le**a**
**Learning
Technology
Accelerator**

Learning Technology Accelerator LEA

**Showcase of implemented PCP / PPI in Education
co- funded by European
Commission 2014 – 2020**

Todays presentation

Innovation procurement in Education
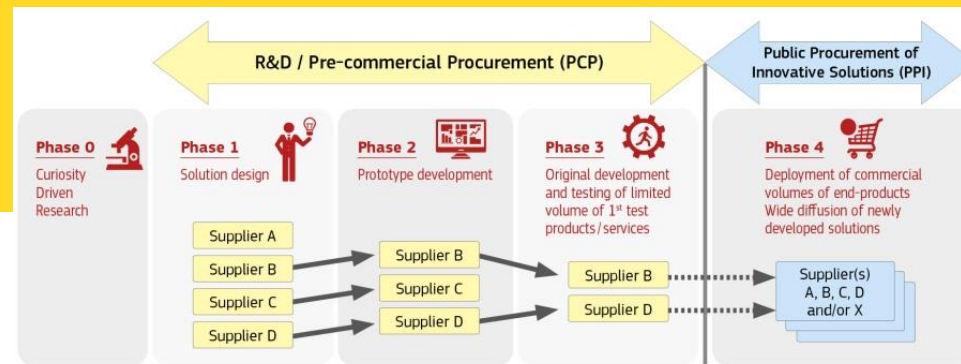Example : IMAILE PCP
Example: LEA
Preparations of launching a PPI 2019
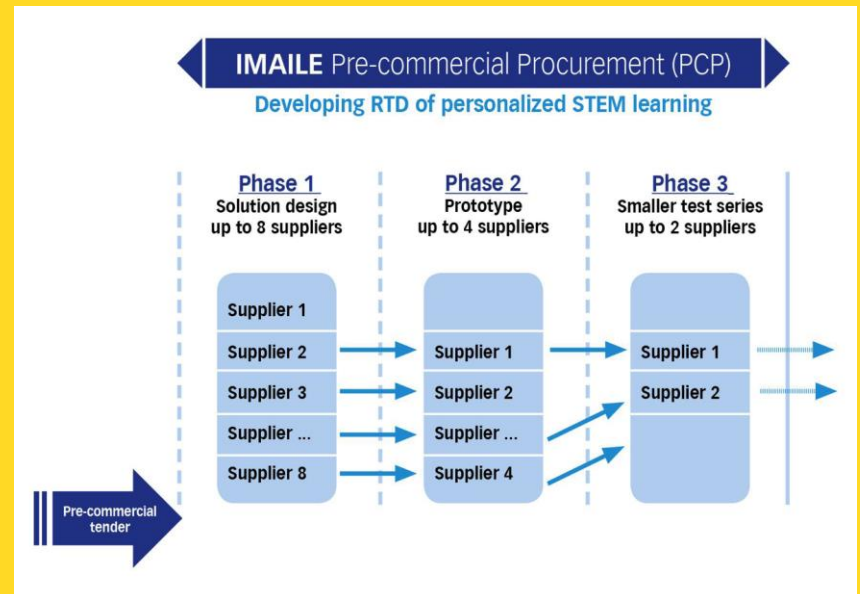Needs, market, PIN , Open market Consultation(OMC)
Lessons learned

Setting the scene of European education

- Backbone of the future
- Digital transformation
- Global school rankings
- Lack of expertise, understanding and dialogue demand and supply side
- "One size fits all" pedagogy

Our Education System

"Everybody is a genius. But if you judge a fish by its ability to climb a tree, it will live its whole life believing that it is stupid."

– Albert Einstein

IMAILE 2014 – 2018 Open PCP

Europe´s first PCP in Education

2 smart and innovative PLEs offering **Learning Analytics** provided by **Intelligent Tutoring systems** to primary and secondary schools that no other solutions available on the market offer.

AMIGO

YipTree

Tested in school real environments by more than 600 students and 40 teachers in 4 European countries.

Solutions include gamification, Virtual tutor, e-Portfolio and alerts on early dropouts and features for motivation in STEM subjects and future careers. Both PLEs are considered to be at (TRL) 7

Results and benefits IMAILE PCP process

Suppliers

Identified market, needs and first customers
Early engagement of end-users
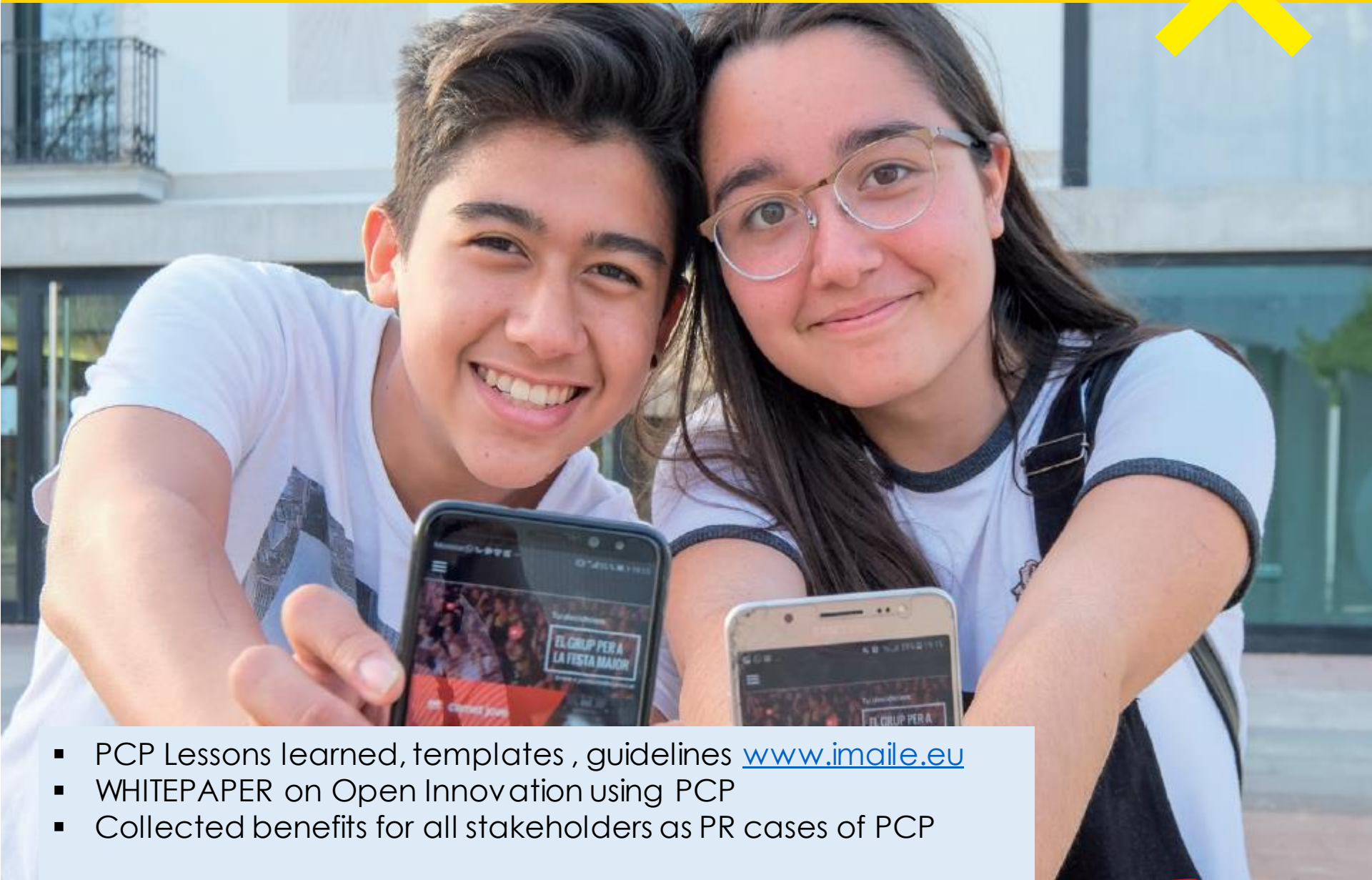Demand/supply side dialogue

