



Innovation Procurement in Europe

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European Commission

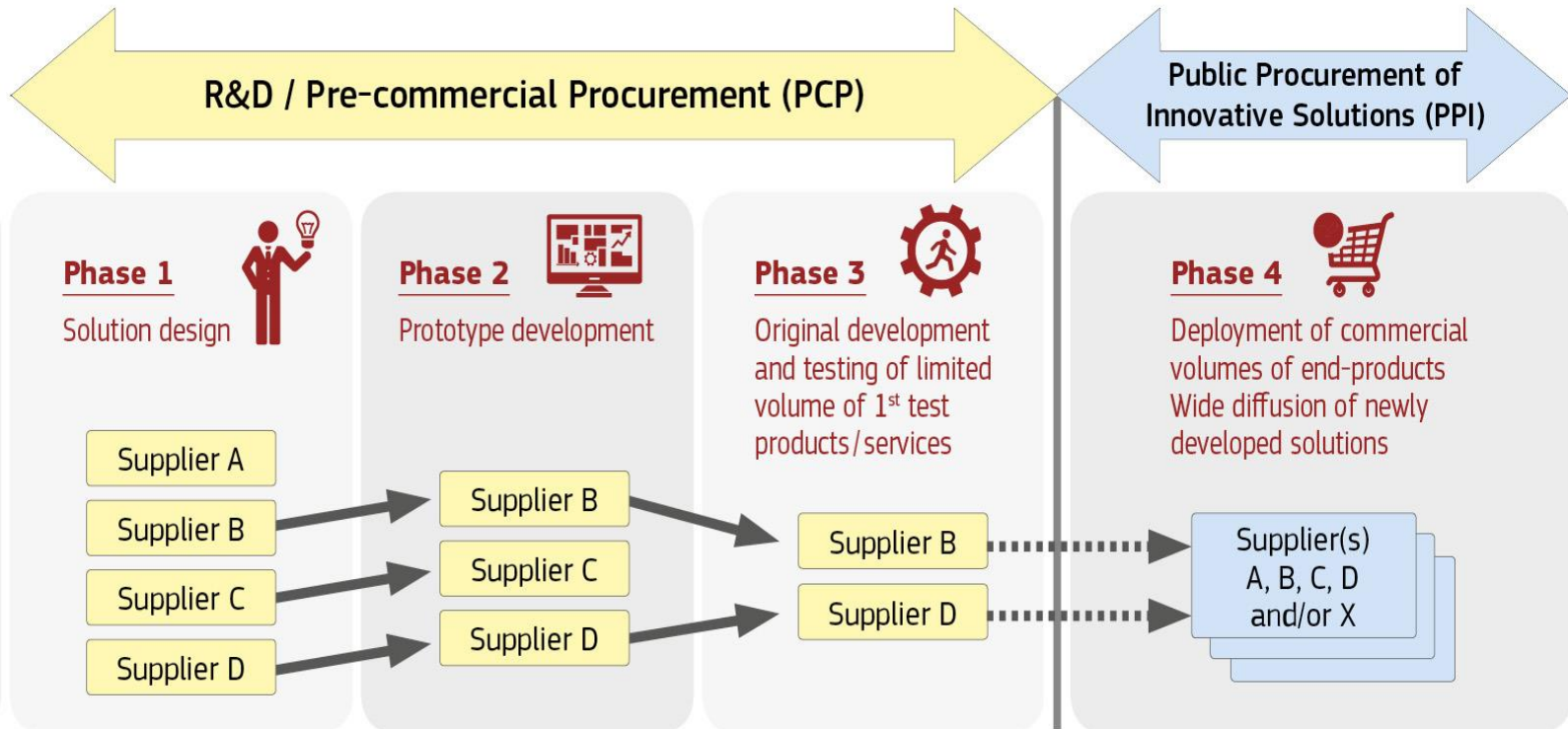
DG CONNECT (Communication Networks Content and Media)
Directorate F (Digital Single Market)
F3 unit ("Digital Innovation and Blockchain")

Innovation Procurement: PCP + PPI

Complementarity



- **PCP** to steer the development of solutions towards concrete public sector needs, whilst comparing/validating alternative solution approaches from various vendors
- **PPI** to act as launching customer / early adopter / first buyer of innovative commercial end-solutions newly arriving on the market



