



PCP experiences in Healthcare

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Agenda

- 1 Decipher mHealth PCP: Lessons learned**
- 2 Case example: Noona eHealth services for cancer patients
- 3 Nordic PCP & PPI experiences

DECIPHER mHealth PCP: Lessons learned

DECIPHER PCP (<http://www.decipherpcp.eu/>) :

- An ongoing EU funded PCP in mHealth. First cross-border EU PCP together with Silver PCP (<http://www.silverpcp.eu/>)
- The project aims to develop a mobile solution which enables secure cross-border access to existing patient healthcare portals.
- The new user-friendly application acquired through pre-commercial public procurement (PCP) will enable efficient and safe medical care of mobile patients in EU member states. The objective of the project is to develop a solution addressing the management of patients with chronic long term conditions.

THE ANALYSIS AND LESSONS LEARNED SO FAR:

- Decipher PCP process and work has been analysed in order to disseminate learnings to wider audiences and to serve future PCP projects .
- **The analysis has been done both from the procurers and from the supply side perspective.**
- All companies participating in the DECIPHER PCP are SMEs. Those SMEs have delivered their views to this analysis..
- Analysis covers so far the 0-1 phases -> i.e. upto the design phase.

Procuring organizations strategies and drivers behind participation in PCP

Procurers views

- **Contracting authorities/procurers did not justify or base their involvement in DECIPHER PCP on existing eHealth or Innovative procurements strategies.** However, doing so could strengthen the case.
- Objectives such as healthcare savings, cost optimization and better services are mentioned as drivers but do not fully translate as such into concrete PCP action.
- The possibility to acquire innovative specifications and then use these to procure a new (needs based and user-driven) mHealth solution does stand out as driver.
- **Procuring organizations main drivers and expected benefits were related to a learning experience around PCP and technological developments in the mHealth area.** These kinds of learnings can support further actions and create added value that is less specific but still important.

Definition of PCP objectives and the specifications in the preparatory (0) phase

Procurers views

- **Training and support needs of the procuring authorities** should be assessed in advance, since all relevant parties should be fully and adequately ready to participate to a joint PCP.
- The **PCP preparation should be led by a combination of clinicians and hospital managers and commissioners of service**, working very closely with the procuring authority responsible for purchasing any new system or technology.
- The need for a new solution, real interest of procuring organizations and the adequacy of the solution to the existing service system should be assessed before embarking to the process. It should be explored whether the EU PCP model could be improved based on learnings from the UK and Dutch SBIR
- **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.** Cost is a key consideration.

Co-creation through User involvement and Market Consultation

Procurers views

- Both user involvement and market dialogue are important activities in the PCP 0 phase, 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.
- Market dialogue with the supply side actors is a must activity in PCP. Workshops with supply side can e.g. provide support to the technical dialogue, feasibility check and market scanning for existing solutions.

Technological aspects in mHealth

Procurers views

- It is important to **reach a common understanding of the IT infrastructure** (e.g. available PHR interfaces in the case of DECIPHER) in each country as relevant to the procurement. This understanding should be reached at early phases of the project planning. It is advisable to base connectivity requirements on international standards.
- Participation of technical persons should be strengthened in the phase of defining technical specifications. **In future PCPs it seems important to provide even clearer and more compact specifications.** It may also be appropriate to put more effort on state of the art analysis to provide more background information for both procurers and bidders.

Legal and procedural aspects

Procurers views

- Time delays, were the biggest impediment so far. Compliance with legal aspects - or the assumed compliance needed - is too burdensome; both national/regional and EU legal framework need to be simplified and made easier to work with. The process is too long, heavy and time consuming
- Since PCP is not subject to procurement law it 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. Lawyers that support PCP actions should help to make the best out of this instrument.
- The focus should be on how to construct and run a fast and result oriented PCP process without unnecessary (perceived) legal constraints.

