

Cross-border innovation procurement in health: EU funding opportunities & best practices

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Why Innovation Procurement

WIN-WIN FOR INNOVATORS

Driving innovation from customer needs helps shortening time-to-market for innovative products / services

The power of the public pursue can open up market/sales opportunities for innovative companies in Europe, in particular also SMEs and start-ups

It helps innovative businesses in Europe to scale up and finally go to market. First customer reference helps attracting investors.

WIN-WIN FOR PUBLIC SECTOR

Modernization of public services – improving the quality and efficiency of public services and tackling societal challenges with innovative solutions

Get better value for money - enable public sector around Europe to share cost + experience to buy new solutions that can respond to concrete public needs

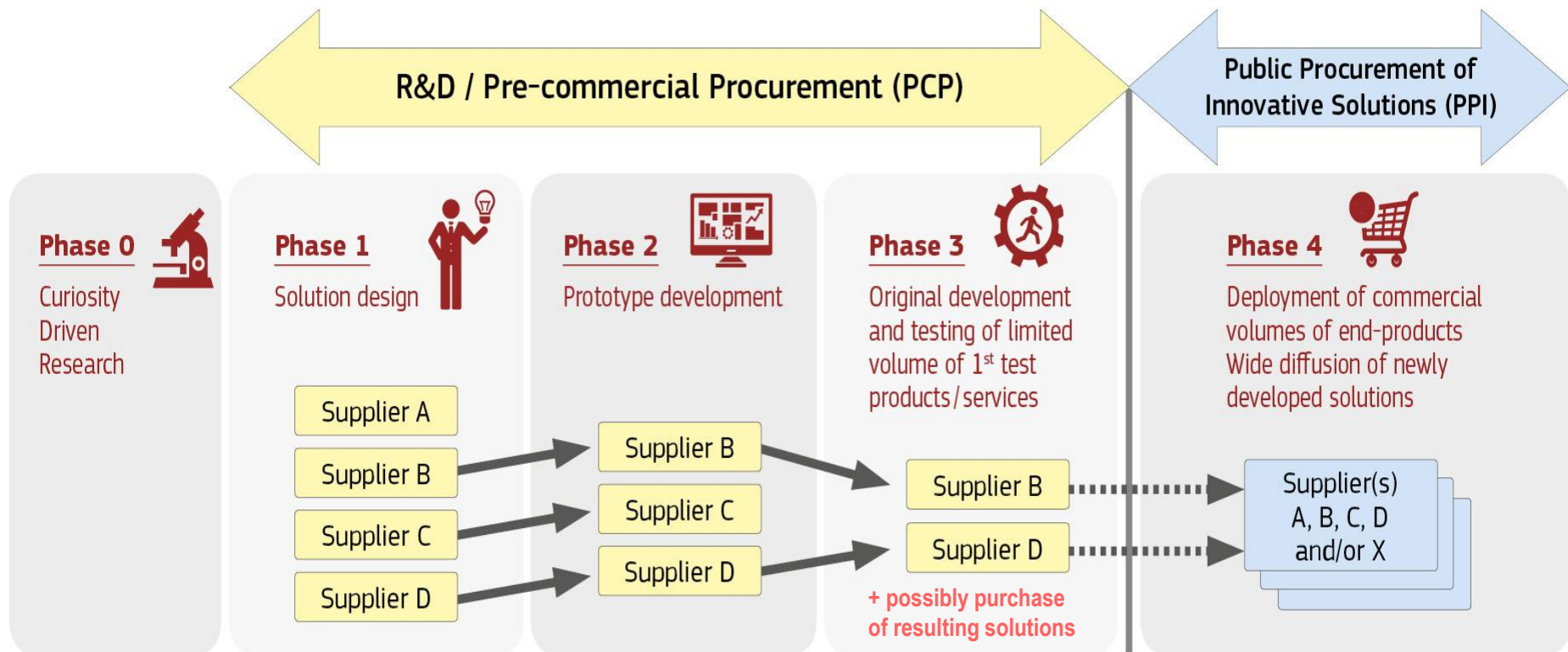
Smart use of the procurement budget to remove supplier lock-in and obtain more open, standardized and better value for money solutions in a cost effective manner

Create growth and jobs in Europe (in PCPs, suppliers can be required to do the majority of R&D in Europe)

Innovation Procurement

What is PCP and PPI?

