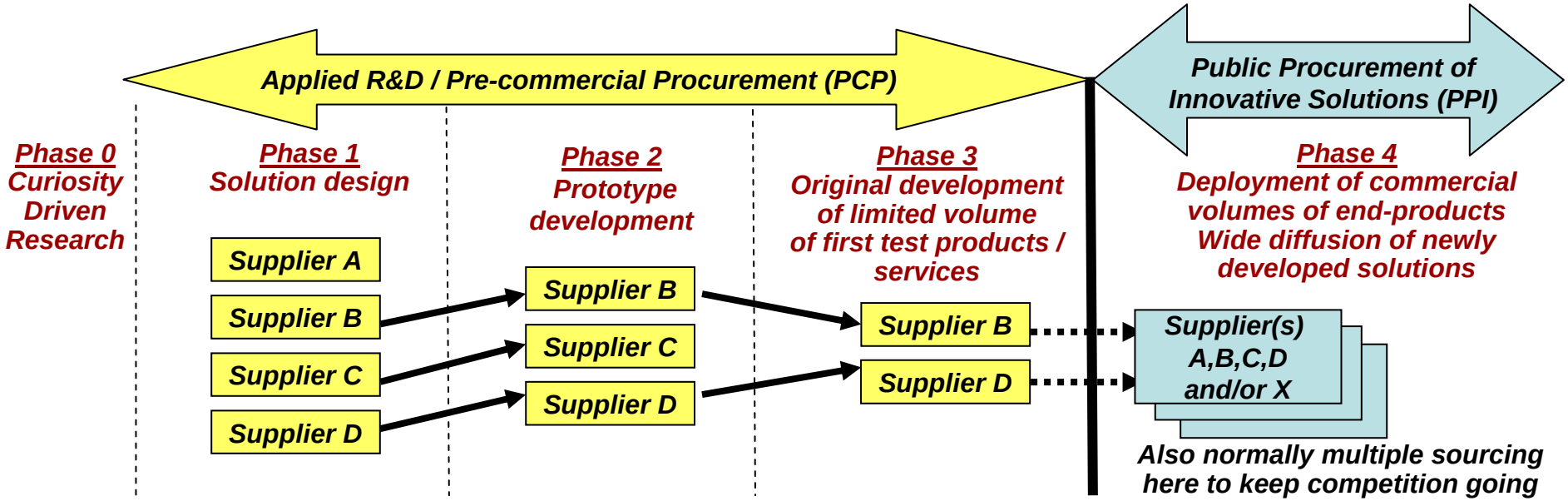
Innovation Procurement (PCP and PPI) in Horizon 2020 - Possible synergies with ESIF

Lieve Bos
European Commission

DG CONNECT (Communication Networks)
F2 unit ("Innovation")

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



Objectives:

- Products that better fit public sector needs
- Shorten time to market for suppliers
- Wider commercialisation of R&D results

Progress PCP implementation

European Commission

2007

Awareness Raising Exploring possibilities	Working on framework	Framework identified and/or pilots in preparation	Pilots started
Malta, Denmark, Lithuania, Ireland, Latvia, Estonia, Norway, Bulgaria, Romania, Slovenia, Slovakia, Cyprus, Germany, France, Iceland, Greece, Luxembourg, Czech Republic, Italy, Austria, Switzerland, Portugal	Sweden, Spain, Finland, Belgium		Netherlands, UK

2014

Awareness Raising Exploring possibilities	Working on framework	Framework identified and/or pilots in preparation	PCPs projects ongoing
Malta, Bulgaria, Cyprus, Slovenia, Luxembourg, Switzerland	Latvia, Iceland	Lithuania, Poland, Czech Republic, Hungary	Estonia, Finland, Sweden, Romania, Ireland, Netherlands, Spain, UK, Norway, Greece, Denmark, Belgium, Italy, Slovakia, France, Germany, Portugal, Austria

First pioneer projects are there now. Still major effort needed to mainstream this