Business / service model

Procurer views

- **Business case – service model** is a necessary tool in a PCP. It reveals and defines possible pathways and opportunities. It also supports & guides the PCP process work and acts as a benchmark tool for successful outcome.
- **All relevant actors (procurers, management, healthcare personnel, end-users of the services and companies from the supply side) should be involved closely in the business case design process from the very start.** This create better chances that correct definitions will be created, that the R&D work runs into correct direction and finally that deployment and commercialization will also take place.
- **All parties agree that business and financial competences are needed** in the business model development and when evaluating proposals. Investor engagement is also recommended as expert resource in the PCP.

The PCP process and the instrument

Supplier views

- The direct interaction between bidders and procurers is considered important - e.g. to clarify issues such as the specifications.
- The challenge brief (CB) / specifications were presented as more broad & challenging than was the case once the Decipher PCP was further clarified. This caused some extra work and uncertainty, but also new learnings.
- The PCP is seen as a valid instrument to connect the correct stakeholders and to create new types of development and innovation opportunities for SMEs / tech companies.
- This type of joint actions and collaboration schemes should be emphasised. PCP provides information on real needs from real users across Europe, which is an ideal situation for the supply side. If those needs are real and confirmed this is a unique opportunities for the participating suppliers.

DECIPHER PCP creates clear (market) opportunities for SMEs

Supplier views

- All of the suppliers selected to Decipher PCP are SMEs. Most of them are companies that are already operating in this business area. They might also have had development activity in this area previously and are trying to provide solutions to the health and social care sector, implementing integrated and innovative ICT-based solutions.
- Companies are not only interested in developing new technologies – they also see new opportunities as (broader) service providers once new solutions are taken into use and commercialized.
- SMEs see this as a good opportunity to actually develop and test their ideas further based on real needs and on specification that have been formulated also by the end users during the different phases of PCP.

SME market opportunities cont.

Supplier views

- 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. 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. A stage gated process and partial funding on a prototype development is seen as a positive opportunity.
- Interestingly, the suppliers also find it important that they can gain insights and acquire new learnings from what is going on in the thematic sector in different EU countries and within the procuring organizations. This can create further opportunities also outside the currently ongoing Decipher PCP.

Technological issues /challenges

Supplier views

- Technical challenges are not too big to overcome.
- Legal and “semantic coordination” needs pose more important challenges and even obstacles. In Europe there is too much regulation compared to USA and Asia. Technical requirements should be defined in the way that the companies are able to develop solutions based on them.
- For example In DECIPHER PCP epSOS was included in requirements although the services are not yet available and the future of epSOS is still unclear.
- The approach of providing a test environment was considered good since the operational PHR interfaces are not available. The suppliers express however a clear wish to be able to test their prototypes in real life test environments in order to connect with the healthcare providing organizations service and technological infrastructure and end users.

The business case and service model

Supplier views

- The business model possibilities are quite clear, even if the the business model of mHealth is still an open and evolving issue and Decipher
- Challenge brief merely explained the opportunities (market size and potential). Use case scenarios explained are credible. The data and information provided in the Business model in support of the scopes of the PCP make it very credible and coherent.
- What needs to be clarified and better defined are the service and procurement strategies & goals of the 3 procurers/healthcare providing organizations.

The business and service model cont.

Supplier views

- The need for this type of services is clear, however it is not so clear who should be the payer of those in the future.
- The preferred outcome would be that the model is effective regardless of the health system where it is used. The business model cannot however, rely only on the public sector only to be successful.
- Other alternative stakeholders that can exploit the DECIPHER PCP outcome can include insurance companies and clinical champions/ hospitals. Decipher consortium should facilitate this larger interaction aiming at sustainable service/ business models and deployment.
- Suppliers also recommend providing open data access to third parties to create new services and enlarge the scope of opportunities. A simple patient consent mechanism would suffice to see who agrees to have his or her data reused for other purposes as well - for a great common good (public health).

Cross-border, pooling of demand and lack of precise information creates challenges

Supplier views

- There should have been better and closer interaction directly with the 3 contracting authorities and also between those three. This interaction could have included face to face meetings or workshops.
- More close interaction with the healthcare providing organizations would have created better understanding of the real life environments and the needs from the early stages of the PCP process.
- More concrete information on their service strategies and existing ICT infrastructure would have helped to develop services with speedier implementation possibilities, including integration of different systems of different countries with different healthcare backgrounds.
- Semantic and security issues may now arise in the implementation phases since a lot of back end information are missing.

