLENGES

4.1 IDENTIFIED PPI FINANCIAL CHALLENGES – LESSONS LEARNED

- In the context of financial crisis and limited public budgets the contracting authorities see Innovation Procurement procedures as involving more costs than the classic procedures for public or restricted tenders. Public procurers perceive that **Innovation Procurement could end up being more expensive** than traditional procurement, which is a huge concern in times of budget shortcuts.
- The need to purchase day-to-day goods and services prevails which limits the use of new procurement tools, such as PPI. Consequently, contracting authorities prefer to stick to non-innovative procurement procedures.
- In terms of turnover and return of investment, evidence suggests that currently most of the **Research and Development projects do not focus on commercialisation options, implying high risk of commercialisation failure.. This risk is shared by Healthcare Procurers undertaken Pre-Commercial Procurement, where R&D is demanded, and there is uncertainty about the commercialization route for acquired R&D products and/or services.**
- In terms of eHealth there is still limited large-scale evidence of the cost-effectiveness of e-health tools and services. The **high start-up costs** involved in setting up e-health systems and the financial costs are also a real concern and a perceived barrier to its implementation. Equipment, transport, maintenance and training costs are costs that some Healthcare organisations cannot assume or are not disposed to assume. **Evidence of the benefits associated with eHealth services is still not enough** for all the most of the Healthcare services.

4.2 RECOMMENDATIONS TO OVERCOME PPI FINANCIAL CHALLENGES

KEY QUESTIONS ADDRESSED

How to ensure confidence in the cost-effectiveness of PPI procedures?

How to evidence cost-effectiveness of eHealth solutions?

- There is a need to demonstrate to policy makers that **PPI is better than traditional procurement in favouring innovation**. Demonstration should be based on evidences from pioneer projects taking into account the financial perspective. Some example measures:

-
- **More detailed business cases including the exploitation plan should be developed in order to have a clear idea of the investment risk and the possibilities of the product / service to be marketable and sustainable.** The lack of proper business case generally results in discontinuation of the process into commercialisation.
 - **Start the uptake of Innovation Procurement at different phases, committing part of the procurement budget to small pilot PPI projects.**
 - **Pursue real commitment so as to extend beyond the pilot stage** should be requested to Healthcare procurers and suppliers participating in Innovation Procurement to ensure commercialisation.
 - There has to be an agenda for the implementation and promotion of PPI, which takes into account **compensation and support measures for the investment costs and associated risks**. Despite commercialisation is a matter of the private sector, public authorities should incentivize those willing to innovate on eHealth. Some good practice measures:
 - **Early demand maps should be developed to support** the allocation of funding in the long-term and define the Procurement Strategy of the healthcare organisations.
 - **Promote financial and institutional support for ‘match-making’ between scientific institutions and companies.**
 - Establish **‘Innovation vouchers’** for organisations investing for the first time in innovative solutions.
 - **Continue to support PPI by EC funds.** EC funding is an important seed-funding providing good practice for broader audience.
 - Support increasing PPI **awareness through the organisation of workshops and practical trainings. Training programmes specifically designed for decision makers are highly encouraged and should be sponsored.** They need to understand and believe that innovation is good. Not just for the sake of innovation, but as a tool of change. It should be also communicated widely that the **risk involved in PPI may be compensated with the “intangibles”**.
 - **Innovation clusters should also be trained and empowered to coach and actively promote the Innovation Procurement schemes and its benefits** linking the industry with the Healthcare services.

5 eHealth CHALLENGES

5.1 IDENTIFIED eHealth CHALLENGES AND LESSONS LEARNED

- There is **market uncertainty due to inadequate or fragmented legal frameworks in the eHealth area**. In particular, **lack of legal clarity for health and wellbeing mobile applications**.
- **Healthcare stakeholders feel threatened by new eHealth tools**. There are still concerns about losing humanity in patient care. This has been evidenced by respondents in the EPP-eHealth consultation surveys.
- **Interoperability between different equipment and between different health care systems and service providers continues to be a challenge**. EU Standards as HL7 are still not widely used as such standardization gap exists. This has been recognised by EPP – eHealth procurers in their “Joint Statement of Unmet Needs”.
- **Big data is a major healthcare challenge as: Healthcare systems need a single entry point for all related data, as well as the tools to analyse that data**.
- The fast changing nature of technology results in **technologies becoming obsolete year on year**.
- A common demand within the medical community is the need to develop **clinically validated eHealth solutions**.
- **The privacy and protection of the patient data is a security concern for many healthcare providers**.
- **Lack of transparency regarding the utilisation of data collected by eHealth applications. There is a general concern about the privacy and confidential treatment of healthcare information**.

5.2 RECOMMENDATIONS FOR TECHNICAL (eHealth) CHALLENGES

KEY QUESTIONS ADDRESSED

What practices could prevent the fear of technology?

How to meet the healthcare challenges: interoperability, big data and data protection?

- In order to overcome **“fear of technology”** there is much to gain potentially from:
 - The utilisation of **good data alongside, safe and effective tools that have demonstrable success would encourage** stakeholders to adopt eHealth solutions.