Ongoing EU funded PCP/PPI projects in ICT domain
Learn from them — See Brochure

HEALTH

THALEA (PCP)
Tele-detection/care of ICU patients

SILVER (PCP)
Robotics ageing well

DECIPHER (PCP)
Services mobile health data

NYMPHA-MD (PCP)
Mental care for bipolar disorders

UNWIRED-HEALTH (PCP)
Mobile care for vaccination & heart failure

STOP AND GO (PPI)
Telecare for elderly with multiple conditions

TRANSPORT

CHARM (PCP)
Traffic Management

V-CON (PCP)
Virtual road infrastructure modelling

E-GOV

Cloud for Europe (PCP)
Cloud computing

PREFORMA (PCP)
Long term digital preservation

ENERGY

ENIGMA (PCP)
Photonics City Lighting

PRACE 3IP (PCP)
High Performance Computing

EDUCATION

IMAILE (PCP)
Personalised learning needs

SAFETY

SMART@FIRE(PCP)
Smart Textiles ICT for fire fighters

Horizon 2020 Support for PCP-PPI

- Coordination and Support Actions (100% funding rate):
  - Support only coordination activities e.g. for preparation of a PCP or PPI by a group of procurers (identifying common challenges among procurers, conducting open market consultations before starting a PCP or PPI etc)
  - CSAs do not provide EU cofunding for an actual PCP or PPI procurement)

- PCP cofund Actions (70% funding rate):
  - Provides EU cofunding for an actual PCP procurement (one joint PCP procurement per action) + for related coordination and networking activities (e.g. to prepare, manage and follow-up the PCP call for tender)

- PPI cofund Actions (20% funding rate):
  - Provides EU cofunding for an actual PPI procurement (one joint PPI procurement per action) + for related coordination and networking activities (e.g. to prepare, manage and follow-up the PPI call for tender)

PCP and PPI cofund actions - Role different actors

- **Participation**: min 3 independent legal entities from 3 different Member States or Associated countries + possibly other types of procurers + other types of beneficiaries

- **Buyers group**
  - Partners that provide the financial commitments to undertake the PCP or PPI.
  - Min 2 public procurers from 2 different Member States or associated countries
  - Shall represent the demand side for the innovations, a critical mass of procurers that can trigger wide implementation of the innovations, shall aim for ambitious quality/efficiency improvements in area of public interest.

- **Lead procurer**
  - Procurer in project appointed by buyers group to lead and coordinate the PCP or PPI.

- **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.

PCP and PPI cofund actions - Eligible activities

In the proposal, consortium shall already identify a specific challenge in the innovation plans of the procurers that requires innovation + KPIs (targeted quality/efficiency improvements) for the PCP/PPI. Eligible activities during a PCP or PPI Cofund action:

❑Preparation stage

- Preparation of **one joint** PCP or PPI procurement per action
  - Open market consultation /verification of market readiness to meet procurement need
  - If relevant to the action, other coordination or networking activities
- Outcome
  - Agreed common tender specifications + Joint procurement agreement
  - Confirmation of commitment on availability of financial commitments to start PCP/PPI

❑Execution stage

- Joint procurement of the R&D services (PCP) or innovative solutions (PPI)
- For PCP: Validation/comparison of the performance of the competing PCP solutions against jointly defined criteria in real-life operational conditions
- For PPI: Evaluation of results of deploying and operating the procured solutions in real-live operating conditions
- Dissemination/exploitation of results

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

PCP and PPI cofund actions – EU contribution

❑**Reimbursement rate direct costs: Max 70% of eligible costs for PCP cofund actions, Max 20% of eligible costs for PPI cofund actions**