Procurers

Peddagogical, technical and financial benefits
Drivers seat of education
Testing in real classrooms
Demand/supply side dialogue

Schools

User friendly technology based upon real needs
Increased digital skills
Democratic process / dialogue

certified
STEM PLE
school
by IMAILE

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IMAILE legacy & lessons learned www.imaile.eu

- PCP Lessons learned, templates , guidelines www.imaile.eu
- WHITEPAPER on Open Innovation using PCP
- Collected benefits for all stakeholders as PR cases of PCP

LEA project ICT 2017
CSA 2018 – 2020
17 partners, 1.9 million euro budget

*"We want to **reform and open up the traditional educational systems** to achieve **increased learning results** by using the **purchase power of public procurement** to steer **user driven** innovations"*

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LEA project rationale

Based upon IMAILE results and lessons learned:

- Speed up awareness and transfer of knowledge of the benefits and tools of innovation procurement
- Prepare one PPI and one PCP
- Gather on common demand – policy
- Attract followers and LEA-N members for critical mass

LEA Mid term results and sharing of lessons learned

- **PR actions** (300 Followers covering 16 EU countries)
- **On site Capacity Building seminars** (Sweden and Italy)
- 5 Webinars (PCP/ PPI, needs, market and supplier perspective) **every second Wednesday at 10:30 am CET**
- **Join for free at:** **https://connect.jyu.fi/lea** (Adobe Connect)
- **PPI / PCP preparations**

PPI DRIVER - Increased demand of personalized learning and best value for public money

Installation, deployment, purchase and after sale service of:

SMART, INTUITIVE , **EASY TO USE** K12 PLE SYSTEM that:

- **Measures learning** and provides personalized support for teachers and students
- Detects **early drop-outs** by alerts
- **Cross sectorial co-labs** are encouraged to use smart technology already on the market also for learning
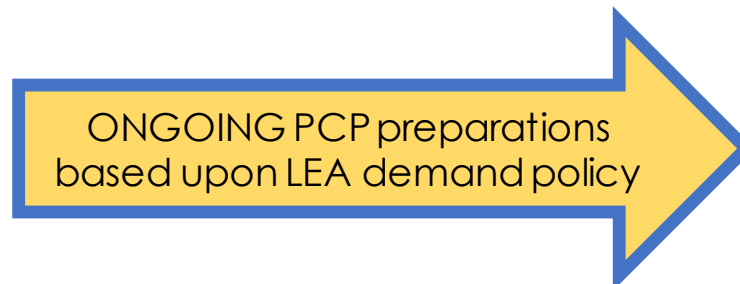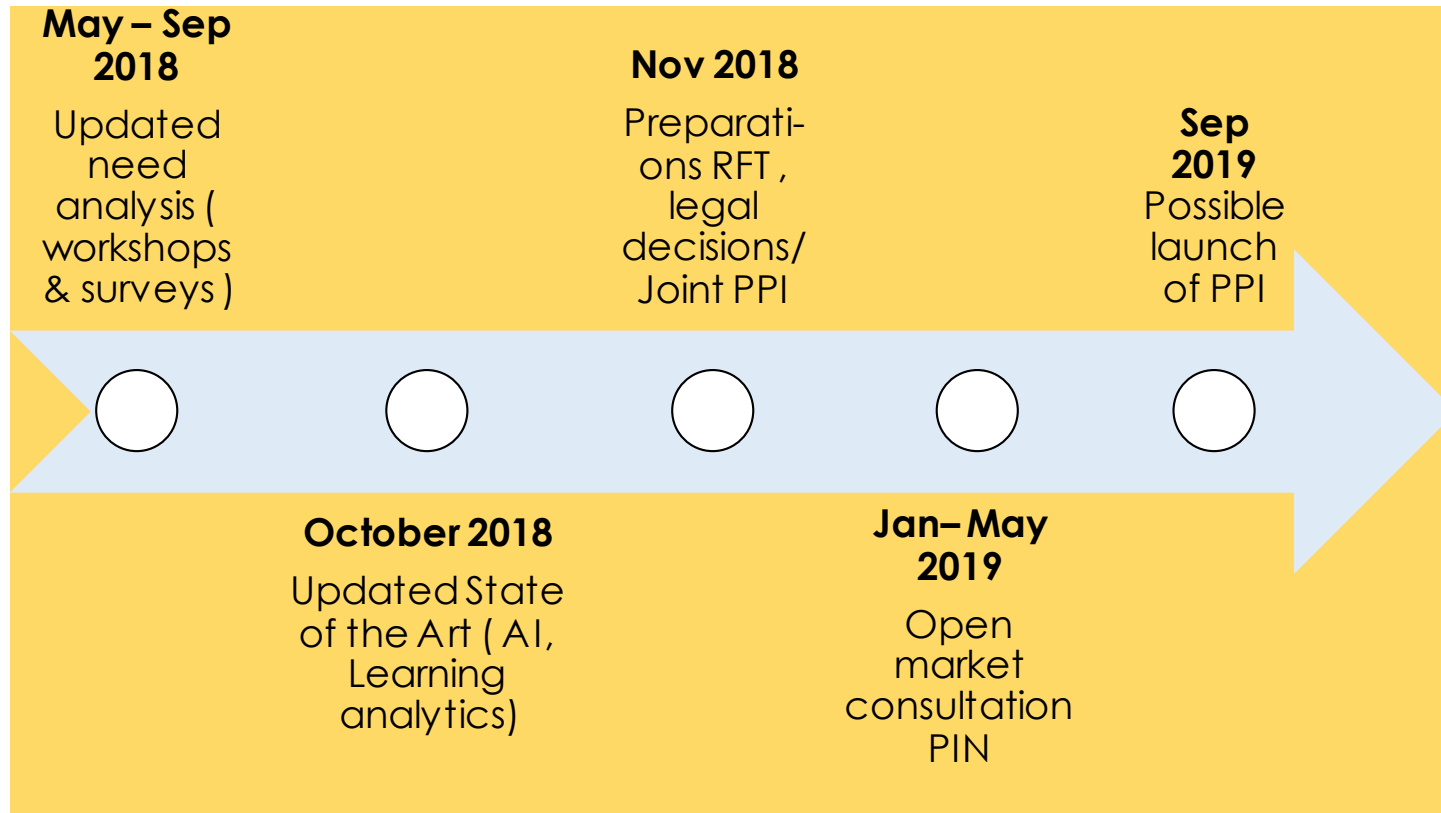
PPI drivers
- **compare** competing PLE systems
  - get a **better price**
- PLE systems fit our needs
- avoid costs of unnecessary features
  - prevent supplier 'lock-ins'

PPI/ PCP preparations & timeline

May – Sep 2018

Updated need analysis (workshops & surveys)

Nov 2018

Preparations RFT , legal decisions/ Joint PPI

Sep 2019

Possible launch of PPI

October 2018

Updated State of the Art (AI, Learning analytics)

Jan–May 2019

Open market consultation PIN

ONGOING PCP preparations based upon LEA demand policy

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Become a LEA FOLLOWER

BENEFITS AS LEA FOLLOWER

- Learn about/join LEA PCP and/or PPI
- Follow LEA results and lessons learned via newsletters and updates on LEA website and in social media
- Attend webinars / capacity building seminars for free

SIGN UP TODAY *www.learntechaccelerator.eu*

@LEAaccelerator
www.learntechaccelerator.eu
www.imaile.eu
Ellinor Wallin
ellinor@euprojektkonsult.se

Innovative R&D Procurement with PCP

ECOVATION Vienna November 2018
Presentation by Hugo Tamagnini Gonçalves
SELECT for Cities Coordinator
www.select4cities.eu

Forum Virium Helsinki

Today's presentation overview

- The case for SELECT for Cities
- Why using the Open PCP call?
- the Open Market Consultation process
- Main results to date

The case for SELECT for Cities?