- **Identification, dissemination and application of best (and certified) practices in health sector would also minimize the fear of technology.**
- **The trend towards more standardization and interoperability in health care sector, with particular reference to e-health, should represent a clear objective for the national Healthcare action plan.** The continued launch of pilot projects and studies in the area of big data and data analytics by the European Commission can also develop solutions to tackle some of the technical challenges. For example, there are a number of existing calls including:
 - An action under the [ISA Programme](#), which is currently collecting best practices in Member States' public administrations in analytics and big data technologies to support decision-making, along with the supporting organisational and operational processes. Additionally, it is launching a number of pilot projects within the Commission to demonstrate in practice how these technologies can help: scientific papers text mining for identification of research trends, national implementing measures analysis, and analysis of the ICT job market through information available on European job posting websites.
 - the [data4policy](#) initiative, with the aim of producing an inventory of big data for policy initiatives in European Union Member States and abroad, a report about state-of-the-art in innovative data-driven approaches for evidence-informed policy, and six case studies,
 - A Tool for Innovation Monitoring (TIM), based on technology forecasting, and exploiting data coming from patents, publications and news. JRC is using big data analytics in Earth and environmental sciences through the [Digital Earth Platform](#), which can help DGs working in this policy area.
- **A centralized set of technical capabilities and adequate support to build, operate and maintain a common big data infrastructure according to the needs of the interested stakeholders would generate considerable efficiencies.** Commission services, along with interested organisations in Member States, could contribute to its development by providing relevant content: additional tools (e.g. open source analytics modules), data, and methodologies/guidelines for specific policy or geographical areas, thus creating a community of users that will maximise its reuse. **Develop supportive guidelines, standards and accreditation schemes for the eHealth products and services under development. Widen the use EU standards** to scale the idea up.



- **Include patient safety and data protection as standard in all procurement processes. Healthcare entities must adopt written privacy policies** and procedures that define how they intend to abide by the highly complex regulation and protect individually identifiable health information.
- **Healthcare entities must adopt written privacy policies** and procedures that define how they intend to abide by the highly complex regulation and protect individually identifiable health information.

6 PPI MANAGEMENT COMPETENCES

- The **technical competences of the Healthcare Procurers** and of **eHealth supplier stakeholder groups** need to be improved:
 - Healthcare procurers need to improve their technical skills to take on big projects.
 - Healthcare procurers need practical know-how in supply chain management.
 - Healthcare procurers need a better understanding of PPI mechanisms.
 - Suppliers need to increase their competences in PPI implementation
- **PPI projects are particularly burdensome and difficult to implement.** They **may involve delays larger** than those in procurement of standard solutions. As a result, they **require extra effort and commitment from Public Procurers**, but the potential benefits are rewarding and can significantly impact on the healthcare service.
- **Public bodies and procurers are difficult to mobilize and lead due to organizational complexities and lack of motivated personnel.**
- **For all the above, good project management covers special relevance** and is a critical success factor within Procurement of Innovation.

6.1 RECOMMENDATIONS TO IMPROVE MANAGEMENT COMPETENCES IN PPI**KEY QUESTIONS ADDRESSED**

How to improve the know-how of the buyer's in technical matters, supply chain management & PPI?

How to encourage supplier's competence in public procurement?

How to ensure good management team works?

How could Public bodies be better mobilized?

How could buyers cope better with longer procurement timings?

- **IT skills of the health professionals should be improved.** This can be addressed through the development of user-friendly technology, education and training sessions.
- **In order to improve Procuremrs competences in Innovation Procurement it is recommended to:**
 - **Improve dissemination of information on PPI rationale.** It is necessary to involve technical experts and end-users from the beginning of the procurement process.

Cross-organisational and cross-disciplinary cooperation should be promoted by management guarantee full access to the organisation know-how.

- **Develop a training program for public contracting authorities. Train staff on PPI procedures** and provide them with the most suitable tools: best practice guidelines; case examples of successful experiences with other contracting authorities, coaching; etc.
- Provision of a **tool-kit for public authorities** to implement PPI in health care sector, coherently with their mission and mandate.
- **Meet-the-buyer type events** should be facilitated by policy makers to improve procurers understanding of the technology landscape, thus ensuring they have a sufficient level of understanding about what is already available on the market.
- It is also necessary to **promote PPI training within the suppliers of eHealth technology** in order to inform future bidders about the PPI process, expectations as well as the advantages of participating in the process.
- It is recommended to **introduce the figure of PPI official within healthcare organisations**. An **Innovation champion** is needed within organisations; a leader of change that can motivate and engage personnel in new methods.
- **Good innovation management requires a new mix of skills** involving legal and the economic areas to perform the business case modeling, market assessment, technology assessment, IP management and contractualization as well as public services performance measurement. **PPI management teams should be formed** and consists of **clinicians and hospital managers and commissioners of service**, working very closely with the procuring **authority responsible**.
- **In order to achieve better engagement levels, public servants involved in R&D projects should be incentivized**. Policy makers could establish a reward scheme for innovation and participation in activities and projects.
- Policy makers could **provide coordination support to public procurers entitled to execute Procurement of Innovation** and private sector could supply services.
- **For the implementation of PPI projects it is recommended to establish and fulfil a detailed planning** from the project very beginning. **The work plan should be detailed deeply and incorporate buffer margins**.

7 UNMET NEEDS IDENTIFICATION CHALLENGES

7.1 IDENTIFICATION OF UNMET NEEDS CHALLENGES AND LESSONS LEARNED

The failure to identify unmet needs until they become urgent problems is incompatible with Procurement of Innovation practices. PPI projects are particularly burdensome and difficult to implement and involve delays larger than those in procurement of standard solutions.