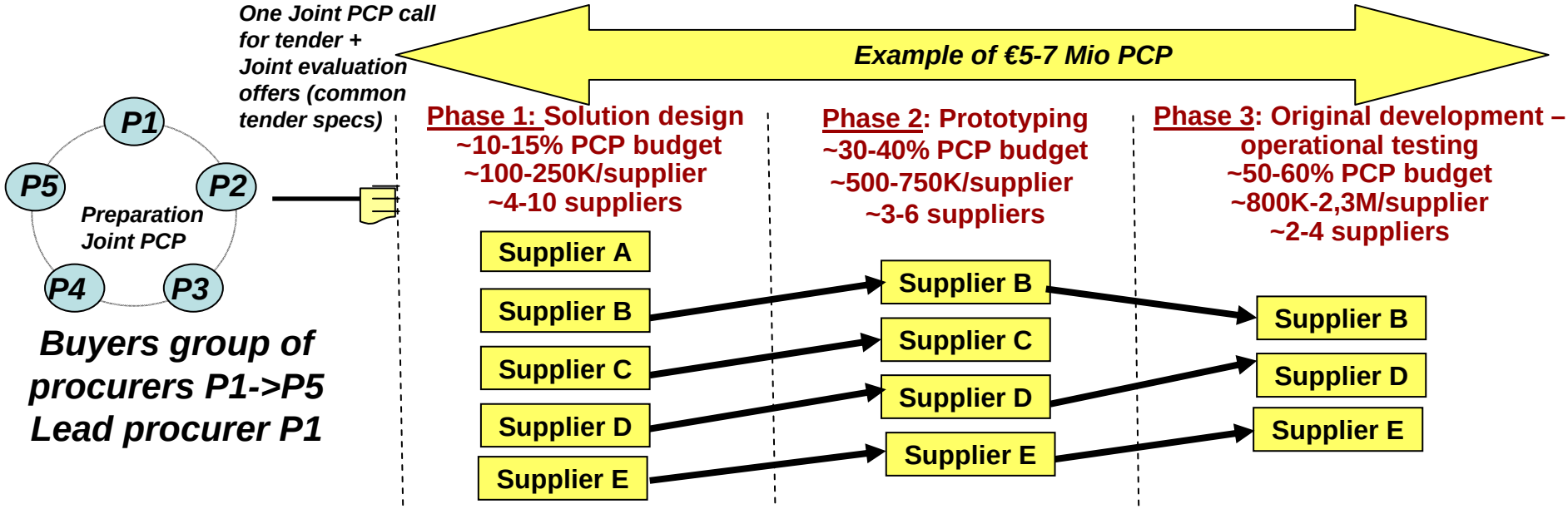
- Eligible direct costs to carry out eligible activities defined in WP include:
  - Price of the R&D services (PCP) or innovative solutions (PPI) procured (if procurement conducted in compliance with requirements in Annex E WP)
  - Eligible coordination and networking activities
  - May include in-kind 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
- Flexibility: Consortium may choose to use part of the Union contribution to increase the support to coordination and networking activities/budget for call for tender as long as the Union contribution does not exceed 70% (PCP)/20% (PPI) of the sum of those costs and the price of the call for tender. Or other way around.
- Requested reimbursement for coordination and networking 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 beneficiaries premises

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

Example PCP cofund action

- **Example: 5 €M PCP cofund grant**
  - EU contribution: Max 1,5 €M for coordination + 3,5 €M for PCP (procurement of 5 €M)
- **Example: 3 €M PCP cofund grant**
  - EU contribution: Max 0,9 €M for coordination + 2,1 €M for PCP (procurement of 3 €M)