"Cities are economic powerhouses, places of social interaction and fora that enable us to exchange ideas. Cities, however, are also the

places where some of our biggest challenges manifest themselves. In this 'urban age' cities are becoming increasingly aware of their

responsibilities as well as their capacities to play their part in addressing issues like poverty, segregation, and climate change adaptation."

Nabielek K. et al. (2016), Cities in Europe. PBL Netherlands

Environmental Assessment Agency, The Hague.

"The process of purchasing goods and services (procurement) has historically been seen as a bit of a challenge for municipalities and other institutions within our cities, especially when it comes to linking it to the achievement of wider local economic, social and environmental benefits.

The process of procurement can and has been seen as bureaucratic, legally complex, isolated from other functions in municipalities, difficult to engage with SMEs, and extremely competitive."

The importance of procurement to city economies | URBACT

urbact.eu/importance-procurement-city-economies

More urban data produced in last 2 years than the whole of mankind...

...yet less than 6% is analysed.

Internet of Everything provides an unparalleled opportunity for city innovation

...but needs to be brought together...

SELECT for Cities competition aims to harness data in a city-wide platform for Smart City innovation

SELECT for Cities

Design and develop a city-wide, data-driven, Internet-of-Everything (IoE) platform for large-scale co-creation, and testing of services

Who we are and the project basic facts

- Forum Virium, Helsinki City (Finland) – Coordinator & Procurer

- Københavns Kommune (Denmark) – Procurer

- Digipolis Antwerp (Belgium) – Procurer

  - Stad Antwerpen (Belgium) - City partner

- Imec (Belgium) - Living Lab expert

- 21c (UK) - Communication expert

Duration: 48 months, 1.12.2015-30.11.2019
Budget: 5.6   million EUR
      PCP budget: 3.9 million EUR
      Other costs: 1.7 million EUR

www.select4cities.eu

Why using PCP Open call?

Cities as a forefront of Single Digital Market

- Interoperability means savings for cities and business for companies

- Since 2012 Forum Virium Helsinki has been a key player in Smart City API harmonization efforts through its wide project portfolio consisting of European and national projects

- To ensure a Digital single market for IoT-enabled urban services with harmonization cities need to work together via the uptake of harmonised solutions

- Leveraging international networks

Pre-Commercial Procurement (PCP) Enables Competitive Research and Development of the Innovation Platform

Market Consultation

Request for Tenders

Phase 1: Feasibility

Phase 2: Prototyping

Phase 3: Testing

RESULT: Innovative Platform ready for commercial-isation

Number of suppliers reduces with each phase

Funding per supplier increases with each phase
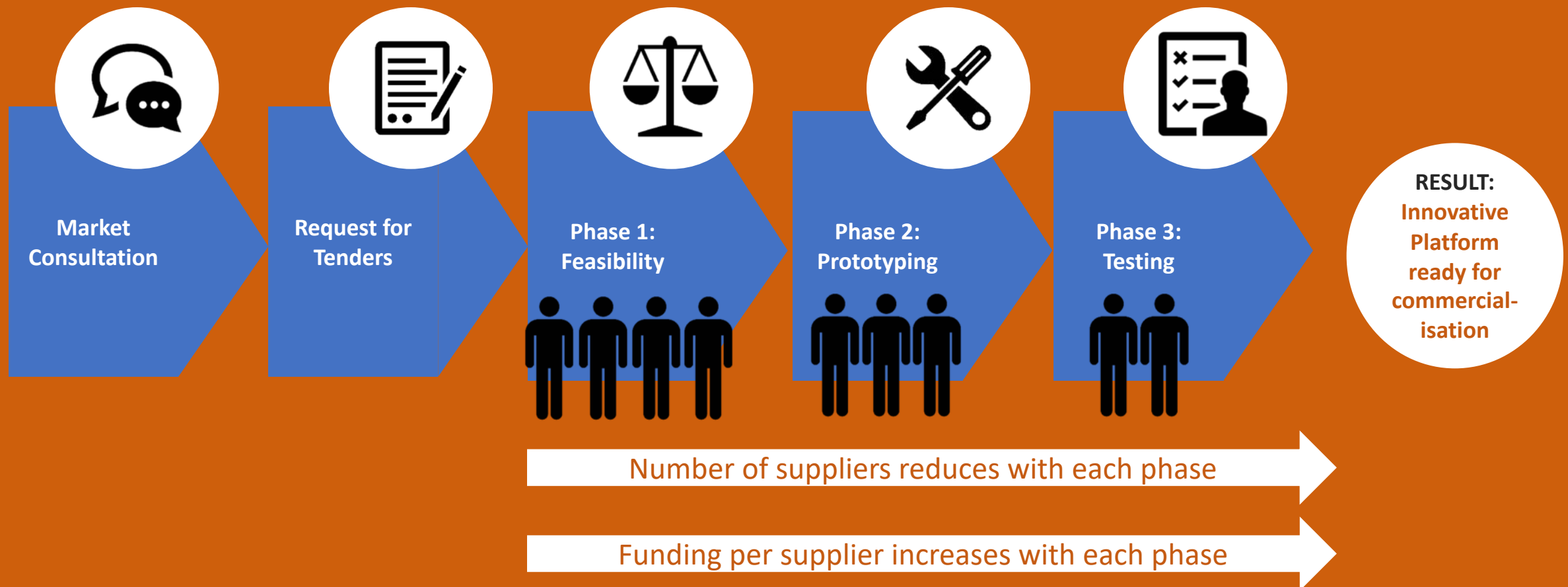
ICT-36-2015 PCP open to all areas of public interest requiring new ICT solutions

- "challenging the market to develop innovative ICT based solutions"
- "To bring radical improvements to the quality and efficiency of public services by encouraging the development and validation of breakthrough solutions through Pre-Commercial Procurement."
- "all areas of public sector interest requiring innovative ICT based solutions"

The Open Consultation process

...about a competition to create large-scale city innovation labs using Internet-of-everything (IoE)

Discussions with Potential Suppliers

Online Survey

Answers from 22 Countries

Antwerp Workshop

24 May 2016

Copenhagen Workshop

6 June 2016

Helsinki Workshop

30 May 2016

71 Respondents

160 Participants

Key Findings and results

Feedback from the Open Market Consultation Participants

SELECT for Cities Statement: The consortium is looking for a platform that is generic, open and able to showcase all use cases in all three cities. Furthermore, it should be pluggable, easy to set up and useable in other cities.

Feedback: *The platform has to integrate easily with the existing cities infrastructure and architecture. This might be challenging.*
Response: This is the primary reason why the SELECT for Cities competition was created - to seek creative R&D solutions.

Feedback: *The use cases presented are too restrictive, difficult to implement and will be complex to handle in 3 different cities. They do not enable suppliers to showcase the innovativeness of solutions, the adaptability to different standards and use cases.*
Response: Use cases are means of testing the solutions in real life scenarios. Applicants will be given the possibility to propose further use cases.

Feedback: *SMEs and start-ups may find it difficult to integrate different components, setting up a business model and using open data and open source.*
Response: Creating an innovative and sustainable solution containing these different dimensions is an important part of the competition. Partnering with other companies may help provide a holistic offering.
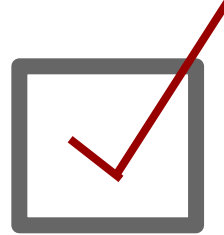
Feedback: *Finding a suitable partner may be challenging for small, medium and large companies and startups.*
Response: Use the SELECT for Cities matchmaking tool http://bit.ly/29SEg58 to form the right consortium.