Urgent-base-working schemes should be clearly avoided in Innovation Procurement. There is a need for long-term investment planning where the importance of a thought for a real need assessment as well as the ability to describe the need clearly is essential for the whole success of the Innovation Procurement process.

Identification of unmet need cannot take place in silos. There is also a need for more effective engagement between procurers, suppliers, academia, national innovation agencies, patients and other stakeholders. There is also a need to establish a connection between NGOs etc. and supplier ecosystem from the beginning taking advantage of desing thinking techniques.

7.2 RECOMMENDATIONS TO FACILITATE THE IDENTIFICATION OF UNMET NEEDS

KEY QUESTIONS ADDRESSED

How to effectively identify the organisation unmet needs?

How to achieve a more effective engagement and dialogue between the different stakeholders?

- **The process of identification of needs should be facilitated by permanent structure to support procurement of innovation**, with staff trained and motivated, and clear policies and strategies in place.
- **The produced solutions should be based on real needs that the procurers/commissioners would be willing to purchase if shown to be appropriate and cost effective.**
- **Early demand maps should be developed** in order to provide information on real needs from real users across Europe, which is an ideal situation for the supply chain. If those needs are real and confirmed this is a unique opportunity for the participating suppliers.

Development of a **Joint Statement of Unmet Needs** should start at the level of common understanding of the subject of procurement.

- Emphasize PPI joint actions and collaboration schemes. To facilitate **networking of the key stakeholders involved in the health and social care services delivery, to reduce fragmentation of demand and enable the demand pooling, a "health-care platform"** should be settled at least at national level with the purpose to enhance a dialogue between public procurers interested to test innovation procurement methodologies and to jointly undertake the PPI, to provide a powerful opportunity for all public sector at local level to collaboratively design the future modernization of health care sector strategy.
- **The role of Innovation platforms** as drivers of communication and collaboration among actors within the organisation should be enhanced.
- **Early involvement of end-users in the need assessment and value design phase, as well as in piloting and testing activities.**
- **Adopt co-creation techniques as main tools to facilitate stakeholder's collaboration during the PPI activities boosting design-thinking methodologies.**
- **Recommendations for creating successful INNOVATION ECOSYSTEMS:**
 - Policymakers should:
 - Support cross-border collaboration.
 - Build innovation centres (as opposed to research facilities which typically lack commercial focus) that facilitate the innovations of others
 - Ensure a friendly regulatory environment
 - Lower barriers to innovation by encouraging 'balanced risk-taking' and providing financial incentives to entrepreneurialism (such as matching private investment in start-ups' research and development and providing tax incentives for funding start-ups)
 - Reform education policies to keep pace with the knowledge and skills required for young people to participate in the emerging 'third-wave industrial revolution'
 - Promote the successes of domestic entrepreneurs to foster an entrepreneurial culture
 - Recognize which start-ups are more likely to succeed and channel the resources to them instead of trying to support as many start-ups as possible.

- Business leaders and entrepreneurs should:
 - Combine financing with commercial mentorship
 - Support the government in creating a modern workforce for the future

The importance of patients in the unmet needs identification process.

Strategies for promoting an active role for patients should be promoted to reinforce building the collaborative health system; but they need to be educated first. Differences in cultural barriers and social inequalities must be taken into account when planning strategies to promote greater patient engagement and participation.

Strategies to support patient education and engagement should be part of health policy. Governments, health authorities or payers looking for ways to inform and empower patients need to agree about clear goals and a coherent strategy, with actions targeted at the national, regional and organizational levels. The goal is cultural change, and a whole-system approach is therefore needed to strengthen and reinforce interventions in the different settings. Initiatives at different levels in the system should be mutually reinforcing and well coordinated. The range and balance of initiatives must be culturally relevant and locally determined, and the vision and strategy must be clearly articulated, so that everyone knows what is expected of them. It is not possible to design a universal blueprint for policy that will work in every setting. Coordinated patient survey programmes have been shown to be a useful way of monitoring performance across the system, by requiring care providers to undertake systematic surveys of patients' experiences and to publish the results.

Considerable evidence suggests that patient engagement can be effective clinically and economically. People who are more informed and engaged tend to use fewer health care resources and to make more appropriate choices, leading to better health outcomes.

In addition, involving patients in the unmet needs identification to know their needs, their suggestions, etc. helps to improve patient's experience in the healthcare system modernization.

8 PPI TENDER EXECUTION SUCCESS FACTORS

8.1 PPI TENDER EXECUTION CHALLENGES

- **Lack of involvement of different stakeholders in the procurement process.** The low level of involvement of specialists in developing the tender specifications for the desired solutions (e.g.: IT specialists, etc.) is challenging. There is a need for end-user involvement and feedback on the specifications of potential solutions. The consequence is the asymmetry between payers and beneficiaries needs due to different targets and lack of alignment.
- **Both user involvement and market dialogue are important activities, which by nature is a co-creation process.** This approach helps to think how the solution to be developed would actually be exploited and paid for and what would be additional value compared to an application already available on market. ([INSPIRE project](#))
- **Procurers often fail to clearly communicate their needs and do not undertake sufficient activities to inform the supply chain about upcoming procurement.** Consequently, inadequate early warning mechanisms still remain in place.
- **Lawyers that support PCP actions should help to make the best out of this instrument.** The absence of standard clauses and/or criteria in PCP tenders, causes uncertainty in purchasers and legal advisors of public administrations and consequently the mechanism has not been widely uptake. PCP, not subjected to procurement law, should be seen and used as an instrument that supports and allows flexible, simplified and smooth adoption practices which are in the interest of both the demand and the supply side. (INSPIRE project).
- **Public Procurers tend to stick to solution-led rather than outcome-led tender specifications** following simply their usual practices.
- **The collaboration between Public Procurers and suppliers is unsatisfactory.** Market dialogue with the supply side actors is a must activity in Innovation Procurement.
- **Binding and close processes. The lack of flexibility** to do market sounding before deciding whether PPI or PCP is most appropriate approach is a challenge for procurers.
- **Inequalities between companies are an issue.** SMEs are still seen as a risk, yet it is well documented that innovation and innovative solutions come from these very SMEs. Tenders remain Procurement Driven, for example, often requesting “3 years accounts”- which omits many SMEs. SMEs compete with large established technology players. This