- **PCP** to steer the development of solutions to concrete public sector needs, while comparing/validating alternative solution approaches from various vendors + possibly first deployment (non-commercial volumes)
- **PPI** to act as early adopter / first buyer of commercial volumes of innovative end-solutions newly arriving on the market



Ongoing and completed PCP procurements in health and care

5 PCPs completed (phase 3 finished)

- [SILVER](#) (Robotics for elderly care)
- [THALEA](#) (Telemedicine for intensive care unit patients at increased risk)
- [Human Brain Project](#) (High Performance Computing for brain simulation)
- [DECIPHER](#) (Mobile health data services)
- [NYMPHA-MD](#) (Mental care for bipolar disorders)

PCP
finished

7 PCPs are ongoing (procuring)

- [QUACO](#) (Quadrupole magnets for large hadron collider)
- [MAGIC](#) (Post stroke recovery)
- [RELIEF](#) (Pain self-management)
- [NIGHTINGALE](#) (Wearable sensors for safer patient monitoring/care)
- [PROEMPOWER](#) (Diabetes self-management)
- [LIVE INCITE](#) (Lifestyle interventions in perioperative medicine)
- [STARS](#) (Health stress reduction)

PCP
ongoing

4 buyers groups are in the preparatory phase

- [ANTISUPERBUGS](#) (Detection of superbugs)
- [SHUTTLE](#) (Toolkit for trace analysis by forensic laboratories)
- [eCARE](#) (continuum of care for frailty prevention in old adults)
- [HSMONITOR](#) (health status monitoring + optimise hypertension care)

PCP
in preparation

Robotics for independent living of elderly

SILVER: benefits for procurers



PCP: procured the development and testing in 5 countries

Oct 2013 -> Aug 2016
7 suppliers (ph 1) -> 3 suppliers (ph 2-3)



Certification of solutions
Scaling up production
SMEs grow their business

INDIVIDUAL PURCHASES by public procurers (DK, SE) + elderly people (NL, UK, FI)

End 2016 - Present

Procurers PCP: City of Odense and region of Southern Denmark (Denmark), city of Västerås (Sweden), city of Vantaa and Oulu (Finland), city of Stockport (UK), city of Eindhoven (Netherlands)

Deployment: Only SE and DK cities are responsible for buying equipment for elderly care. NL, UK, FI cities promoted SILVER to elderly (wide deployment depends on sickness reimbursement schemes for robotics).

Benefits for procurers:

- ☐ Contributing to the goal to bring solutions to the market that enable to **care by 2020 with the same amount of care staff for 10% more elderly people** living a **higher quality life** independently at home
- ☐ **Choice between 5 products.** 5 out of 7 participating contractors are successfully commercialising their solutions: Robot Care Systems (NL), Bioservo (SE), Camanio (SE), Robosoft (FR), Marsibionics (ES)
- ☐ A few hundred of the robotics solutions resulting from SILVER have already been sold and deployed in the SILVER countries & beyond.

Robotics for independent living of elderly

SILVER: benefits for companies

- SILVER triggered the creation of new start-ups and helped existing startups grow their business.

Aug 2016 (end of PCP)



SME, NL

SME ph1 grant (2012) setup the SME
Lerovis merged into RCS (2014)
Raised equity investment (2016)



SME, SE

Agreements with NASA, Airbus, GM, GE
3 equity investment rounds ('13, '14, '16)
NASDAQ listed (2017)
SME ph2 grant (2018) wider commercialisation



SME, FR

SME, FR

Equity investment round (2013)
Spun out Kompaï robotics company (2016)
Won also Fabulos PCP contract



SME, SE



SME, SE

Merged with Brighter Two into Camanio (2016)
Stocklisted on Spotlight (2017)
Office in US, distributors in China, AU, EU



SME, ES

ECHORD ++ support
Agreement with ESCRIBANO (2016)
SME ph2 grant (2018) wider commercialisation
Clinical trials in Spain ongoing
Crowdfunding ongoing