Feedback: *We feel we will be facing the possibility of exposing our work to competitors. We are fearing for a loss of revenue and investment on the R&D we invest.* **Response:** SELECT promotes open innovation 2.0 principles and expects bidders to capitalize and generate revenue on the results of the competition. IPR is a key part of the expected solution.

**Feedback:** *Additional information is needed about the level of openness requested by the platform.*
Response: This information will be provided in the tender documents along with evaluation criteria and scoring methodology.

Results

Is the platform challenge innovative enough?

Conclusion
- The platform challenge is deemed innovative and exciting to participants of the Open Market Consultations
- The broad specifications and scope currently seems too overwhelming
- The Consultations' participants want to be innovative and they would like to have as little restrictions as possible while preparing for the tender

Will suppliers take part in the competition?
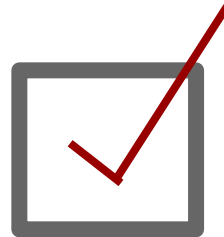
Conclusion
- 80% of respondents to the online survey said they were interested in participating
- Workshop participants are interested in participating but some are worried about scope and budget
- The demand for the solution to be open source is challenging

What can SELECT do to help suppliers?
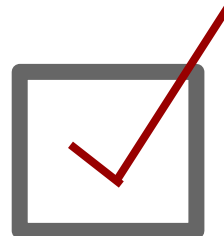
Conclusion
- Take all feedback from workshops and survey and ensure it is reflected in the tender documentation
- Create a partner matching tool to help smaller organisations build consortiums http://bit.ly/29SEg58
- As much information as possible about requirements will be provided in the tender documents, project's website, newsletter, reports and social media accounts

Platform R&D generated through Pre-Commercial Procurement (PCP)

START
February 2017

Pre-Commercial Procurement (PCP) tender

Tenderers notified of decisions

Contract Award
May 2017

Phase 1
Solution Design
May 2017 - Sept 2017

Up to **36.000 EUR*** /contract

Up to **217.000 EUR*** /contract

Phase 2
Prototype
Sept 2017 - June 2018

Phase 3
Testing
July 2018 - Oct 2019

Up to **544.000 EUR*** /contract

*The budget mentioned is 21% VAT excluded

Dissemination of results

Launched call for tenders

28 entries received

Phase 1: 10 Tenderers selected to developed their platform concept

Phase 2: 5 prototypes created

Phase 3: 3 prototypes chosen to be piloted in living labs

Where are we now?

Phase 3 solutions testing in Living Labs inside the Cities of Antwerp and Helsinki

Improve proposed solutions
by actively involving users
through real-life intervention

Final phase approach

- Beyond prototype, real-life validation: a mature proof of concept that can run in a semi-commercial setting

- Demonstrate these solutions' capacity to allow a user-centered management of personal data

- Simultaneous and iterative testing in two cities

- Validated with stakeholders for different use cases in each city

Main results to date and lessons learned?

Key Outcomes From Phase II

- All 5 prototype platforms met requirements and present unique innovations

- All developed platforms are close to market readiness, with some already being piloted in different locations

- Project website revamped into a knowledge hub for more effective information sharing on IoE, PCP and City Platforms

  www.select4cities.eu/selectforcitiesplatform

Beyond the State-of-Art (SoA) for city dashboards…
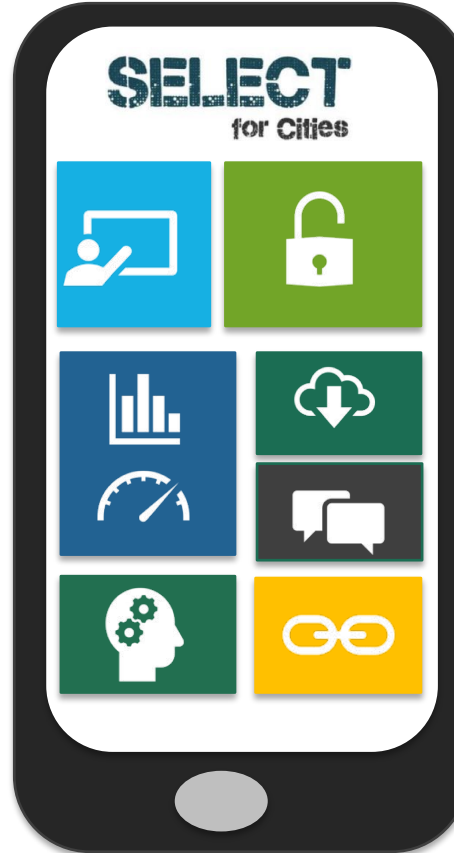
SoA: Role based dashboards

Select Innovation: Personalised individual dashboards that can be created and shared by the user based on their needs

SoA: Data widgets

Select Innovation: Dynamic visualisations (inc. 3D) enabling users to drill down further into the data to individual sensor level and generate business intelligence

SoA: Real-time information

Select Innovation: Future information. Predictive analytics enables city users to anticipate and mitigate situations before they arise

SoA: Proprietary systems

Select Innovation: Fully open source components using open standards to facilitate open innovation and reduce vendor lock-in

SoA: Monolithic architecture

Select Innovation: Modular architectures for **self healing and auto-scaling**

SoA: Scripted chat bots

Select Innovation: Smart chatbots using Natural Language Processing capabilities for more personalised assistance

SoA: Centralised transactions

Select Innovation: More secure decentralized transactions through blockchain to trace actions and provide cryptocurrency rewards of value

SELECT for Cities

User-centric design optimised for any device

Commercialisation

Smart City digital single market approach through three principles: (1) No city lock-in, (2) No vendor lock-in, and (3) Interoperability through open source

Key Platform Innovations

Smart City Digital Twin – virtual replica allows data analysis and simulation of use cases without impact on the real world.

Data Source Discovery Engine - Searches the web and pulls together potential data sources ready for use
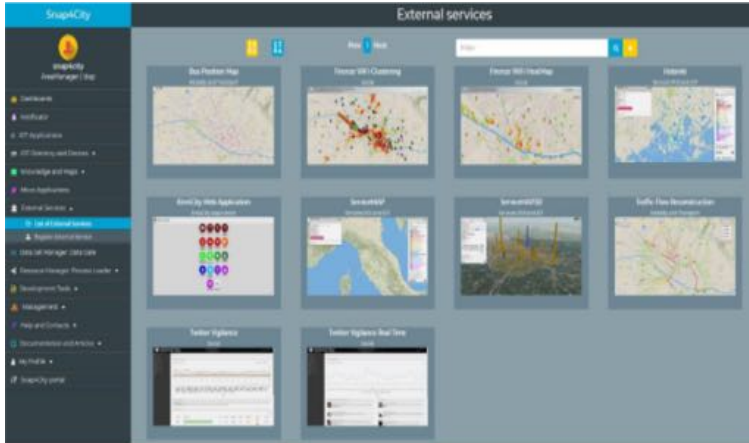
Data Mashup Editor – Non-coders can create simple new apps through mash-up of web services and open data with intuitive interface

Participation and Co-creation by Default – Open innovation area that allows the creation of ideas, transforming them into challenges, rewards and incentives

Sofia4Cities

Marketplace

Commercialisation

Platform is central to all their smart city bid responses. Two pilots already starting in Grand Canaria based on 1) Smart waster and 2) Smart tourism

Lead: Indra

Key Platform Innovations

Ease of Use – Platform built to be flexible and be used by both data experts and people without coding skills

Information Management - Allows the use of predefined and custom taxonomies built on top of different data sources like IoT and historical data.