PCP is exempted from WTO GPA and public procurement directives

Info about impacts of EU funded PCPs

<https://ec.europa.eu/digital-single-market/en/news/results-eu-funded-pre-commercial-procurements>



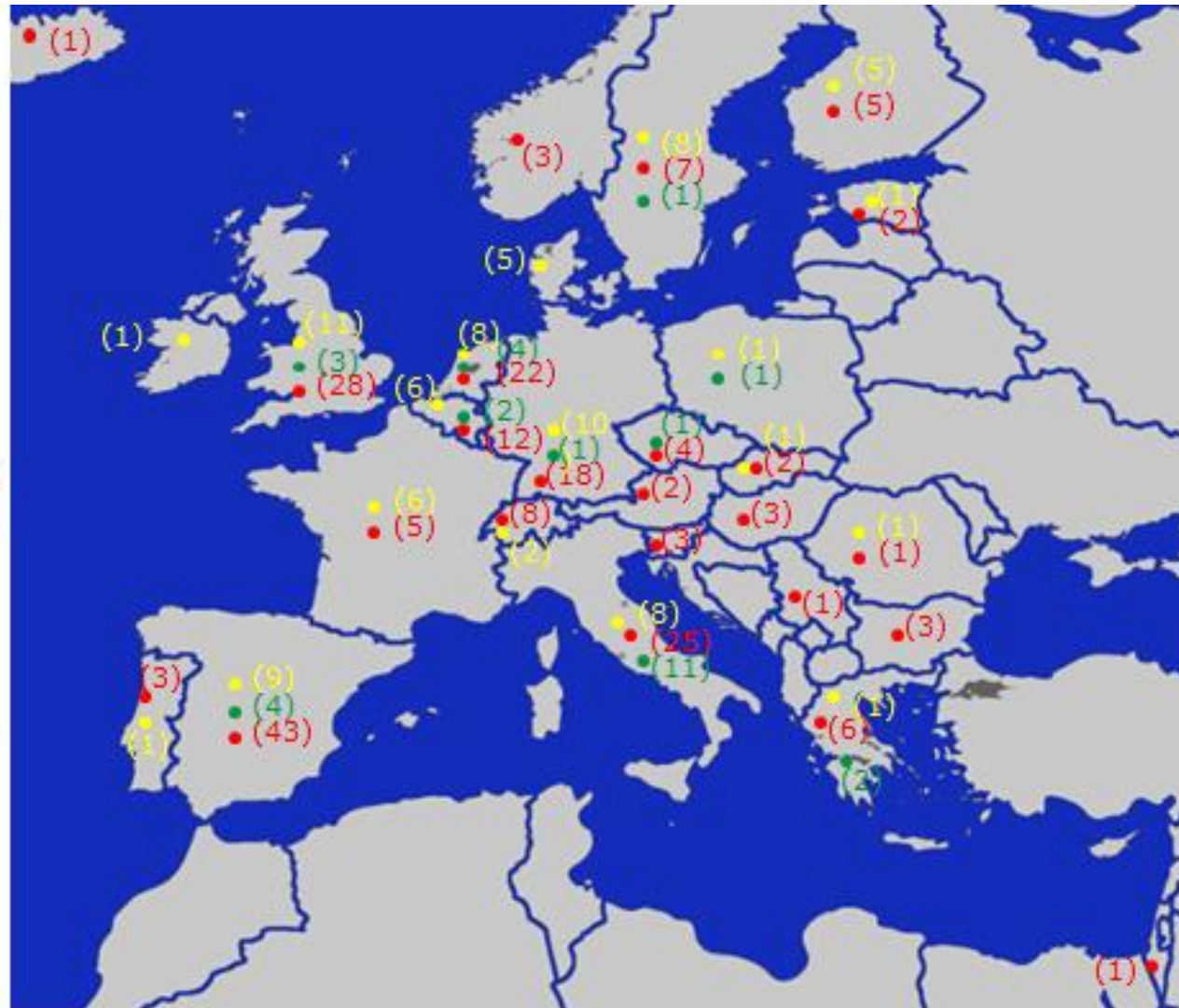
- **Opening a route-to-market for new players/SMEs**
 - 65,9% of contracts won by SMEs (SME lead bidder, bidding alone or with partners)
 - Compared to 29% average in public procurements across Europe