Cross-border activity and pooling of demand

General analysis

- Can drive technological standardization and create better understanding of national differences and how to solve these.
- Main challenges in cross-border PCP can be found in the legal sphere and service adoptability and interoperability issues.
- For suppliers cross-border activity may appear as too complicated in relation to the financial compensation available or predicable as market opportunity.

What is needed and what pays off?

General analysis

The key issues even in PCP is if the procuring authority really needs the new solution and is willing to pay for it.

- Base PCP on a real measurable and economically appropriate need. **New solutions and technologies can only be considered for purchasing if the economic argument is compelling.**
- **Business model thinking** helps to focus on what the customer values, how this value is best delivered and how strategic partners are leveraged
- EU cross-border projects drive forward **interoperability**, market coherence and possibilities for **scalable** Business models

Public sector service (business) model

General analysis

1. **Visualizes and clarifies the objectives and value creation process**
2. **Should be used as a tool to guide the whole process** from all perspectives (demand and supply side actors and end-users)

Concentrate on issues that are the key for success, such as:

- 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, better support etc)
- new, improved ways of delivery, e.g. use of eHealth
- eventual other economic and societal benefits

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Case example: Noona eHealth services for cancer patients

- Helsinki University Hospital and (Startup) company Innovation partnership
- A relevant reference case also for PCP or PPI cases, while it concentrates on some of the main issues also important for a successful PCP or PPI case.
- Clear intention from the start to integrate this new eHealth service into the care delivery path, connecting with clinical information system
- Service & business model have been defined and can evolve further and to further markets too.
- Currently conducting clinical studies in order to justify the eHealth investment with measured evidence of positive outcomes and value, incl. cost/benefit analysis
<http://www.noona.com/>
<http://www.noona.com/news/>
- (Patient) value is defined using also User-Driven Innovation (UDI) and Service design methodologies:
[Service design led development: http://www.kaufmann.fi/about/](http://www.kaufmann.fi/about/)

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NORDIC PCP & PPI experiences

- The following Nordic level analysis on innovation procurement was done in a Nordic Innovation funded project called Nordic PPI Net in 2014:
<http://www.nordicinnovation.org/projects/lighthouse-projects/public-procurement-and-innovation-within-the-health-sector-/>
- More material available: <http://www.nordic-net.com/about/step-by-step-guide/>
<http://www.nordic-net.com/>

Best Case and key learning points

- The increased focus on initial need assessment and a dialogue with suppliers shows positive results
- The tender specification should be based on functionality rather than detailed technical requirements
- There are distinct issues that prevent the commercialization of Nordic PCP projects:
 - Lack of risk assessment and cost/benefit calculations
 - The innovation is not an integral consideration in planning procurement processes
 - Small companies experience substantial challenges when dealing with big institutions
 - Projects fail to take into account the issues of integration, implementation and operational challenges
 - High impact projects have failed due to silo thinking within the health organization
 - Idealists are in charge of the project, and tend to fail during the anchoring phase
 - The Consortium consisting of small and large enterprises is more likely to succeed
 - There is a need for more knowledge and experience with innovative procurement
 - Procurement of Innovation is about total cost of ownership – not the lowest price per piece
 - The use of Competitive Dialogue gives better results

Key Learning Points: Phase One - Preparation and anchoring

- The importance of a thorough needs assessment
 - The ability to describe the user need clearly, is essential for the whole procurement process.
 - The user need is the basis for dialogue with the suppliers.
 - The user need is the basis for functionality and performance requirements described in the tender documentation.
- The value of anchoring of the strategy, and the involvement of user groups
 - This is standard in most traditional procurement processes, but our analysis shows a lack of strategic foundation for the innovation within the organizations in a number of ongoing pre-commercial projects and projects funded by R&D grants.