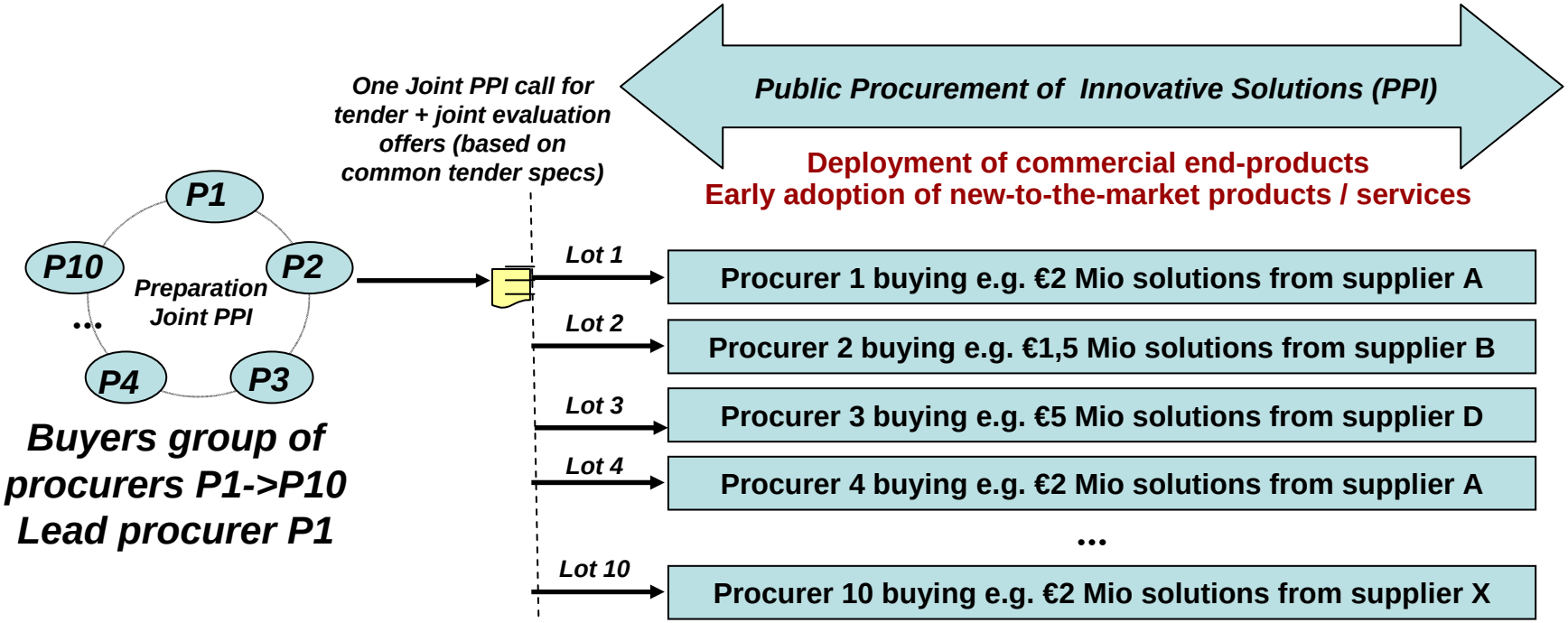


Option 1: P1 pays all suppliers in name and on behalf of buyers group -> Only P1 requests reimbursement for PCP procurement price to the EC.

Option 2: P1 to P5 each pay each supplier pro rata according to their contribution to the total PCP budget -> P1 to P5 request reimbursement for part of PCP procurement price to the EC.

Example PPI cofund action

- **Example: 5 €M PPI co-fund grant**
  - EU contribution: Max 2,5 €M for coordination + 2,5 €M for PPI (procurement of 12,5 €M)
- **Example: 2,5 €M PPI co-fund grant**
  - EU contribution: Max 1,25 €M for coordination+ 1,25 €M for PPI (procurement of 6,25 €M)



Option 1: P1 pays all suppliers in name and on behalf of buyers group.

Option 2: P1 to P5 individually pay those supplier(s) that are delivering the innovative solutions they individually need.

Possible synergies with ESIF
Cohesion policy may support measures in OPs

European Commission

- **To foster more innovative public procurement procedures and admin capacities**

TO 11 (IP11) Enhancing institutional capacity and an efficient public administration

TO 2 (IP2C) strengthening ICT apps for e-gov, e- learning, e-inclusion, e-culture and e-health

Beneficiaries & target group: procurement officers (improving know-how to run PCP/PPI procedures)

- **To foster innovation through public procurement - both PCP and PPI**

TO 1 (IP1B) Strengthening research, technological development and innovation

Beneficiaries: public procurers (e.g. open call offering co-financing from the OP to procurers from the region to prepare and carry out PCPs and PPIs, best ideas selected = public sector challenges that would generate maximum quality / efficiency improvement for region if solved by innovations)

Target group: public sector (improved quality/efficiency) and enterprises (business opportunities)

- **To foster better meeting of public needs through buying the development (PCP) and deployment (PPI) of innovative solutions**

TO 1 (IP1A) enhancing research and innovation (R&I) infrastructure

TO 2 (IP2C) strengthening ICT apps for e-gov, e- learning, e-inclusion, e-culture and e-health