also raises the challenge of how SMEs compete with large established technology players.

- **Intellectual property** – IPR clauses risk-benefits sharing is difficult to transmit to the industry. Adopt co-creation techniques as main tools to facilitate stakeholder's collaboration during the PPI activities boosting design-thinking methodologies.
- Lack of **evaluation criteria for innovative solutions** creates difficulties for procurers in terms of defining features and establishing conditions and criterion to select a solution.
- **Existing indicators on the impact of procurement do not allow the long term impact of procuring innovative goods and services to be captured and recorded.** The same problem applies to the missing link between need assessment and performance measurement.

8.2 RECOMMENDATIONS FOR THE PPI TENDER SUCCESSFUL EXECUTION

KEY QUESTIONS ADDRESSED

How to ensure effective market analysis and market dialogue?

How to present credible demand?

What communication methods could facilitate stakeholder's engagement?

How to enhance collaboration with suppliers to ensure successful preparation and implementation of the tender?

What multidisciplinary profiles should be involved in the tender preparation?

What profiles should works in tender evaluation (award phases)?

How to ensure multidisciplinary experts working together for the tender preparation?

How to ensure meeting the needs of different stakeholders?

How to involve all the users in the preparation of the tender specifications?

How could be SME's participation in PPI tenders promoted?

What should be taken into account in the definition of the evaluation criteria?

What type of KPI should be the reference points?

How to build confidence in the benefits of PPI from various perspectives (e.g.: financial, technical, etc.)?



How could the impact be measured?

- **Early involvement of end-users** in the needs assessment and value design phase, as well as in piloting and testing activities is recommended. **Multidisciplinary management team. Including** technical personnel would strengthen the definition of technical specifications.
- **Ensure close relationships with suppliers** by establishing activities to keep regular communication with suppliers through proven communication channels. **Clear lines of communication should be opened** between both parties and that both are committed to finding a good solution. Building trust and have a strong relationship are key factors to the success of the procurement project.
- **Ensure prevalence of solution-led rather than outcome-led specifications.**
- **Current programmes available for cofund of PPI projects could be more flexible to ensure continuity of successful projects** after identifying needs. On occasions is not possible to define whether the action is required: PCP or PPI.
- As there is a need for innovation public procurement process to be extended much more **systematically towards pre-procurement activities, public bodies should clearly and broadly publish and signal future innovation needs as early as possible by means of a PIN** (Prior Information Notice), avoiding the risk of distortion of competition and defining a specific provision on safeguards against undue advantage in favour of participants to market consultations.
- **Technical dialogue should be systematically implemented**, as it is an useful instrument for contracting authorities to obtain information on the technology state of the art, as well as on the structure, capability and capacity of a market while at the same time informing market actors of public purchasers' procurement projects and requirements. However, preliminary contacts must not result in unfair advantages and distortions of competition.
- Workshops with supply chain can provide support to the technical dialogue, feasibility check and market scanning for existing solutions. **Both stakeholders should work together on aligning their final goals and collaborate in achieving them. For example, suppliers and procurers can come together through networks or platforms supported by public or private organisations.**
- **SMEs cannot easily qualify as a technical provider** to big procurers, such as regional healthcare providers, because usually traditional procurement tenders look first at company size, references, financial viability and only after that at technical capabilities.

Pre-qualifications hindering SMEs tendering as don't have pre-requisites needed to progress (e.g.: financial statements, references, etc.). A PCP process allows SMEs to emerge and compete fairly on a European scale also while they have the ability to react quickly to the requirements from the call and to adapt fast to customer needs. **Tools and measures that cover SME risks could be developed and promoted.**

- Intellectual Property Rights (IPRs) should be stated clearly in any contractual arrangement including legal advice to prepare the documents and for the follow-up of the contracts.
- There is a **need to construct at EU and possibly also at National level indicators that capture the long-term impact of procurement of R&D on the efficiency of the public sector**, on market conditions such as competition and on economic growth.
- PPI should look into the **sustainability of the Business Model in order to make the participation of the supply side more lucrative**. Pooling of demand and scalability should be realized both through cooperation among public organizations and through public and private demand pooling. The public sector service (business) model should also visualize and clarify the value creation processes for the public sector, concentrating on valid objectives such as:
 - The cost of innovation process and procurement against not innovating.
 - System or service level cost savings.
 - Improved quality of services (less clinical errors, timelines, accessibility, better outcomes etc).
 - Value for care personnel and patients (empowerment, inclusion, accessibility etc).
 - New, improved ways of delivery, use of eHealth and focus on outpatient care.
 - Eventual economic and other societal benefits.