Monitoring – The platform allows real-time monitoring of device statuses in a intuitive way

Intuitive Help – Chabot with natural language processing to help users throughout the platform

Snap4City

Commercialisation

Paid piloting work started in Phase 2 with Florence Living Lab. Aim to sell, via a spin-off company, to mid and small sized cities within 6 months after end of SELECT

Key Platform Innovations

Wizard – For immediate production of applications combining data with graphics to create city and personal dashboards

Monitoring – Advanced monitoring capabilities for all the aspects of the platform, devices and networking.

Geographical capabilities – The platform allows to easily show and find data on Maps, also 3D is supported

Flexible and Extensible IoT/IoE Applications – The platform allows to integrate with existing and new IoT gateways in a intuitive way

Challenges Faced in Phase II - Prototyping

Contractors

- Difficulties to cope with a heavy R&D workload coupled with a vast administrative process in short timeframe

- Perceived insufficient feedback from Contractors

- Struggle with commercialisation strategies for their final products

Testers

- Solutions regular testing was particularly difficult to conciliate with evaluation needs

- Capturing the requirements in a test manual and user stories proved to be a time consuming way of testing

Lessons Learned

- Difficulty in combining the performance of the R&D tasks with a regular dialogue and feedback between Procurers and Contractors

- PCP framework rigidity - change the underlying criteria for the following call-off to accommodate changes in underlying assumptions, conditions, products developed and learnings - Locking the weights at the start of the process is unreasonable

- Very heavy for the Procuring team - more horizontal support would be welcoming (eg. disseminating Contractors results, direct support and supervision of commercialisation strategy and efforts), best practices and toolkits for interactive process, continuous monitoring and feedback, etc.)

Conclusion

- PCP enables Cities to take the drivers seat

- Targets SMEs and the collaboration between small and large corporations

- Spinn-offs are abundant
  - New agile procurement process: Digipolis Antwerp 'Fast & easy procurement'
  - New PCP builds on lessons learned: Forum Virium Helsinki https://fabulos.eu/

We are very happy to be part of the PCP family and encourage its use!

SELECT for Cities

ANTWERP

City of Copenhagen

digipolis

FORUM VIRIUM HELSINKI

imec

21c Work Smarter

THANK YOU FOR YOUR TIME!

select4cities.eu   @SELECT4CITIES   Select4Cities

INNOVATION PROCUREMENT H2020 SUPPORT

ICT-34 call open PCP

Vassilis Tsanidis Dr.Jur.
Digital Innovation and Blockchain Unit (F3)
DG CNECT
European Commission

# Why innovation procurement ?

PCP – Pre-Commercial Procurement

- ## When
  - Challenge needs radical innovation, no solution 'on' or 'close to' market yet. There are different competing 'potential' solution approaches / ideas, but still **R&D needed** to de-risk and compare / validate the pros and cons of different technological alternatives: **No commitment to large scale deployment (PPI) yet**. Procurer wants to **induce a step change in the market** (e.g. moving from proprietary / vendor lock-in situation to better open systems / multiple vendor environment including new players)

- ## What
  - Public sector buys R&D to **steer development of solutions to its needs**, gather info about pros / cons of alternative solutions to be **better informed to make specs for a follow-up PPI** possibly later, to **avoid supplier lock-in** (create competitive supply base)

- ## How
  - Public sector buys R&D from **several suppliers in parallel** (comparing alternative solution approaches), in form of competition **evaluating progress after critical milestones** (design, prototyping, test phase), risks & benefits of R&D (in particular related to IPRs) shared with suppliers to maximise incentives for wide commercialisation

PPI – Public Procurement of Innovative Solutions

European Commission

- **When**
  - Challenge requires solution which is **almost or already on the market in small quantity** but not meeting requirements for large scale deployment yet. Desired solutions would be provided if clear requirements/sufficient demand would be expressed by the market. **Incremental innovation** (production adaptation, scaling up of production) or **non-R&D innovation** (e.g. organisational/process innovation) can deliver required quality/price, so **no procurement of R&D** involved.

- **What**
  - Public sector acts as launching customer / **early adopter** / first buyer for **innovative** products and services that are newly arriving on the market (**not widely commercially available yet**)

- **How**
  - Public sector acts as facilitator establishing a **buyers group** with critical mass that triggers industry to scale up its production chain to bring products on the market with desired quality / price ratio by a specific time. After **potentially a test / certification / labelling**, the buyers group buys a significant volume of solutions.

- **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
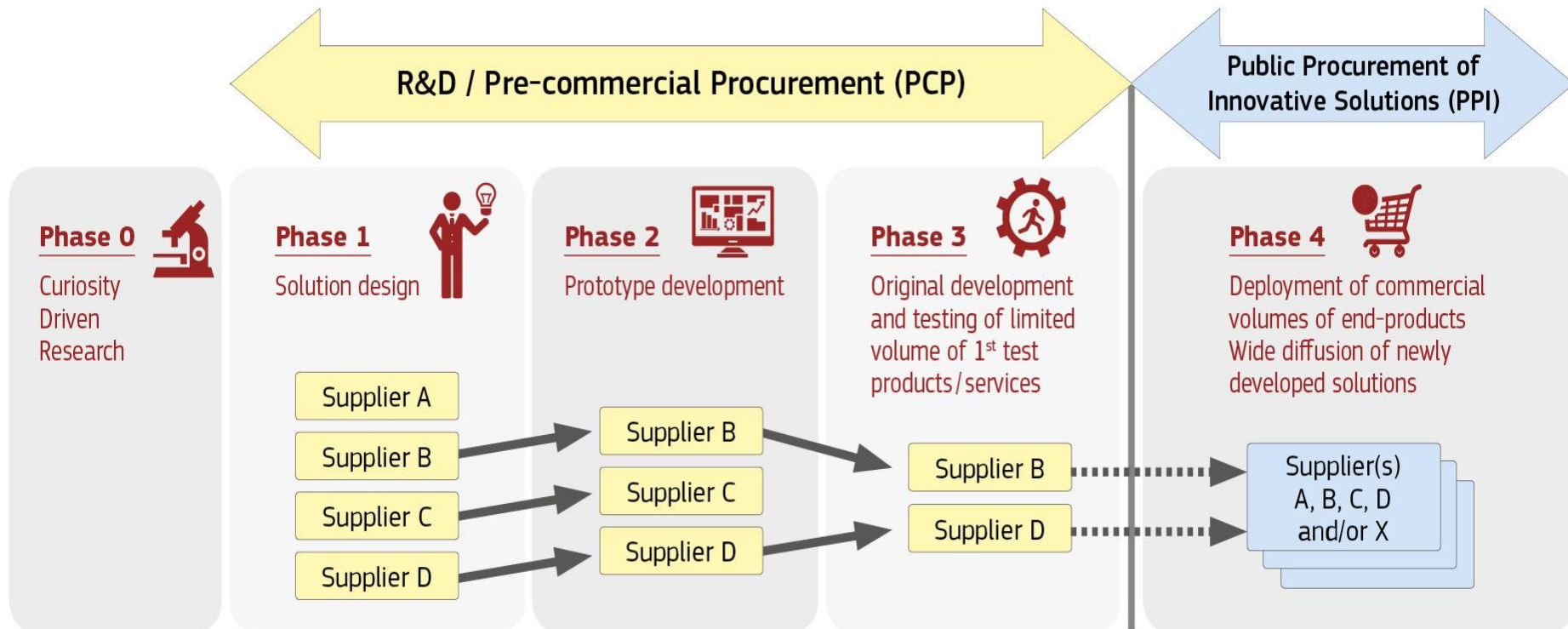
H2020 Support to PCP-PPI actions