TO 4 (all IPs) supporting the shift toward a low –carbon economy in all sectors

TO 5 (all IPs) promoting climate change adaption, risk prevention and management

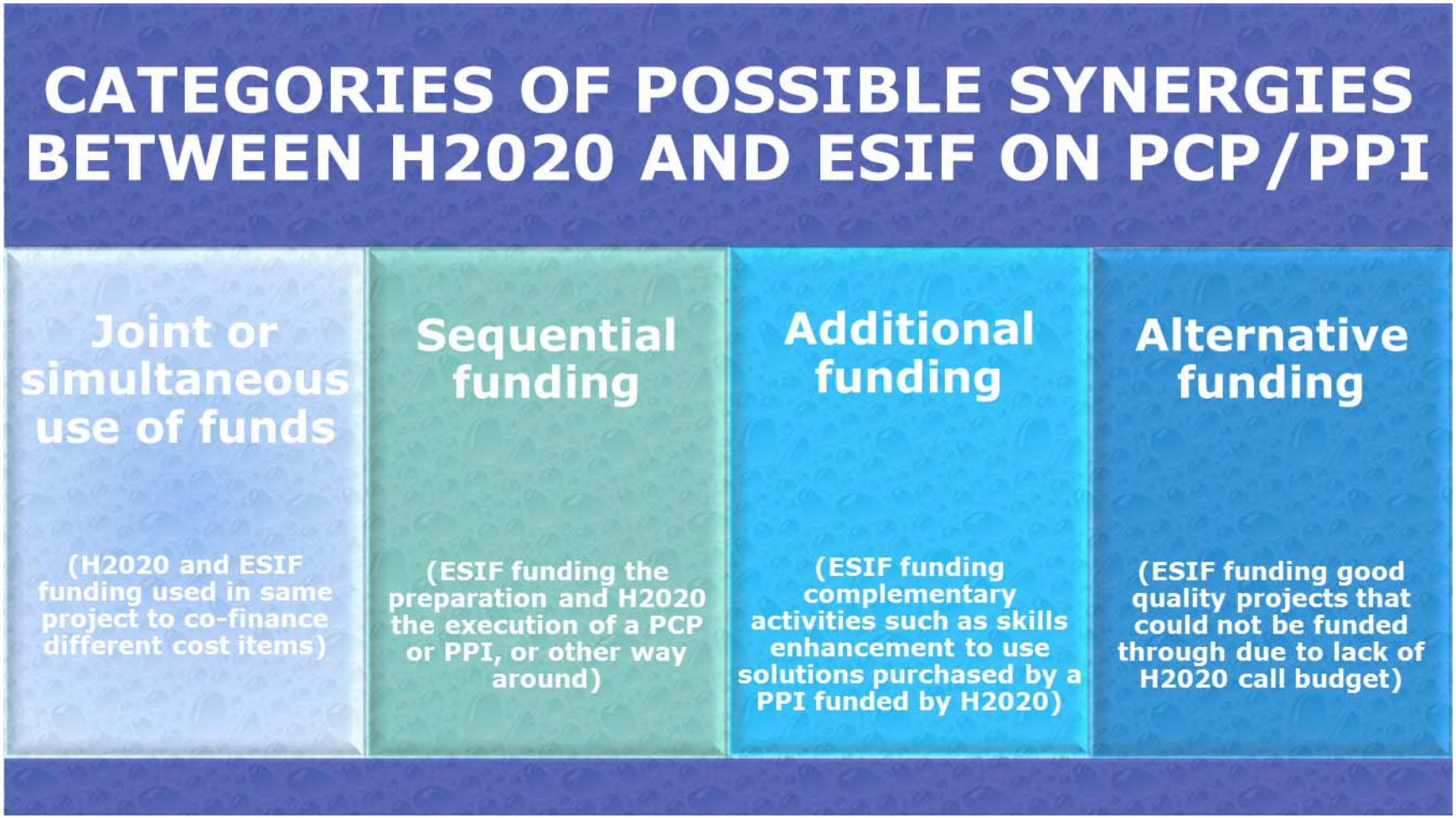
TO 6 (all IPs) preserving and protecting the environment and promoting resource efficiency