Key Learning Points: Phase One - Preparation and anchoring

- The lack of proper integration with existing solutions, and issues related to aging infrastructure in hospitals might hinder innovation
 - To facilitate the implementation of innovative solutions, potential obstacles as a result of existing technical infrastructure as well as the feasibility for implementation of new solutions, should be extensively documented and articulated during the first phase of the procurement process.
- The Cost-Benefit analysis should be integrated into all innovative procurement processes
 - Documentation of the financial effects of the innovation is often missing in pre-commercial projects. Lack of a proper business case for a pre-commercial project generally results in a discontinuation of the process into the commercial phase of the project.

Key Learning Points: Phase One - Preparation and anchoring

- The positive effect of a well-organized dialogue is threefold
 - The procurement team receives valuable input.
 - The announcement of market dialogue attracts new suppliers.
 - The suppliers that participate in the dialogue activities tend to be more involved, and invest more effort in innovation.
- The use of an external facilitator --particularly during dialogue and partnering activities—has a proven positive impact
 - Including an external facilitator in the procurement process, with a neutral role and extensive cluster network, is proven to increase the number participating suppliers, and creates a better platform for knowledge sharing.

Key Learning Points: Phase One - Preparation and anchoring

- Proper treatment of information gathered during the dialogue activities is vital for future involvement from the suppliers
 - Being able to transform the information gathered during the dialogue into an innovation friendly tender specification is important for future involvement from the suppliers.
- The tender specification should be based on functionality rather than detailed technical requirements
 - Outcome-based specifications give suppliers room to innovate.
 - In Nordic healthcare organizations the tradition and culture encourages high levels of detailing. This mindset needs to be challenged.
- The risk of revealing trade secrets often discourages companies from participation in dialogue activities
 - Companies with excellent product innovations hesitate to participate in dialogue activities due to the risk of revealing trade secrets

Key Learning Points: Phase Two – Pre-Commercial Procurement

- Public funding of programs for innovation are common
 - In the Nordic countries, most public and private pre-commercial projects are based on government-funded programs like OFU (Norway) and OPI (Denmark), rather than the competition based EU model.
 - Vinnova and Tekes have launched programs based on the EU model, however, only a few projects are currently being conducted in the health sector.
- There are distinct issues that are characteristic to Nordic PCP projects
 - Lack of risk assessment and cost/benefit calculations.
 - The innovation is not an integral consideration in planning procurement processes.
 - Small companies experience substantial challenges when dealing with big institutions. (E.g. contracts, capacity, financial strength and cultural differences)
 - Projects fail to take into account the issues of integration, implementation and operational challenges.
 - High impact projects have failed due to silo thinking within the health organization. It tends to be challenging to implement an innovation project with cross-department consequences.
 - Idealists are in charge of the project, and tend to fail during the anchoring phase.
- The above-mentioned issues generally tend to prevent further commercialization of the projects.

Key Learning Points: Phase Two – Pre-Commercial Procurement

- The commercialization potential of new ideas receives limited focus within the public sector
 - When private sector companies are involved during the user-driven innovation process, the health organization should be aware of, and accept, the suppliers' need for cash flow and long-term profit.
 - Finding an avant-garde customer who provides a first return-on investment and signals the feasibility of a technology to more risk-averse customers is crucial for the success of commercially exploiting research outcome.
 - Lack of public sector organizations that act as early adopters of new technology in the Nordic countries reduce the innovation capacity.
- The value of clear agreements about Intellectual Property Rights
 - Establishing an open dialogue and clear assumptions concerning IPR and commercialization of the results in the early phases of the project is an important success factor.

Key Learning Points: Phase Two – Pre-Commercial Procurement

- The Consortium consisting of small and large enterprises is more likely to succeed.
 - Creating a market-oriented exploitation consortium including SMEs, niche-seeking organizations and large enterprises with their market power, increases the possibility of success during the commercialization phase
- User driven innovation beats “great ideas”
 - User-driven innovation tends to be more successful than development-oriented innovation.
- The impact and scale is essential for Disruptive Innovation
 - Successful disruptive PCP cases are large-scale in terms of solution impact and economy.
 - Disruptive health innovation must seek to increase value for patient outcomes and decrease the overall cost for the provider.

CHANGE OF MINDSET NEEDED?

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THANK YOU !