Mostly small young SMEs: 36% below 10 people, 64% below 50 people, 69% less than 10 years old
- **Helping also larger market players bring products to the market**
 - 18% of contracts won by large companies as single bidder
 - 10% of contracts won by consortia of larger companies and SMEs
 - 73% won by SMEs (SMEs alone or as lead bidder)
- **Relevance to universities & bringing scientific results to market**
 - 27% 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**
 - 36,5% of contracts 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**
 - 99,7% of bidders do 100% of R&D in Europe
(2 have committed to do minimum 68% resp. 85% of R&D in Europe)

Geographic location winning bidders & procurers



- Companies in winning bids (nr/country)
- Universities/ research centra in winning bids (nr/country)
- Procurers (nr/country)



Scaling up procurement innovations



EU funded PCP

+



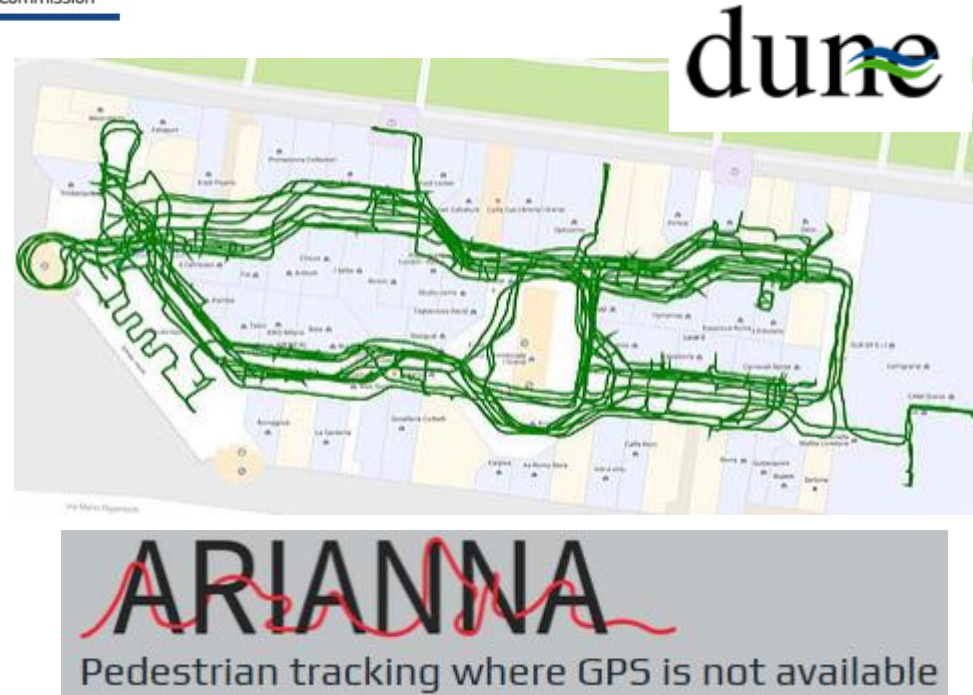
- Smart robotic muscle strengthening system that provides extra grip and independence when needed
- Won several awards (e.g. Red Herring), 3rd VC investment round
- Commercialised worldwide (e.g. sales in Nordics + strategic agreements with NASA, General Motors, General Electric, Airbus)

Scaling up procurement innovations



EU funded PCP

+



- Smart localization system to locate/communicate with firemen at all times & rescue injured firemen in 3 minutes instead of one hour
- Award winning (e.g. Microsoft innovation award)
- Commercialised worldwide (e.g. United Nations, Taiwan rescue agency, China Aerospace agency CASC)

Scaling up procurement innovations



Thalea⁾⁾⁾

EU funded PCP & PPI

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ERDF



- Tele-detection and tele-care Cockpit with predictive capabilities
- Earlier diagnosis and improve efficiency in intensive care
- 25% lower sepsis mortality and 20-50% shorter hospital stay
- Commercialising globally (sold/installed in 25 Dutch + 2 US hospitals, strategic partnership with Philips and distributors in US)