9 THE IMPORTANCE OF PPI TRAINING

There is a **need for improved collaboration and replication between stakeholders to achieve results**, develop best practice and communicate success. **We need to be better at replication and copying from previous experience.**

KEY QUESTIONS ADDRESSED

What could facilitate taking advantage of the experience from previous projects/experiences?

How to achieve a better replication and collaboration between different stakeholders in the development of best practices and communication success?

9.1 RECOMMENDED PRACTICES

- Having **case examples and demonstrators** supports the case for innovation procurement across Europe. These examples need to be consolidated and shared between stakeholders as this will influence levels of awareness and ultimately adoption.
- **Meta-analysis of the results** from past and ongoing innovative procurement projects. There is a need for conclusive overviews including the aspects that are not successful.
- **EC continue to organize workshops and seminars** because they provide a real learning opportunity. It is essential before implementing something new that you have previous knowledge and insight; networking is important to build that knowledge and for cross-border procurement. Better to hold procurers separate from stakeholders; to focus on procurer's education.
- **Provide general guidelines with practical examples** of application of the content of Public Procurement Directives, with particular reference to PCP combined with subsequent PPI, in health care sector.

10 RECOMMENDATIONS TO THE EC TO IMPROVE PPI

In the framework of *the [DG Connect & EPP-eHealth Innovation Procurement Stakeholder Workshop](#)* held last 11th and 12th of May in Brussels, several reflections regarding the following question were gathered by the attendees:

“What should the EC do?” to cover gap areas, or to implement the procedures and methodologies, promote ecosystems, facilitate communication between stakeholders, etc. in the field PPI.

The observations collected are shown below:

Note: *The comments presented hereinafter do not represent the views of the EC nor EPP-eHealth project but only intended to contribute to the discussion and spot some pertinent aspects to take into account in innovation procurement from healthcare perspective*

- **An important arrow between NGOs etc. and supplier eco system should be drawn.** There is a strong link between social and health issues where the community, NGO etc. can also be a health provider. An arrow can also be drawn between hubs and NGOs etc. Social innovation hubs exist around the world. The ‘art’ of entering an innovation procurement process is to keep partners open-minded, neutral and curious though out the process and constantly targeted towards a common WHY?, which has to be a value based outcome clearly defined by the procurer (based on end users real need). Choosing partners carefully and with similar core values (often more visible in social enterprises) could ease the process and also create better synergies with other EC programmes and policies, e.g. promoting a green agenda or social innovation.
- **There is a need for a meta-analysis of the results from past and ongoing innovative procurement projects.** A lot of results and data are available but the conclusive overview is needed and also to identify the things that don’t work. Innovative procurement needs to be seen in a supply chain perspective. Irrespective of the focus for the individual project, the final result has to fit into a flow of work and products internally and externally. Finally a greater involvement of the private sector is needed and could be of benefit to projects.



- **Coordination and Networking in PPI projects should be conveniently subsidized.** The 30% - 50 % threshold limits are not adequate for the involvement and efforts (dissemination, market consultation, legal assistance) needed for the effective execution of the project. Moreover, involvement of **public bodies** is a constraint itself. They are **difficult to mobilize** and lead due to organizational complexities and **lack of motivated personnel**. Hence, **incentives** for public servants involved in research projects might be something to consider in the future.
- **EC should continue organizing training workshops;** seminars etc. because before implementing something new you need to have previous knowledge. For the cross-border procurements we should spend some longer time together for the better networking. **Separate funding system in health area would be desired in the future.** Possibly concentrate on innovative health services and goods separately, to talk about in detail about qualification or valuation criteria of the innovative procurement and to hold procurers separate from stakeholders in the training workshops.
- **There should be more flexibility to do market sounding before deciding whether PPI or PCP is most appropriate (Nordic approach).** The National Innovation Agencies could be more involved in PPI Actions as the innovation risk may be too great for SMEs in particular. There seems to be a missing link between PCP and mainstream procurement that inhibits exploitation of new solutions. **Calls should be designed to align with the timing of PPI/PCP projects** that need a Phase 2 project (similar to what is provided for the Covenant of Mayors initiative).
- **A cultural change in procuring organizations should be part of a PCP as well as PPI project.** This cultural change alongside with organizational changes the care sector is vital. Once in place it will create the favorable landscape for innovations to flourish. When not taken into account even a PCP with an enthusiastic procurers and developers could be unsuccessful because it is not embedded in long term plans and when changes (available money, key persons leaving an organization, change in political party, etc), that are often outside the control of the project, occur it might also lead to a much less favorable landscape for innovations and the project stops/the innovation in the end will not be bought.
- **Rethink the duration and set-up of the project.** Even though the EC sees a clearly different role for these project the structure is still the same as research project, e.g. in terms of total duration of the project, set-up in work packages, the fact that all partners

need to be involved in the same timeframe. A different structure should be used that fits better the unexpected events and practical issues you have to deal with in a real-life implementation. For example projects could be split in two parts: 1) preparation up until the call for tender, and 2) negotiation and execution of the tender. Or even in totally different scheme where there is a common interest of procurers and a group of experts available that can provide support; procurers can join for example every year and the total duration of the project could be 8 years.

- **Leaving enough time for a proper evaluation**, flexibility of procurers to join when the local situation is favorable, but still having a shared learning and overall coordination. As an intermediate set-up between the strict rules of the research style framework and the very flexible set-up of the EIP AHA commitments.