TO 7 (all IPs) promoting sustainable transport & removing bottlenecks in key network infrastructures

Beneficiaries: public procurers such as town planners, transport, environment, health etc. authorities and ministries (ERDF, Cohesion Fund and ESF)

Target group: public sector (improved quality/efficiency) and enterprises (business opportunities)

Categories of possible synergies



Background info

Official Horizon 2020 docs setting conditions for PCP and PPI cofund actions:

http://ec.europa.eu/research/participants/portal/desktop/en/funding/reference_docs.html#h2020-work-programmes-2014-15-annexes **(Annex D&E)**

CNECT website on PCP and PPI:

FAQs, ongoing projects, initiatives in Member States, upcoming events, etc
Keep informed: subscribe yourself to the CNECT PCP-PPI newsletter
http://cordis.europa.eu/fp7/ict/pcp/home_en.html

Slides from PCP-PPI in H2020 info day:

Funding conditions for PCP-PPI support in Horizon 2020
Synergies between Horizon 2020 and ESIF funding for PCP-PPI
How to find partners, budget, write a proposal. Proposal submission & evaluation
Proposal ideas from participants that attended the info day
http://cordis.europa.eu/fp7/ict/pcp/events_en.html

Finding partners: Procurement forum, PCP-PPI Linkedin group

Background Slides
PCP & PPI

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

- Get better and 20% cheaper 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

… above not the case if R&D is procured as part of/inside large deployment contract

Evidence on impact from successful examples

- Shortening of time-to-market: UK National Health service PCP examples achieve reduction from several years to 18 months
- Attracting venture capital: Companies in UK NHS PCPs attract significant VC investment, enabling them to grow faster
- Creating lead markets: Companies in UK ministry of defence PCPs are selling now also to US department of defence
- Retaining lead market position: possible via sustained PCP/PPI procurements (e.g. 60 ys of supercomputing PCPs -> IBM, Cray, HP)
- 20% cheaper products and higher product quality: evidence from US defense multi competitor, multi phase PCP-PPI procurements
- Removal of supplier lock-in -> 20% cost reduction: outcome of benchmarking of CHARM PCP on new traffic management centres thanks to move towards open architecture via PCP
- Benefits on local economy: Estonia PPI buying Mitsubishi electric vehicles increased local Estonian economic activity in related sectors

Background Slides

Calls supporting PCP-PPI in Horizon 2020

2014-2015

Calls for PCP cofund actions

- **ICT** LEIT Work Program
  - ICT-23(c): Robotics for public safety, environment & infrastruct. monitoring (€ 5M, 2014)
  - ICT-2(c): Smart system integration for in-vitro diagnosis in healthcare (€ 3M, 2014)
  - ICT-3(d): Electronic and photonic textile technology for healthcare sector (€ 2,5M, 2014)
  - ICT-24(d): Robotics for healthcare sector (€ 5M, 2015)
  - ICT-8(a): Boosting public service productivity/services via cloud computing (€ 9M, 2015)
  - ICT-36: Call open to any area of public interest needing ICT based solutions (€ 4M, 2015)
- **Health** Societal Challenge Work Program
  - PHC 27: Selfmanagement of health and disease and patient enpowerment supported by ICT (€ 15M, 2015)
- **Security** Societal Challenge Work Program
  - DRS 18: Interoperable next generation of broadband radio communication system for public safety and security (no predefined max budget for PCP cofund proposals, 2015)
- **Research Infrastructrure** Work Program
  - INFRASUPP2(b): Scientific instrumentation for research infrastruct. (part of € 14M, 2015)
  - EINFRA8: Geant – novel telecom and Internet technologies (part of € 25M, 2015)

Calls for PPI cofund actions

- **ICT** LEIT Work Program
  - ICT-8(b): Boosting public service productivity/services via cloud computing (€ 13M, 2015)
  - ICT-20(d): ICT technologies for better human learning (€ 10M, 2015)
  - ICT-27(b): Photonics – software defined optical networking technologies and services for National Research and Education Networks (€ 5M, 2015)
- **Health** Societal Challenge Work Program
  - PHC 29: eHealth services (€ 10M, 2015)
- **Transport** Societal Challenge Work Program
  - MG 8.3: Transport Infrastructure (€ 13M, 2015)
- **Research Infrastructrure** Work Program
  - INFRASUPP2(c): Scientific instrumentation for research infrastructure (part of € 14M, 2015)