Scaling up procurement innovations

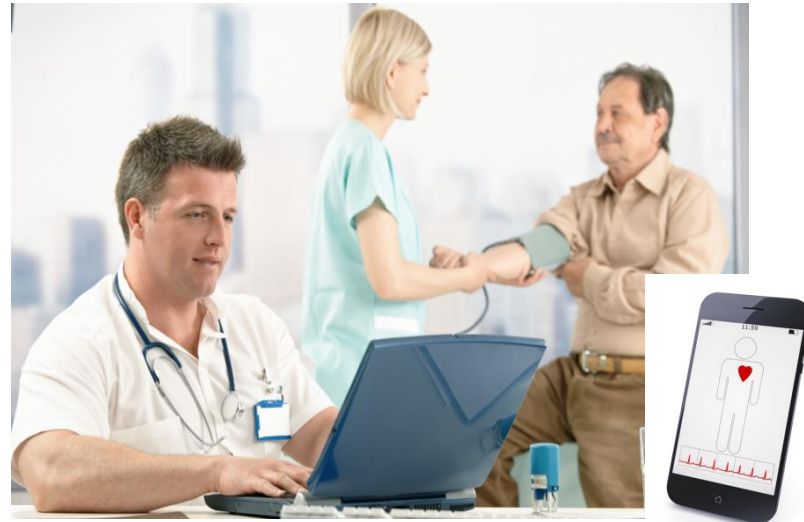


DECIPHER PCP 

EU funded PCP

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CEF TELECOM



- Health record's access, multi-language information sharing with professionals & relatives, treatment planning & monitoring, emergency support and geolocation, patienty consent and privacy
- Commercialising across EU (CEF: EL, MT, CY, LU, BE)
- Helped also win other PCPs to enrich with new innovations (e.g. AI)

Scaling up procurement innovations



PRACE 3IP

EU funded PCP

PPI4HPC

EU funded PPI

- More energy efficient supercomputers
- Started with small PCP, then bigger PPIs
- Joint Undertaking was setup for more structured approach to a lasting European cooperation on joint procurement

What Startups need



Startup communities call upon the next European Commission (see recommendation 3) to revise the EU public Procurement directives to:

The poster for the Startup Europe Summit 2019 in Cluj, Romania. It features a background image of a cityscape. The text on the poster includes:

- Startup Europe Summit 2019**
- CLUJ, ROMANIA**
- Startup policy ideas for the future 5 years**
- Lenard KOSCHWITZ, Director, Allied for Startups
- Dobromir IVANOV, CEO BESCO
- Gianluca DETTORI, Executive Chairman, Primomiglio
- Sandro GIANELLA, Stripe
- Dominic JACQUESSON, Index Ventures
- Marija RUCEVSKA, Co-founder, TechChill & Quro.io
- March 22 2019**
- 12:30 - 13:15**
- bit.ly/Cluj_Startup_Policy
- ALLIED FOR STARTUPS**

- Adopt the Scale Up Europe manifesto **targets for pre-commercial procurement and public procurement of innovative solutions** and monitor the implementation of the targets regularly at European level.
- Promote **more open, transparent** and **shorter-term contracts**, which are **advertised in good time**, without **prohibitive conditions or qualifying criteria**.
- Provide procurers with free access rights while **Intellectual Property Rights remain with innovators**.