11 CONCLUSIONS

Public procurement needs to be repositioned in an innovative framework and no longer dominated by the legal process. Both customers and suppliers find the system complex and expensive and it does not encourage the deep dialogue required to understand and deploy new technologies. **But, done properly, the public procurement of innovation can help to resolve many of the challenges now facing public authorities - delivering quality services with fewer resources,** in more joined up ways, responding to users' needs more efficiently and effectively, stimulating local employment and economic growth.

If **Innovation in Public Procurement** is to start delivering anything close to its full potential, it is clear that public **policy instruments need to be reinforced and redirected.** High level endorsement, combined with **more funding and support must motivate innovation leadership within public authorities.**

There is now an opportunity to make this happen. The new public procurement rules are beginning to operate, requiring member states to improve the consistent application of public procurement rules and to establish fully resourced supervisory authorities. **The innovation and growth teams in the Commission should be working with their public procurement experts to integrate promotion, training and capacity building into the deployment of the new rules.** Any unclear elements in the rules, especially in relation to the State Aid issues arising from pre-commercial tendering, must be urgently resolved.

There should be more support to facilitate pre-commercial challenges, whether within one member state or trans-national. If support is too heavily focused on trans-national aspects of procurement this makes an already complex process even less attractive. **Trans-national activity can only develop on the basis of strongly embedded procurement cultures in local authorities and that should be the priority.**

Support for enterprises engaged in competitive procurement should be boosted. It should be possible to target SMEs who are nominated as lead suppliers as a result of pre-commercial procurements. Conditions could be added to SME support funds to ensure that a share was directed to suppliers active in public technology contests. Public authorities who wish to make major investment in procuring innovation should be supported with grants or loans. **The Commission - and all other EU Institutions - should be looking at their own**

internal procurement procedures and become Beacons for innovative procurement. Public procurement teams across the board should be encouraged to gain Beacon status.

The main recommendations to policy makers identified by EPP-eHealth consortium are presented below:

- **Early demand maps should be sponsored** in order to provide information on real needs from real users across Europe, which is an ideal situation for the supply chain. If those needs are real and confirmed this is a unique opportunity for the participating suppliers.
Continue to develop and support EU panels of buyers (consumers).
- **In order to coordinate and orchestrate policy learning, it would be important to implement a rigorous programme with validated documentation**, at EU level, of high-value capacity building, coaching and mentoring, backed up by a quality assured and certified professionals by European Commission.
- **Procurement professionals skills Innovation Procurement should be improved by:**
 - **Improve dissemination of information on PPI rationale.** It is necessary to **involve technical experts and end-users from the beginning of the procurement process.** **Cross-organisational and cross-disciplinary cooperation should be promoted by management guarantee full access to the organisation know-how.**
 - **Develop a training program for public contracting authorities.** Train staff on **PPI procedures** and provide them with the most suitable tools: best practice guidelines; case examples of successful experiences with other contracting authorities, coaching; etc.
 - Provision of a **tool-kit for public authorities** to implement PPI in health care sector, coherently with their mission and mandate.
 - **Meet-the-buyer type events** should be facilitated by policy makers to improve procurers understanding of the technology landscape, thus ensuring they have a

sufficient level of understanding about what is already available on the market, besides others.

- **Provide an interactive platform that allows for multidisciplinary meetings, idea sharing for experts and procurers/ suppliers, promoting synergies with other sectors.** A European Collaborative-Knowledge platform could bring about the flexible, collaborative innovation that will bridge this gap.
- **Identification of unmet need cannot take place in silos. There is also a need for more effective engagement between procurers, suppliers, academia, national innovation agencies, patients and other stakeholders.** There is also a need to establish a connection between **NGOs etc. and supplier ecosystem from the beginning taking advantage of desing thinking techniques.**
- Need for a **meta-analysis of the results** from past and ongoing innovative procurement projects
- **Support increasing PPI awareness through the organisation of workshops** and practical trainings for decision makers, procurers, technicians, end-users, suppliers and auditors. **Auditors should be trained** to understand the risks associated with the implementation of PPI by taking into account the PPI Directive; thus allowing for flexibility.
- **Allow good timing and funding as well as enough flexibility** and tolerance for mistakes to learn in order to integrate this new mechanism in the procurement practices.
- **Need of a centralized set of eHealth technical capabilities and adequate support to build, operate and maintain a common eHealth infrastructure** according to the needs of the interested stakeholders would generate considerable efficiencies (interoperability).
- **Support access to safe and secure start-up funding for eHealth with help from the procurers.**

12 USEFUL RESOURCE MATERIALS

- [EPP-eHealth PPI and eHealth Glossary of Terms](#)
- [EU Public Procurement Directives \(2014\)](#)
- [Factsheets explaining public procurement reform in plain language](#)
- [National Plans and Regulatory framework for Innovation Procurement – Overview for Spain, Denmark, Poland and UK](#)
- [DG CONNECT PPI overview](#)
- [Directive 2016/680 the protection of natural persons with regard to the processing of personal data](#)
- [Reform of data protection rules in the EU](#)
- [Overview of the national laws on electronic health records in the EU Member States](#)
- [EU Joint Action for eHealth Governance](#) - The eHealth Governance Initiative is working to establish a governance structure for eHealth within Europe in order to ensure continuity of healthcare both at home and across borders
- [Legal framework for eHealth - Overview for Spain, Denmark, Poland and UK](#)
- [Public Consultation on the interest of public procurers for innovation procurements of ICT based solutions for Horizon 2020 WP2018-20 Summary of Findings](#), October 2016 (Preliminary Early demand map)
- [“Strategic use of public procurement in promoting green, social and innovation policies”, Final Report DG GROW](#)
- [Guidance for Public Authorities on Procurement of Innovation](#)
- [EAFIP Toolkit](#) - The *efip* Toolkit aims to provide support to policy makers in designing PCP and PPI strategies, and to procurers and their legal departments in implementing such procurements
- [EC templates for the completion of the Prior Information Notice and the Call for tender](#)
- [Frequently Asked Questions about PCP and PPI](#)
- [Videos that provide an easy way to get better acquainted with innovation procurement](#)
- [Assistance to implement Innovation Procurement](#)
- [EPP-eHealth project, “Mapping of healthcare EU initiatives and Horizon2020 funded projects” report](#)
- [INSPIRE project, Analysis of Innovation Procurement Practices and case examples](#)