Forms of support

❖ Coordination and Support Actions (100% funding rate):
- Support only coordination activities e.g. preparation of a PCP or PPI by a group of procurers (investigating feasibility to start PCP/PPI, open market consultation with industry before initiating a concrete PCP or PPI etc)
- CSAs do not provide EU co-financing for an actual PCP or PPI procurement

❖ PCP Actions (maximum 90% funding rate):
- Provide EU co-financing for an actual PCP procurement (one joint PCP procurement per PCP action) + for related coordination and networking activities (e.g. to prepare, manage and follow-up the PCP procurement)

❖ PPI Actions (35% funding rate):
- Provide EU co-financing for the actual PPI procurement(s) (one joint procurement or several separate but coordinated PPI procurements per PPI action) + for related coordination and networking activities (e.g. to prepare, manage and follow-up the PPI procurement(s))

Minimum 3 independent participants from 3 different MS or AC, of which minimum 2 public procurers (buyers group) from 2 different MS or AC

In addition, other entities can also participate

- In buyers group: <u>also private/NGO procurers providing services of public interest</u>
- In coordination/networking activities: any private/public type of entity (e.g. experts, end-users, certification bodies that assist procurers) that has no conflict of interest (no potential suppliers of solutions for the PCP/PPI)

Sole participants can be also eligible if the minimum conditions are met by the legal entities forming the sole participant (e.g. central purchasing bodies, European Research Infrastructure Consortia, European Groupings of Territorial Cooperation)

Public procurers are contracting authorities or contracting entities as defined by the EU public procurement directives

MS = Member States, AC = Countries Associated to Horizon 2020

PCP and PPI actions - Role of different actors

- ❑ **Beneficiaries and third parties**
  - ▪ Action involves beneficiaries that undertake together the PCP procurement or PPI procurement(s), i.e. the buyers group & the lead procurer
  - ▪ Action can include third parties that can make in-kind contributions (make available resources / equipment to the beneficiaries to carry out the PCP or PPI(s)). E.g. end-users (fire brigades) as 3rd party associated to procurer/beneficiary (min. of interior)

- ❑ **Buyers group**
  - ▪ Procurers in the action that provide the financial commitments for the PCP or PPI(s)
  - ▪ Min 2 public procurers from 2 different Member States or associated countries
  - ▪ Representing the demand side (responsible for acquisition and/or regulatory strategy, or having a mandate from one of more of such procurers to act on their behalf in the procurement e.g. central purchasing bodies)
  - ▪ Seeking ambitious quality and/or efficiency improvements in services of public interest

- ❑ **Lead procurer**
  - ▪ Procurer appointed by buyers group to lead and coordinate the PCP or PPI(s). Can be one of the procurers in the buyers group or another procurer.
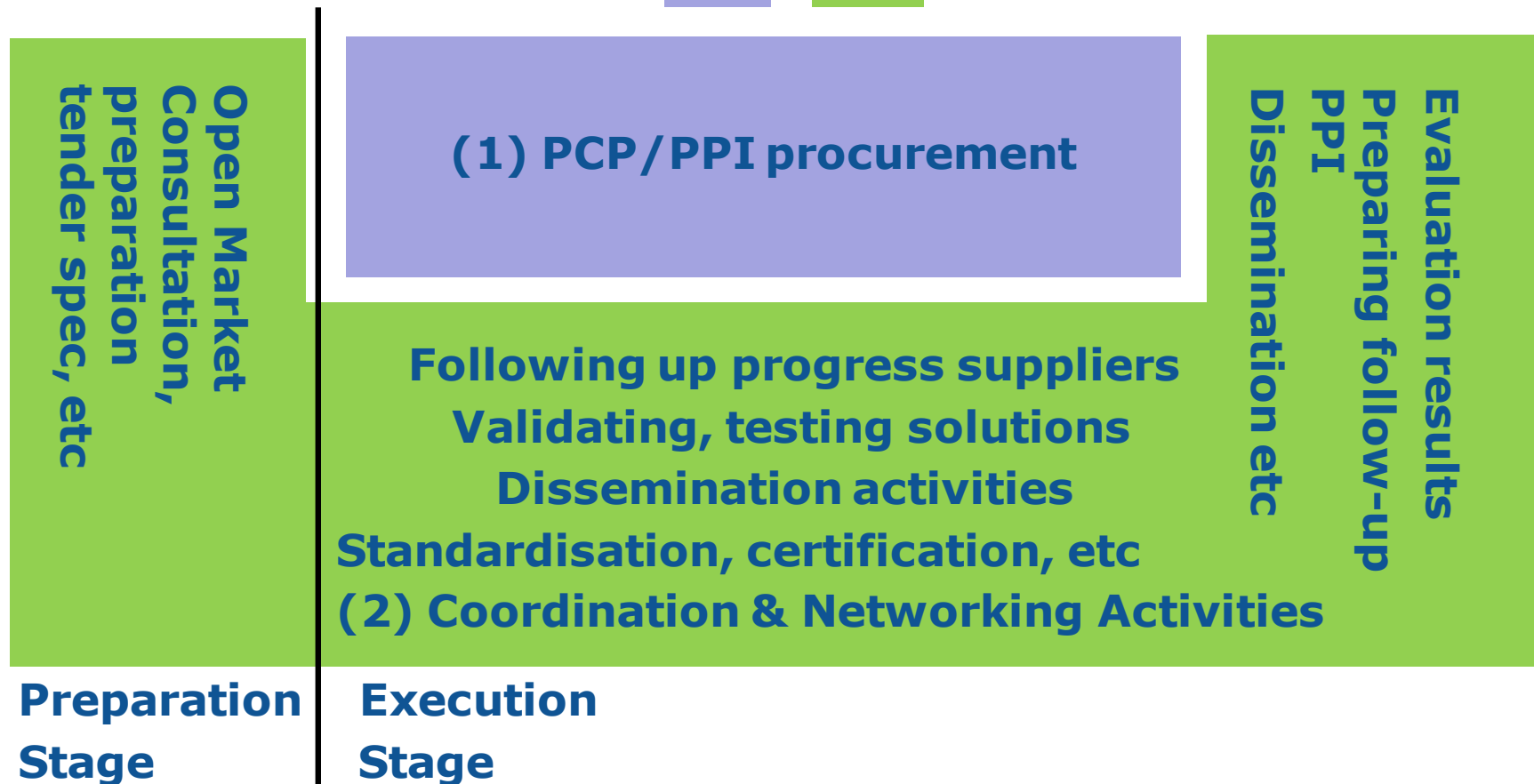
- ❑ **Subcontractors**
  - ▪ Successful tenderers, selected by the buyers group & lead procurer as result of the PCP or PPI call for tender, to provide the R&D services (PCP) or innovative solutions (PPI). They do 'NOT' enter the grant agreement with the EC and are not paid by the EC

PCP and PPI actions – What is covered

PCP/PPI actions co-finance (1) + (2)

Preparation Stage: Open Market Consultation, preparation tender spec, etc

(1) PCP/PPI procurement

Execution Stage:
Following up progress suppliers
Validating, testing solutions
Dissemination activities
Standardisation, certification, etc
(2) Coordination & Networking Activities

Evaluation results, Preparing follow-up PPI, Dissemination etc

Every project goes through a preparation stage and an execution stage

PCP and PPI actions - Eligible activities

❑ **Preparation stage**
  ▪ Preparation of **one joint** PCP procurement per PCP action or **one joint or several separate but coordinated** PPI procurements per PPI action
  ▪ Open market consultation /verification of market readiness to meet procurement need
  ▪ Outcome
    ▪ Agreed common tender specifications + Procurement agreement
    ▪ Confirmation of availability of financial commitments to start PCP/PPI