Helping Startups/SMEs in Europe

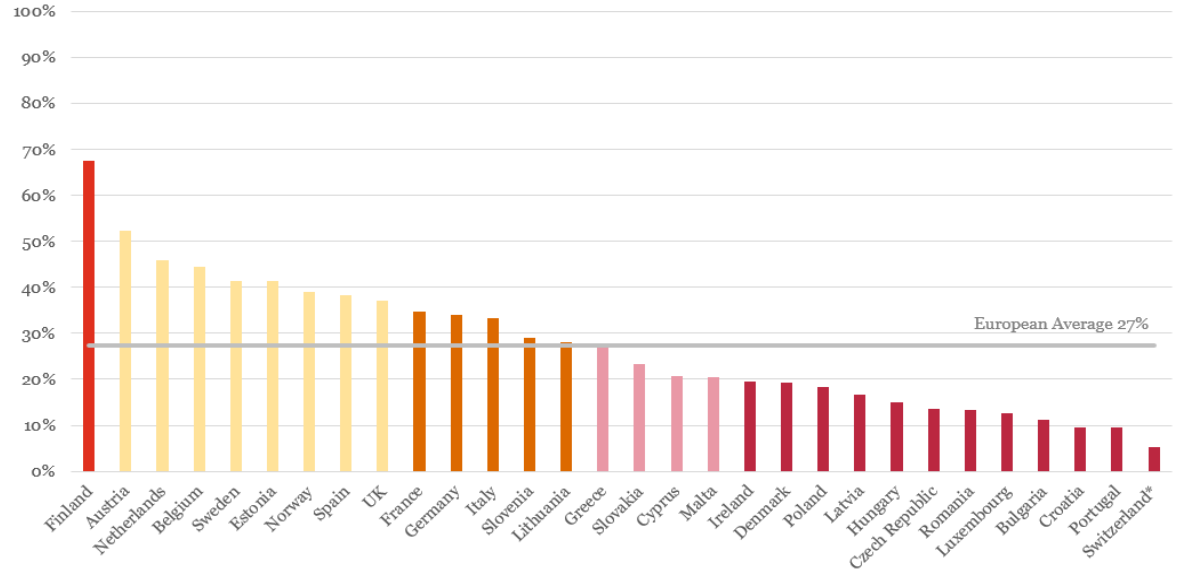


- More ambitious strategic political targets for innovation procurement
 - US spends yearly 2,5% of proc budget on buying R&D
 - Korea targets 5% of proc budget on R&D and 20% on deployment of innov solutions
 - Most ambitious targets in Europe are 5% for R&D and deployment together!
- Increase amount of open, transparent procurements
 - Not only publication of calls for tender but also open market consultations
 - Allow procurers everywhere in Europe to publish call for tenders in English
- Keep contracts short & small
 - Stepwise PCP contracts, while linking SMEs with financial investors/corporates
 - Plan strategically PPIs for wider deployment afterwards
- Leave IPR ownership with companies
- Link with EIC & Innovation Radar
 - Facilitate access of SMEs in innovation procurements to EIC grant and equity support to grow their business, EIC support for meeting corporates and investors
 - Train SMEs receiving EIC grants/equity on how to bid for public procurements and inform them about innovation procurement calls for tender
- Link with Certification and Standardisation
 - Cannot afford to lose pace with other parts of the world

Interesting Links



www.eafip.eu



■ Strong performers
 ■ Good performers
 ■ Moderate performers
 ■ Modest performers
 ■ Low performers

Benchmarking nat policy FWs



European Network of national competence centers for innovation procurement



Procurer & Company Testimonies

BACKGROUND SLIDES



2018-2020 calls in support of PCP and PPI



2018 (41,2 M€)

• PCP actions

- ICT based solutions for any area of public interest: 6 M€ ([ICT-34](#))
- Digital health & care: 22 M€ ([DTH-10](#))
- Security: 8,2 M€ ([SU-GM03](#))

• CSA actions

- Integrated healthcare / diagnosis: 2M€ ([HCO-12](#))
- Digital health & care: 3M€ ([HCC-04](#))

2019 (83 M€)

• PCP actions

- ICT based solutions for any area of public interest: 6 M€ ([ICT-34](#))
- Next generation sequencing for routine diagnosis: 40 M€ ([BHC-10](#))
- Wave energy: 20 M€ ([LC-SC3-JA-3-2019](#))
- Security: 7 M€ ([SU-GM03](#))

• PPI actions

- Digital health & care solutions for an ageing society: 10 M€ ([DTH-05](#))

2020 (100+ M€)

• PCP actions

- Infection & integrated care: ([BHC-20](#))
- Climate Change resilience ([LC-CLA-13-2020](#))
- 100% renewable energy: ([LC-SC3-RES-10-2020](#))
- Security ([SU-GM03](#))

• PPI actions

- Infection & integrated care: ([BHC-20](#))
- Innovative HPC systems ([INFRAEDI-04](#))

PCP actions: co-finance (max 90%) actual procurement cost for joint PCPs + coordination costs

Note: Lower max funding rates are used for the security PCPs (70%) and wave energy PCPs (50%) !!!