-
- **EPP-eHealth Workshop on Innovation Procurement:** This event, which was jointly organized by the EPP-eHealth project and the DG CONNECT, brought together key actors and those engaged in health (and social) care PPI and PCP projects, buyers and supply chain representatives and EC officers. It reviewed current state of the art, consider barriers and opportunities, and propose future calls to enable the wider adoption of innovation procurement as a mechanism to drive markets for healthcare innovation
 - [Stream video](#)
 - [Available presentations](#)
 - **European support instruments for investing in eHealth:**
 - [European available business support initiatives](#) - A wide range of support services is available to both ICT entrepreneurs and start-ups in order to enable them to build sustainable ICT-based and innovation driven business models with a global reach
 - [European financial instruments for investing in eHealth , EPP-eHealth “ Mapping of healthcare EU Initiatives and Horizon2020 funded projects” report](#)
 - [Overview of the 2016-17 calls for proposals in support of PCP and PPI across the different Horizon 2020 work programmes](#)
 - [GET project – Delivering growth to eHealth businesses](#) - The GET project delivers four high-impact services to eHealth SMEs and entrepreneurs in order to boost their growth and move them to the next level of competitiveness
 - [eHealth Start-up guide for business success](#)
 - [EU Joint Action for eHealth Governance](#) - The eHealth Governance Initiative is working to establish a governance structure for eHealth within Europe in order to ensure continuity of healthcare both at home and across borders
 - **Matchmaking tools:**
 - [EPP-eHealth Matchmaking tool](#) - Access to contact details from companies that are currently interested in finding partners to create consortia and participate in innovation procurement projects
 - [Enterprise Europe Network – Partnering Opportunities/ Matchmaking tool](#)
 - [Innovation Procurement Platform, Procurement Forum](#) - The Procurement Forum gives users the ability to post content, discuss experiences, problems and solutions with peers and form professional connections with forum members. It is also the first port of call for stakeholders looking to find valuable project partners with which to collaborate
 - [Innovation networks and clusters](#)

-
- An action under the [ISA Programme](#), collecting best practices in Member States' public administrations in analytics and big data technologies to support decision-making, along with the supporting organisational and operational processes. The [data4policy](#) initiative, with the aim of producing an inventory of big data for policy initiatives in European Union Member States and abroad, a report about state-of-the-art in innovative data-driven approaches for evidence-informed policy, and six case studies. A Tool for Innovation Monitoring (TIM), based on technology forecasting, and exploiting data coming from patents, publications and news. JRC is using big data analytics in Earth and environmental sciences through the [Digital Earth Platform](#), which can help DGs working in this policy area
 - [From Innovation to implementation: eHealth in the WHO EU Region 2016](#)
 - [Meet-the-buyers day. Case Example: EPP-eHealth Deliverable D4.3 Stakeholders Workshop report](#)
 - **Networks of healthcare procurers for aggregation and pooling of demand and Matchmaking:**
 - [The procurement of Innovation Platform](#)
 - [EU Innovation PROCUREMENT Forum](#)
 - [PIANOo – Dutch Expertise Centre for Public Procurement \(NL\)](#)
 - [Ecoquip – Business Innovation and Skills](#)
 - [Smart specialisation platform](#)
 - [Happi – Réseau achats hospitaliers d’Ile de France \(Paris, FR\)](#)
 - [LINKEDIN group on public procurement and innovation](#)
 - [Enterprise Europe Network](#)
 - [EPP-eHealth Matchmaking tool](#) - Access to contact details from companies that are currently interested in finding partners to create consortia and participate in innovation procurement projects
 - [What is an innovation Ecosystem? Deborah J. Jackson](#)
 - [What is co-creation? The importance of co-creation](#)
 - [The co-creation Initiative](#)
 - [Overview of main techniques which are used as part of the design thinking and co-creation processes](#)
 - [EPP-eHealth “Joint Statement of Unmet Need” report](#)
 - [EPP-eHealth “Unmet Needs Synthesis” report](#)
-

- [Supplement of the Official Journal of the EU. Tenders Electronic Daily – TED](#)
- [INSPIRE CAMPUS – The business case modelling](#): This document is intended to indicate the key questions which Public Procurers and their organisations will need to be able to answer in order to establish whether they should or should not conduct the future-focused procurement methodology known as Pre-Commercial Procurement (PCP). It will explain why the selected questions are important and provide some guidance as to how answers to the questions can be found
- [Business Model CANVAS](#)
- [European Assistance for Innovation Procurement Initiative - EAFIP Major Events EAFIP Workshops](#)
- [European Assistance for Innovation Procurement Initiative - EAFIP Major Events EAFIP Webinars](#)