Calls for Coordination and Support Actions

- **Food** Societal Challenge Work Program
  - ISIB 7-2014: Networks of procurers preparing PPI on bio-based products (€ 2M, 2014)
- **Energy** Societal challenge Work Program
  - EE 7-2014/2015: Enhancing the capacity of public authorities to plan, finance and implement sustainable energy plans & policies e.g. in buildings, mobility
    (no max total budget, part of big call, € 1,5/2M per project)
  - EE 8-2014: Targeting procurements for products already on the market
    a) Preparing and supporting PPIs on sustainable energy products
    b) Preparing and supporting PPIs or PCPs on ICTs e.g. green data centers
    (no max total budget, part of big call, € 1/1,5M per project)
  - EE 17-2015: Targeting min 25% higher-than available energy performance levels
    b) Preparing and supporting procurements by large buyers groups
    (no max total budget, part of big call, € 1,5/2M per project)
  - SCC 4-2014: Networks of local administration public procurers on smart city solutions, to prepare for PPI on solutions at the intersection of ICT, energy, transport
    (€ 0,1M/0,15M per proposal , € 1M in total for SCC-4)
- **Climate** Societal Challenge Work Program
  - WASTE-5-2014: Preparing and supporting PPI for eco-innovative solutions for resource efficiency, waste management and prevention (€ 1M)
  - SC5-8-2014: Preparing and supporting PCP on soil decontamination/remediation (€ 2M)

Calls for Coordination and Support Actions

- **ICT** LEIT Work Program
  - ICT-35(f): European Procurer Platforms preparing joint cross-border PCPs or PPIs, call open to any area of public interest that requires new ICT solutions (€ 1M, 2014)
  - ICT-26(c): European cities focusing on wide deployment/PPI of SLL lighting solutions (part of call for 3 CSAs for max total of € 5M, 2015)

  Other calls for CSAs in other areas of ICT that can address PCP/PPI, for example:
  - ICT-33: Supporting network of ICT National Contact Points including in promoting new Horizon 2020 funding instruments such as PCP and PPI to procurers (€ 4M, 2014)
  - ICT-30(b): CSAs to develop ecosystem for Internet of things that could address also PCP (part of call for 3 CSAs for max total of € 5M, 2015)
  - ICT-7(c): CSAs to support adoption of cloud computing (€ 2M, 2015)
- **Security** Societal Challenge Work Program
  - DRS 5-2014: Preparing PCP in crisis management – situation awareness civil protection decision making solutions (no max budget predefined, part of large call)
  - BES-11-2014: Information management, systems and infrastructure for civilian EU External Actions (no max budget predefined, part of large call)
- **Research Infrastructrure** Work Program
  - INFRASUPP1-2014: Awareness raising, networking, portal publishing call for tenders and future needs (€ 2M, 2014)
  - INFRASUPP2-2015 (a): Exploring future use of joint PCP and PPI in research infra (part of € 14M call, 2015)

Quite some ICT related PCP-PPI calls
ICT is pretty wide domain

- ICT covers
  - Components and systems: embedded ICT systems, minituarisation / system integration, advanced thin large organic and large area electronics
  - Advanced computing (e.g. customised and low power computing)
  - Future Internet (e.g. smart novel Internet architectures and experimentation platforms, optical and wireless network technologies, cloud computing infrastructure and services, tools and methods for software development, web entrepreneurship)
  - Content technologies and information management (e.g. big data handling, content handling and modelling, automatic learning language translation systems, creative industries / social media ICTs, ICTs for learning / teaching and gaming, multimodal natural computer interaction)
  - Robotics
  - Micro- and nano electronics, cross-cutting ICT KETs, photonics (e.g. (O)LED lighting)
  - High Performance computing
  - Cybersecurity / trustworthy ICT
  - Human-centric ICT solutions