PPI actions: co-finance (max 35%) actual procurement cost for joint or coordinated PPIs + coordination costs

CSA actions: co-finance (max 100%) only coord/netw costs e.g. procurer networks preparing future PCP/PPIs

Note: WP2020 info is still indicative. WP2020 will only be finalised next year.



IMAILE



URL: www.imaile.eu

Procurers: schools and universities (SE, ES, DE, FI)
Joint PCP developed personalised learning solutions that increased motivation and success of students to study maths, science with 50-75% and decreased teachers' planning/assessment time with 30/40%

Artificial intelligence adapts the subject to the interests and learning habits of the study.
Gaming aspect makes the learning experience more interactive, interesting and rewarding for students.

Serial entrepreneur testifies: SME in the PCP grew 4 times faster than his other SMEs outside PCPs

CHARM



URL: tinyurl.com/CHARM-PCP

3 road authority procurers: Rijkswaterstaat (NL), Highways Agency (UK), Department Mobility and Public Works - MOW (BE).

Joint PCP procured R&D to support the move towards an open modular traffic management architecture by getting modules developed that optimise network performance, increase road safety and reduce CO2 emissions by improving network management, incident prediction and prevention and cooperative ITS.

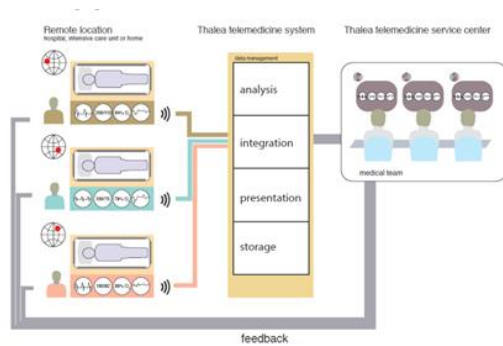
Benchmarking: 20% expected cost savings

Examples PCPs EU funded *Health*



European
Commission

THALEA (I & II)



http://eafip.eu/wp-content/uploads/2015/12/7_G.MARX_.pdf
See also videos (Aachen hospital & Newcompliance) [here](#)

5 buyers: Univ, hospitals of Aachen(DE), Maastricht(NL), Parc Tauli Sabadell (ES), East Limburg (BE), Oulu (FI).

PCP (June 2015 - Oct 2016) developed, tested and deployed in small scale a highly interoperable platform for tele-detection and tele-care of ICU patients at increased risk. PCP started with 5 vendors: 3 delivered a system that meets the needs (PCP opened market for SMEs). Self-learning and prediction algorithms enable earlier diagnosis and higher efficiency in ICU

-> Cost savings (buyers group), 25% reduction in sepsis mortality and 20-50% in length of hospital stay
Enlarged buyers group now starts THALEA II PPI to deploy certified solutions at wider scale across EU

EU funded *HPC*

PPI4HPC (PPI for High Performance Computing)



www.ppi4hpc.eu

Started April 2017. Follows after PRACE3IP PCP.

Buyers group: supercomputing centers Juelich (DE), CAE/GENCI (FR), CINECA (IT) and BSC(ES) will launch a joint PPI procurement of € 73M.

PPI for HPC participants will coordinate their procurement roadmaps to contribute to building a European Data Infrastructure with high-end supercomputers, which will around 2022 reach the exascale performance level. Cooperation paves the way for further joint investments in EUROHPC (new € 1Bn JTI setup in Jan 2018)



- ❑ **More detailed ppt** on how PCP/PPI action instrument works, how to prepare a proposal, **FAQs** and **template tender docs** for PCP/PPI procurements: <https://ec.europa.eu/digital-single-market/en/news/calls-eu-funding-opportunities-pre-commercial-procurement-and-public-procurement-innovative>
- ❑ Info about scope of each call topic, **online drafting and submission of proposals** on H2020 participants portal (search per topic e.g. ICT-34): http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/search/search_topics.html
- ❑ Overview **ongoing EU funded PCP/PPI projects** in ICT and other domains: <https://ec.europa.eu/digital-single-market/en/eu-funded-projects>
- ❑ More info about **results ongoing PCPs**: <https://ec.europa.eu/digital-single-market/en/eu-funded-projects>
- ❑ **Background info** on Innovation Procurement (news, events, case examples): <http://ec.europa.eu/digital-agenda/en/innovation-procurement>
- ❑ Section in **Horizon 2020 online manual about innovation procurement**: http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/innovation-procurement_en.htm
- ❑ **Finding partners**: [EU procurement forum](#), [PCP-PPI LinkedIn group](#), [National Contact Points for Horizon 2020](#), National Competence centers for innovation procurement