13 REFERENCES

- [1] “Synthesis of unmet needs”, EPP-eHealth Report, OPTIMAT, March 2016.
- [2] EPP-eHealth Deliverable D3.1 / D4.1 Review of eHealth demand-side conclusions.
- [3] EPP-eHealth Deliverable D3.2 / D4.2 Consultations with buyers/users conclusions.
- [4] EPP-eHealth Deliverable D3.3 PPI Training workshop Report 2.
- [5] EPP-eHealth Deliverable [D3.4 Joint Statement of Unmet Needs](#).
- [6] EPP-eHealth Deliverable D3.5 PPI Training workshop Report.
- [7] EPP-eHealth Deliverable D4.3 PPI Training workshop Report 3.
- [8] Opportunity now: Europe’s mission to innovate, Robert Madelin and David Ringrose, European Commission, 2016.
- [9] [EPP-eHealth PPI and eHealth Glossary of Terms](#)
- [10] [EU Public Procurement Directives \(2014\)](#)
- [11] [Factsheets explaining public procurement reform in plain language](#)
- [12] [National Plans and Regulatory framework for Innovation Procurement – Overview for Spain, Denmark, Poland and UK](#)
- [13] [DG CONNECT PPI overview](#)
- [14] [Directive 2016/680 the protection of natural persons with regard to the processing of personal data](#)
- [15] [Reform of data protection rules in the EU](#).
- [16] [Overview of the national laws on electronic health records in the EU Member States](#)
- [17] [EU Joint Action for eHealth Governance](#)
- [18] [Legal framework for eHealth - Overview for Spain, Denmark, Poland and UK](#)
- [19] [Public Consultation on the interest of public procurers for innovation procurements of ICT based solutions for Horizon 2020 WP2018-20 Summary of Findings](#), October 2016 (Preliminary Early demand map).
- [20] [“Strategic use of public procurement in promoting green, social and innovation policies”, Final Report DG GROW](#)
- [21] [Guidance for Public Authorities on Procurement of Innovation](#)
- [22] [EAFIP Toolkit](#) - The *eafip* Toolkit aims to provide support to policy makers in designing PCP and PPI strategies, and to procurers and their legal departments in implementing such procurements
- [23] [EC templates for the completion of the Prior Information Notice and the Call for tender](#)

-
- [24] [Frequently Asked Questions about PCP and PPI](#)
- [25] [Videos that provide an easy way to get better acquainted with innovation procurement](#)
- [26] [Assistance to implement Innovation Procurement](#)
- [27] [INSPIRE project, Analysis of Innovation Procurement Practices and case examples](#)
- [28] **EPP-eHealth Workshop on Innovation Procurement:** This event, which was jointly organized by the EPP-eHealth project and the DG CONNECT, brought together key actors and those engaged in health (and social) care PPI and PCP projects, buyers and supply chain representatives and EC officers. It reviewed current state of the art, consider barriers and opportunities, and propose future calls to enable the wider adoption of innovation procurement as a mechanism to drive markets for healthcare innovation. ([Stream video](#) /[Available presentations](#))
- [29] [EC templates for the completion of the Prior Information Notice and the Call for tender](#)
- [30] [EPP-eHealth project, “Mapping of healthcare EU initiatives and Horizon2020 funded projects” report](#). This report overviews the global knowledge that has been produced under the initiatives and projects funded by the EC within the healthcare domain.
- [31] [European available business support initiatives](#) - A wide range of support services is available to both ICT entrepreneurs and start-ups in order to enable them to build sustainable ICT-based and innovation driven business models with a global reach.
- [32] [Overview of the 2016-17 calls for proposals in support of PCP and PPI across the different Horizon 2020 work programmes](#)
- [33] [GET project – Delivering growth to eHealth businesses](#) - The GET project delivers four high-impact services to eHealth SMEs and entrepreneurs in order to boost their growth and move them to the next level of competitiveness.
- [34] [eHealth Start-up guide for business success](#)
- [35] [EU Joint Action for eHealth Governance](#) - The eHealth Governance Initiative is working to establish a governance structure for eHealth within Europe in order to ensure continuity of healthcare both at home and across borders.
- [36] An action under the [ISA Programme](#), collecting best practices in Member States' public administrations in analytics and big data technologies to support decision-making, along with the supporting organisational and operational processes.
- [37] The [data4policy](#) initiative, with the aim of producing an inventory of big data for policy initiatives in European Union Member States and abroad, a report about state-of-the-art in innovative data-driven approaches for evidence-informed policy, and six case studies.
- [38] A Tool for Innovation Monitoring (TIM), based on technology forecasting, and exploiting data coming from patents, publications and news. JRC is using big data analytics in Earth and environmental sciences through the [Digital Earth Platform](#), which can help DGs working in this policy area.
- [39] [From Innovation to implementation: eHealth in the WHO EU Region 2016](#), report.

- [40] [What is an innovation Ecosystem? Deborah J. Jackson](#)
- [41] [What is co-creation? The importance of co-creation](#)
- [42] [The co-creation Initiative](#)
- [43] [Overview of main techniques which are used as part of the design thinking and co-creation processes](#)
- [44] Where are the patients in decision-making about their own care?, WHO, 2008
<http://www.who.int/management/general/decisionmaking/WhereArePatientsinDecisionMaking.pdf>