Today

~32 LEA robots (walking and other assistance) sold in NL, UK, DE, Scandinavia

~ 245 i-Hands (smart wearable giving muscular support) sold worldwide to industrial and health market

~ 50 Kompaï robots (walking+other assistance) installed in several nursing homes + hospitals

~350 Mealtime devices (eating assistance) sold worldwide

Wearable bionic exoskeleton (muscular assistance) in trials



European Commission

Telemedicine for ICU-patients at increased risk

THALEA: benefits for procurers

Thalea⁾⁾⁾

PCP: procured the R&D, testing and deployment (for 4 years) of pre-series systems

June 2015 -> Nov 2016
5 suppliers (ph 1) -> 3 suppliers (ph 3)



Certification of solutions
Scaling up development
SMEs grow their business
Enlarged buyers group

Thalea⁾⁾⁾ II

PPI: larger scale wider deployment of final certified systems

Call for tenders
Expected by Mid 2019

Procurers PCP: Univ Clinic Aachen (DE), Univ Hospital Maastricht (NL), Hospital East Limburg (BE), Parc Tauli Sabadell University Hospital (ES), Northern Ostrobothnia Hospital District (FI)

Enlarged buyers group for the PPI: includes also Austrian procurers.

Benefits for procurers:

- ❑ **Interoperable (lower cost)** platform for tele-detection and tele-care of ICU-patients at increased risk.
- ❑ **Significantly improved risk-detection, earlier diagnosis and higher efficiency** in the ICU, enabling a **reduction in sepsis mortality by 25% and in length of hospital stay by 20-50%.**
- ❑ **Faster time to market:** From research to deployed working systems in 1,5 year time. The three pre-series systems delivered at the end of the PCP by Dendrite Clinical Systems, New Compliance and Philips all met the procurers' requirements. They are deployed and in use in the hospitals since 2016.



European
Commission

Telemedicine for ICU-patients at increased risk

THALEA: benefits for companies

Benefits for companies:

- ❑ PCP enabled companies to grow their business cross-border and bring disruptive innovations to the market: Telemedicine center with big data analysis, self-learning and prediction capabilities.

Nov 2016 (end of PCP)



Company setup office in the US (12/2016)
Distributor agreements (2017)
Integration with hospital platforms of big corporates (e.g. GE, Johnson, Philips..)
ERDF funded safety demonstration (2018)
Certified as medical device (2018)
Finalising VC investment round (2019)

Today

OR Cockpit Solution
already installed in 25 Dutch and 2 US hospitals.
Distributing also in BE.



SME, UK



SME, IE

Setup new company ICView specifically for commercialising the solution in Europe, Middle East, Russia (2017)
Certified as medical device (2018)

ICView Solution is
running as a pilot system
in several hospitals.

PHILIPS

Healthcare

Further solution enhancements in cooperation with DE hospitals (2017-19)
Certified as medical device (2018)

eICU Solution has been
deployed in several
hospitals



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Telemedicine for ICU-patients at increased risk

THALEA: benefits for procurers

Improving the quality of public services for European citizens

"I couldn't really believe how good the innovative telemedicine solutions are that were developed in our THALEA PCP, until I saw it in action with my own eyes. Last week the system predicted the risk that a sepsis infection would occur in the intensive care unit in our hospital. Four hours later this situation really happened and thanks to the telemedicine solutions we were able to save lives.

The novel algorithms and improved risk-detection of the new telemedicine solutions result in earlier diagnosis and improve efficiency in the ICU significantly, enabling a reduction in sepsis mortality by 25% and a reduction in the length of hospital stay of patients by 20-50%."

Robert Deisz, Head Doctor, Intensive Care Unit, University Hospital Aachen (procurer in [THALEA](#) PCP)



Example transnational PPI

Elderly Care



STOPANDGO
2016-2018
Value PPI procurement: € 17,2M
stopandgoproject.eu

STOP AND GO procurers: Health agency province ASP Catanzaro (IT), ASL Roma D (IT), SO.RE.SA (IT), Eastern Cheshire Clinical Commissioning Group (UK), City of Liverpool (UK), Santa Creu I San Pau hospital (ES), City of Helmond (NL)

The STOP AND GO procurers completed across 4 different countries in total €17,2M of public procurements of innovative solutions that delivered ICT based telecare services for frail elderly that suffer from multiple conditions at the same time such as heart failure, diabetes, etc.