Background slides

PCP and PPI: legal framework



PCP and PPI are NOT new public procurement procedures. They are approaches to use existing public tendering mechanisms in such a way - to optimise the innovation outcome (best value for money for procurer) - to optimise growth opportunities for suppliers

PCP

- ***Open*** tendering
- ***R&D services*** procurement (possibility to buy also end-product)
- ***IPR sharing*** between supplier (keeps IPR ownership) and procurer (right to use/license)
- ***Multiple sourcing*** (# suppliers)
- ***Phases*** (FW contract for the PCP + specific contracts/phase)
- ***Job creation*** (majority R&D done in EU MS or associated countries)

Exempted from EU public procurement directives, WTO

PPI

- ***Early announcement (via PIN) of the 'intention' to buy*** a critical mass of solutions 'if' the market can deliver solutions that match predefined specific requirements by a set date
- ***Conformance testing (optional)*** to verify if market can meet needs
- ***Tendering:*** different procedures possible e.g. open, negotiated procedure, competitive dialogue

Subject to applicable provisions EU public proc. directives, WTO

Complementarity / split between PCP and PPI and phased approach enables to...



- Get 20% better value for money products(US defense data)
- Use PPI also if no(more) R&D needed for procurement need
- Use a small budget PCP to de-risk a large budget PPI
 - PPI spec can be 'completely rephrased' benefiting from PCP lessons learnt
- Use conditions that encourage job creation 'in Europe'
 - Because PCP falls outside WTO rules
- Prevent foreclosing of competition & crowding out of private investment in R&D
 - Companies that are not financing their R&D via procurement/PCP (e.g. via grants, own company resources) can still bid for deployment contracts/PPIs
- Facilitates access to procurement market for SMEs*
 - Gradually increasing contract sizes, tasks, required manpower
 - Stringent financial guarantee/qualification requirements:'no' in PCP,'ltd' in PPI

All the above is not the case if R&D is procured as part of a deployment contract (e.g. innovation partnerships)

(more on differences PCP-PPI/innovation partnerships: [eafip toolkit](#))

Comparison PCP – regular procurement – innovation partnerships



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	Pre-Commercial Procurements	Average across all public procurements in Europe	Innovation Partnerships	Indicator for
Average Nr of offers received	12,0	3,0	2,0	Level of interest of suppliers to participate
% of procurements that receive only 1 offer	0,0%	30,0%	44,0%	Level of interest of suppliers to participate / Degree of competition in bidding
% of procurements that award contracts to single versus multiple vendors	13% to 3 vendors 53% to 3 to 6 vendors 34% to > 6 vendors	/	56% to 1 vendor 19% to 2 vendors 25% to > 2 vendors	Degree of competition in product development / Resilience to prevent supplier lock-in
% of vendors winning a contract for the first time with the procurer	77,0%	no data	16,0%	Opportunities for suppliers to find new customers
% of contracts awarded to suppliers from another country than the procurer	34,6%	1,7%	1,5%	Cross-border growth opportunities for suppliers
% of procurements stopped	0,0%	no data	25,0%	Degree of difficulty for procurers to setup / manage the procurement procedure
% of total value of contracts that is awarded directly to SMEs	59,0%	29,0%	5,5%	Facilitating access of SMEs to the market
% of number of contracts that is awarded directly to SMEs	71,0%	56,0%	6,0%	Facilitating access of SMEs to the market
% of number of SMEs < 10 years old that are awarded contracts	51,0%	no data	0,1%	Facilitating access of young SMEs to the market
% of winning tenders with university / non profit research center in it	28,0%	no data	0,0%	Degree of upstream R&D / disruptive innovation involved

Based on data from EU funded PCP procurements and data from procurements published in TED and awarded up to 26 October 2017