❑ **Execution stage**
  ▪ Procurement of the R&D services (PCP) or innovative solutions (PPI)
  ▪ Follow-up of suppliers and validation of results
    ▪ PCP: Validation/comparison of the performance of the competing PCP solutions against jointly defined criteria in real-life operational conditions
    ▪ PPI: Evaluation of results of deploying and operating the procured solutions in real-life operating conditions
  ▪ Dissemination/exploitation of results

  Other coordination/networking activities relevant to the action (e.g. preparation of follow-up PPI, contribution to standardisation / regulation / certification)

PCP and PPI actions – EU contribution

- ❑ **Reimbursement rate direct costs: Max 90% respectively 35% of eligible costs for PCP actions respectively PPI actions**
  - ▪ Eligible direct costs to carry out eligible activities defined in WP include:
    - - Price of the R&D services (PCP) or innovative solutions (PPI) procured (if procurement conducted in compliance with requirements in Annex E WP)
    - - Eligible coordination and networking activities
    - - May include in-kind contributions (e.g. third parties putting resources at disposal of beneficiaries e.g. for testing of solutions)
    - - VAT is an eligible cost unless for beneficiaries that can deduct it
  - ▪ Requested reimbursement for coordination and networking activities can comprise max 30% (for PCP) / max 50% (for PPI) of total requested grant

- ❑ **Plus 25% for indirect costs**. But, no indirect costs on the price of the PCP/PPI procurement or on 3rd party resources not used at the beneficiary premises

- ❑ **Pre-financing:** Yes, 1st pre-financing at start project for costs for preparation stage, 2nd pre-financing before execution stage for rest of costs (incl. call for tender)

One joint PCP coordinated by the lead procurer

- In their proposal, consortium shall have already identified one concrete procurement need as proposed focus for the PCP that is identified as a **common challenge** in the innovation plans of the buyers group and requires R&D!

- One joint call for tender published EU wide
- One joint evaluation of offers based on common tender specs
- One lead procurer awarding all contracts in the name and on behalf of all procurers in buyers group
  - Each winning tenderer gets: 1 framework agreement to participate in the PCP + one specific contract per PCP phase (solution design, prototyping, testing)
- One joint total budget (grouping financial commitments of all procurers in buyers group) from which all R&D providers are paid

- But, actual payments can be carried out centralised or distributed
  - Either all R&D providers paid by the lead procurer
  - Or each R&D provider paid pro rata by each procurer in the buyers group according to the share of each procurer's contribution to the common pot

- Also supervising suppliers and testing of solutions can be centralised or distributed
  - Choice between testing all solutions of all R&D providers in 1 procurers site or on several sites procurers sites etc

Specific requirements PCP procedure (Annex E WP)

❑ Procedure: Compliance with applicable national procurement rules + compliance with additional specific requirements

- ▪ Definition PCP (Horizon 2020 RfP and PCP communication)
- ▪ EU-wide published open market dialogue and call for tender
- ▪ PCP call for tender open for at least 60 days
- ▪ Same objective evaluation criteria
- ▪ Functional / performance based specifications
- ▪ Best value for money award criteria
- ▪ Majority of R&D activities performed in MS/AS

❑ IPR arrangements for PCP

- ▪ R&D providers generating results in PCP shall own attached IPRs
- ▪ Procurers shall enjoy royalty-free access rights to use R&D results for own use
- ▪ Procurers shall also enjoy the right to grant or to require participating R&D providers to grant non-exclusive licenses to third parties to exploit the results under fair and reasonable market conditions without any right to sublicense

One joint PPI or several coordinated PPIs coordinated by the lead procurer

- In their proposal, consortium shall have already identified one concrete procurement need as proposed focus for the PPI that is identified as a **common challenge** in the innovation plans of the buyers group and requires innovative solutions!

- EU wide publication of **one joint or several separate call for tender(s)** that are coordinated based on common tender specifications (If PPI procures a limited set of prototypes / test products developed in a preceding PCP, then negotiated procedure without publication foreseen in EU public procurement directives is possible)
- Evaluation of offers based on common tender specs (**same core functionality** and performance characteristics for solutions procured by all procurers, but possible **additional local functionality** for each procurer)

- But contract award can be centralised or distributed
    - In case of 1 Joint procurement:
        - Either one lead procurer awarding all contracts to all suppliers on behalf of all procurers in the buyers group
        - Or one lead procurer only awarding a framework contract with lots to each supplier (e.g. lot per procurer), and each procurer awarding (a) specific contract(s) for his lot(s) to the supplier(s) delivering the solution(s) he buys
    - In case of several separate but coordinated procurements:
        - Each procurer awarding his own contract(s) directly himself

- Also supervising suppliers and payments can be centralised or distributed

Specific requirements PPI procedure (Annex E WP)

European Commission

❑ Procedure: Compliance with applicable national procurement rules + compliance with additional specific requirements

Unless PPI limited to prototypes, test-products developed during pre-ceding PCP action

- Definition PPI (Horizon 2020 RfP). Choice between procurement procedures covered by procurement directives that do not include procurement of R&D
- EU wide publication of open market consultation, early announcement of target date for launching the PPI open market consultation and call for tender(s)
- PPI call for tender(s) open for at least 60 days
- PPI call for tender(s) open to tenderers from EU Member States and H2020 associated countries + (if applicable) additional countries that ratified WTO GPA
- Possibility of conformance testing before contract award
- Same objective evaluation criteria
- Functional / performance based specifications
- Best value for money award criteria

❑ IPR arrangements for PPI

- IPRs attached to results generated during PPI shall be owned by the party that generated the results, unless duly justified cases (e.g. party generating results is not able to exploit IPRs)

- Beneficiaries must ensure wide publication for open market consultation & contract notice, unless for PPI procuring PCP results
  - At least via H2020 sites and NCPs (encourage also via relevant brochures, specialised press, relevant major events, mailing lists relevant industry/research associations etc)

- The beneficiaries must formally notify the Commission:
  - 5 days before publication in OJEU: copy of PIN open market consultation
  - 30 days before publication in OJEU: copy of contract notice & its contents

- Open market consultation to be announced well in advance to market
  - Min 2 months in advance via publication of PIN in OJEU (except for PPIs limited to procuring limited set of prototypes/first test products that are outcomes of PCP actions)

- Joint call for tender shall remain open
  - At least 60 days: for PCP and PPI

Proposal Template Coordination and Support actions

Proposal Template in pdf format (for consultation) under topic conditions and docs on the topic page or on the how to participate/reference docs page on the participant portal

Editable word version of Proposal Template: downloadable after you log in to submission system to submit a proposal for a specific topic

Proposal template CSAs
Structure according to evaluation criteria

- Cover page

- 1. Excellence
  - Objectives
  - Relation to the work programme (topic calling for the CSA)
  - Concept, approach, quality of coordination & support measures

- 2. Impact
  - Expected impacts (check those under topic calling for the CSA)
  - Measures to maximise impact
  - Dissemination & exploitation of results+Communication activities

- 3. Implementation
  - Project Plan: work plan, work packages, deliverables, milestones
  - Management structure and decision making procedures
  - Consortium as a whole
  - Resources to be committed (table person months, other costs)

- 4. Consortium Members
  - Participants and third parties

- 5. Ethics and security (optional)

Page limit: max 50 pages
For sections 1,2,and 3 together

Proposal Template
PCP-PPI actions

Proposal Template in pdf format (for consultation) under topic conditions and docs on the topic page or on the how to participate/reference docs page on the participant portal
Editable word version of Proposal Template: downloadable after you log in to submission system to submit a proposal for a specific topic

- Cover page
- 1. Excellence
  - Progress beyond state of the art
  - Clarity & pertinence of objective of the PCP/PPI–common challenge
  - Credibility of the proposed approach

  2. Impact
  - Expected impacts
  - Measures to maximise impact
- 3. Implementation
  - Project Plan: work plan, work packages, deliverables, milestones
  - Management structure and decision making procedures
  - Consortium as a whole
  - Resources to be committed
- 4. Consortium Members
  - Participants and third parties
- 5. Ethics and security (optional)

Page limit: max 70 pages For sections 1,2,and 3 together

OVERVIEW OF THE INNOVATION PROCUREMENT RELATED CALLS IN THE H2020 WP.2018-2020

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)

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 (maximum 90%) actual procurement cost for joint PCPs + coordination costs
PPI actions: co-finance (35%) actual procurement cost for joint and coordinated PPIs + coordination costs
CSA actions: co-finance (100%) only coordination costs e.g. procurer networks preparing future PCPs/PPIs
Note: WP2020 info is still indicative.