Examples of impacts:

- ❑ Santa Creu: Remotely monitored implantable cardiac defibrillators: 9,8% reduction in hospital visits, 29% decrease in risk of death, implants were successful in 98,12% of cases (90% under old approach). Wider deployment of this approach currently implemented in Catalonia and in ongoing RITMOCORE PPI.
- ❑ Liverpool: ICT based home care service delivers better care for less cost (payment by results), increased service flexibility, monitoring and enables data-enabled urgent care interventions
- ❑ Follow-up project RITMOCORE PPI: <http://www.ritmocore-ppi.eu/>

Impact of EU funded PCPs (ongoing + completed)

- **Opening a route-to-market for new players/SMEs**

- 61,5% of the contracts won by SMEs only
- Compared to 29% average in public procurements across Europe

Mostly small young SMEs: 31% below 10 people, 48% below 50 people, 60% less than 10 years old

- **Helping also larger market players bring products to the market**

- 16% of contracts won by large companies as single bidder
- 19% of contracts won by consortia of larger companies plus SMEs
- 73,5% of contracts won by SMEs (SMEs alone, or as lead bidder)

- **Relevance to universities & bringing scientific results to market**

- 30% of winning contracts have also a university/R&D center partner in consortium
- Winning SMEs are also often university start-ups

- **Stimulating cross-border company growth**

- 33,1% of contracts are won by bidders that are not from a country of any of the procurers in the buyers group (e.g. DE company working for UK+NL procurers)
- Compared to 1,7% average in public procurements across Europe

- **Creating growth and jobs in Europe**

- 99,5% of contractors do 100% of R&D activities for the PCP in Europe



Lessons learnt

- **Separating PCP (R&D) from PPI (commercial deployment) and using a phased PCP approach**
 - Opens the market for small players/SMEs (smaller gradually growing contract sizes)
 - Enables procurers to steer industry R&D to meet their needs, achieve desired quality and efficiency improvements in public services and reduce vendor lock-in
 - Stimulates cooperation with universities and larger companies
 - Enables use of place of performance clauses that create growth/jobs in Europe
- **Joint cross-border PCP procurement**
 - Stimulates cross-border company growth
 - Facilitates the creation of more open standards based interoperable solutions
- **Leaving IPR ownership rights with contractors**
 - Reduces the cost / the R&D risk for procurers with 50%
 - Encourages wider commercialisation of solutions by vendors
- **Using a place of performance condition in PCPs**
 - Can effectively stimulate growth and job creation in Europe



Ongoing PCP/PPI networking projects in health



Introducing innovation and integrated care solutions in Europe's health and social care systems through cross-border value-based innovation procurement.

<https://www.euriphi.eu/>






PIPPi

Platform for Innovation of Procurement and Procurement of Innovation

<https://pippi-project.eu>





Procurement organization and service providers

-  FPT - AQUAS - FCRB/HCB
-  ARESS/INNOVA PUGLIA - FDG - SORESA
-  RESAH - APHP - UNIHA
-  NHSCS - NWSSP
-  RSD




Association and networks

-  HOPE - RSCN - IFIC - EUREGHA - MEDTECH EUROPE

Private company

-  CMS UK/CMS De Backer - BCG
-  EMPIRICA
-  WS
-  GOBLIRSCH

Research organization

-  UVEG
-  UA
-  FDG

Partners:

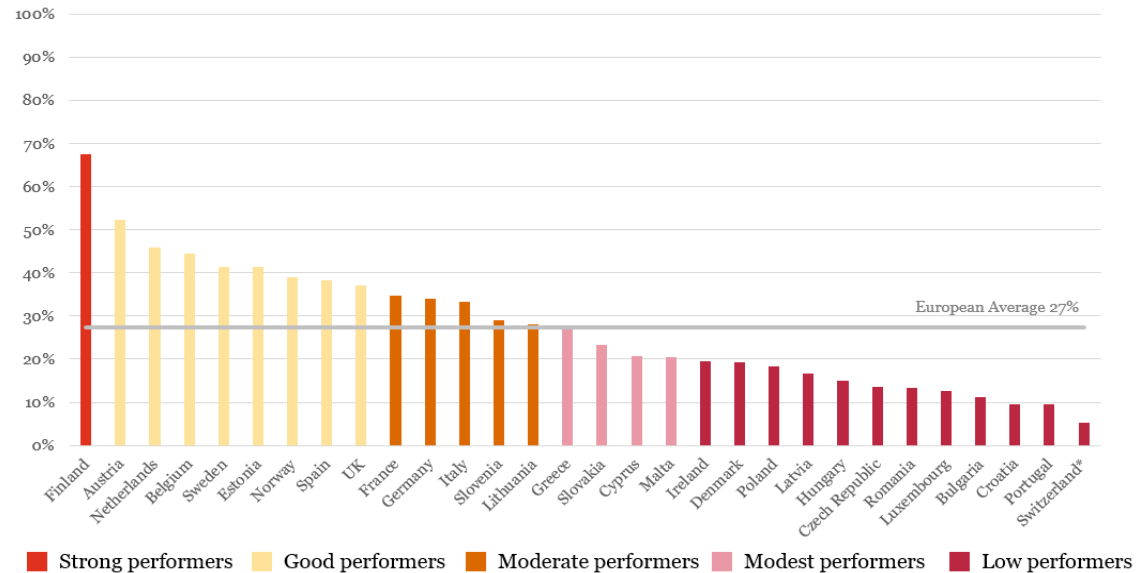
Karolinska University Hospital (Sweden), Erasmus University Medical Center Rotterdam (The Netherlands), San Raffaele Hospital (Italy), Medical University Vienna (Austria), Catalan Institute of Health – University Hospital Vall d'Hebron (Spain), Agency for Health Quality and Assessment of Catalonia (Spain), Helsinki University Hospital (Finland), Kings College Hospital (UK)



Interesting links



www.eafip.eu



European Network of national competence centers for innovation procurement

More info - Overview EU funded innovation procurements

<https://ec.europa.eu/digital-single-market/en/innovation-procurement>

<http://ec.europa.eu/digital-agenda/en/eu-funded-projects>



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Help us spread the message

There are still plenty of public procurers out there that don't know yet about this type of EU support for innovation procurement!

Who can help promote the Horizon 2020 support to help public procurers carry out PCPs/PPIs across the EU Member States and Associated Countries?

There are still plenty of companies out there that don't know yet about these innovation procurement sales opportunities!

Who can help promote upcoming open market consultations and call for tenders in for PCP/PPI procurements in their countries?



More info - Overview EU funded innovation procurements

<https://ec.europa.eu/digital-single-market/en/innovation-procurement>

<http://ec.europa.eu/digital-agenda/en/eu-funded-projects>



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Thank you!

@EUScienceInnov

#InvestEUresearch

#EUHealthResearch

<http://ec.europa.eu/research/health>

[https://ec.europa.eu/info/funding-](https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home)

[tenders/opportunities/portal/screen/home](https://ec.europa.eu/info/funding-tenders/opportunities/portal/screen/home)

[https://ec.europa.eu/programmes/horizon2020/en/what-work-
programme](https://ec.europa.eu/programmes/horizon2020/en/what-work-programme)



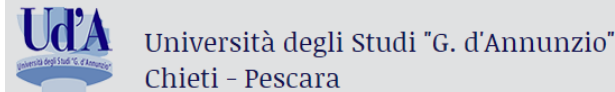
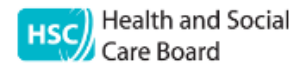
Procurers involved

	     
	    
	  
	 <p>in cooperation with</p>     
	  
	   

Procurers involved



Servicio Andaluz de Salud
CONSEJERÍA DE SALUD



Procurers involved



Bispebjerg og Frederiksberg Hospital



SPMS^{EPE}
Serviços Partilhados do
Ministério da Saúde



eCARE



Health
Status
Monitor



SHUTTLE