Calls for PCP actions

Call deadlines in red

- ## **ICT** Work Program
  - ICT-34: Open to ICT based solutions in <u>any area of public interest</u> (€ 6M; 28 Mar 2019)

- ## **Health** Work program
  - BHC-10: Next generation sequencing for routine diagnosis (€ 40M; 16 April 2019)
  - BHC-20: Infection and integrated care (budget / deadline tbc)

- ## **Climate** Work program
  - LC-CLA-13-2020: Solutions for climate change resilience (budget/deadline tbc)

- ## **Energy** Work program
  - LC-SC3-JA-3-2019: Wave energy (€ 20M; 27 Nov 2019)
  - LC-SC3-RES-10-2020: 100% renewable energy (budget/ deadline tbc)

- ## **Security** Work Program
  - SU-GM03: Innovative solutions to enhance security (budget / deadline tbc)

Calls for PPI and CSA actions

European Commission

Call deadlines in red

PPI actions

- ## **Health** Work Program
  - DTH-05: Digital health and care solutions for an ageing society (€ 10M; 24 Apr 2019)
  - BHC-20: Infection and integrated care (budget/deadline tbc)

- ## **Research infrastructure** Work Program
  - INFRAEDI-04: Innovative High Performance Computing (budget/deadline tbc)

❑ More info on Innovation Procurement (news, upcoming events and info days, case examples): http://ec.europa.eu/digital-agenda/en/innovation-procurement

❑ Ongoing PCP/PPI projects in ICT (and other) domains:
https://ec.europa.eu/digital-single-market/en/eu-funded-projects

❑ Overview ppts and FAQs on H2020 funding for innovation procurement:
https://ec.europa.eu/digital-single-market/en/news/calls-eu-funding-opportunities-pre-commercial-procurement-and-public-procurement-innovative

❑ Horizon 2020 online manual about innovation procurement:
http://ec.europa.eu/research/participants/docs/h2020-funding-guide/cross-cutting-issues/innovation-procurement_en.htm

❑ Info about scope of each call topic, online drafting and submission of proposals on H2020 participants portal:
http://ec.europa.eu/research/participants/portal/desktop/en/opportunities/h2020/search/search_topics.html

TOPIC : ICT 34

PRE-COMMERCIAL PROCUREMENT OPEN

HORIZON 2020

ICT 34 Pre-Commercial Procurement open

- **Specific Challenge**:The challenge is to enable public procurers to collectively implement PCPs in order to close the gap between supply and demand for innovative ICTs. The objective is to bring radical improvements to the quality and efficiency of public services by encouraging the development and validation of breakthrough solutions through PCP

- **Scope:** PCP actions targeting consortia of procurers with similar procurement needs that want to procure together the development of innovative ICT based solutions to modernize public services whilst creating growth opportunities for industry and researchers in Europe in new markets. This topic is open to proposals for PCP actions in all areas of public sector interest requiring innovative ICT based solutions.

ICT 34 Pre-Commercial Procurement open

Opening date:16 October 2018
Deadline: 28 March 2019
Budget: 6.000.000 Euros

Link to the call:

http://ec.europa.eu/research/participants/portal/deskt
op/en/opportunities/h2020/topics/ict-34-2018-
2019.html

Why European cooperation on PCP?

- **Speed up public sector modernisation** – improve quality and efficiency of public services with breakthrough solutions

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

- **Address issues of common interest together** – e.g. where interoperability and coherence of solutions across borders, pooling of resources or market defragmentation is required

- **Create growth and jobs in Europe** – help innovators bring European R&D to the market (the majority of R&D in H2020 funded PCPs should take place in Europe, ltd set of first test products can be bought in the PPI from companies in the PCP)

Completed PCP procurements

- ## 19 PCPs are busy - or have completed - procuring by now

  - SILVER (Robotics for elderly care)
  - THALEA (Telemedicine for intensive care unit patients at increased risk)
  - SMART@FIRE (Smart protective equipment for fire fighters)
  - Human Brain Project (High Performance Computing for brain simulation)

  - DECIPHER (Mobile health services)
  - V-CON (Virtual construction of road infrastructure)
  - CHARM (Traffic management)
  - PRACE 3IP (Energy efficient supercomputing)
  - Cloud for Europe (Cloud computing for governments)
  - PREFORMA (Long term digital preservation)
  - IMAILE (Personalised e-learning solutions)
  - NYMPHA-MD (Mental care for bipolar disorders)

  PCP completed

HBP PCP doesn't result from a PCP call. HBP decided itself to implement a PCP in the HBP research project.

European Commission

- HNSciCloud (Science cloud platform for research community)
- QUACO (Quadrupole magnets for large hadron collider)
- MAGIC (Post stroke recovery)
- SELECT4Cities (Internet of Everything platform for Cities)
- -RELIEF (Pain self-management)
- -EMPATTICS (Chronic disease self-management)
- -NIGHTINGALE (Wearable sensors for safer patient monitoring/care)

PCP ongoing

Achieved market engagement

- ## Open Market Consultations
    - Involving between 70 to 300 companies and researchers per PCP
    - Broaching the views of companies and researchers from all over Europe and beyond in preparation of the upcoming PCP procurement

- ## Call for Tenders
    - Tender docs downloaded typically between 50 to 300 times
    - Nr of offers received typically between 10-48 (4-7 for specialised/low budget PCPs)
    - Offers received from all over Europe and beyond

- ## Contract award
    - 86 procurers cooperating in the 19 buyers groups
    - 126 contracts awarded in total
    - Winning bidders involving 193 companies and 26 universities/research centra
    - Total value of the PCP procurements: between € 450.000 and € 9.000.000
        - Contract values for phase 1: between € 15.000 and € 180.000 (per contractor)
        - Contract values for phase 2: between € 20.000 and € 900.000 (per contractor)
        - Contract values for phase 3: between € 65.000 and € 2.700.000 (per contractor)

Info about impacts of the procurements itself

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

  - 56,2% of total value of contracts directly won by SMEs
  - Compared to 29% average in public procurements across Europe

  Mostly small young SMEs: 30% below 10 people, 54% below 50 people, 53% 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 plus SMEs
  - 73% of contracts won by SMEs (SMEs alone, or as lead bidder)

- ## Relevance to universities & bringing scientific results to market
  - 25% of winning contracts have 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

Info about impacts of the procurements itself

- ## 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)

- ## Budget efficiency / Reducing the R&D risk for procurers Encouraging commercialisation of results by vendors
  - Leaving IPR ownership rights with contractors reduced the R&D cost for procurers on average with 50% as vendors see wider commercialisation opportunities
    -> PCPs can get twice as much R&D done for same budget as R&I action

- ## Improving the quality and efficiency of public services
  - All completed PCPs have delivered innovative solutions that achieve the expected quality and efficiency requirements set out initially by the procurers
  - 60% of procurers use PCP to obtain more open, interoperable solutions

Thank you very much for your attention

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