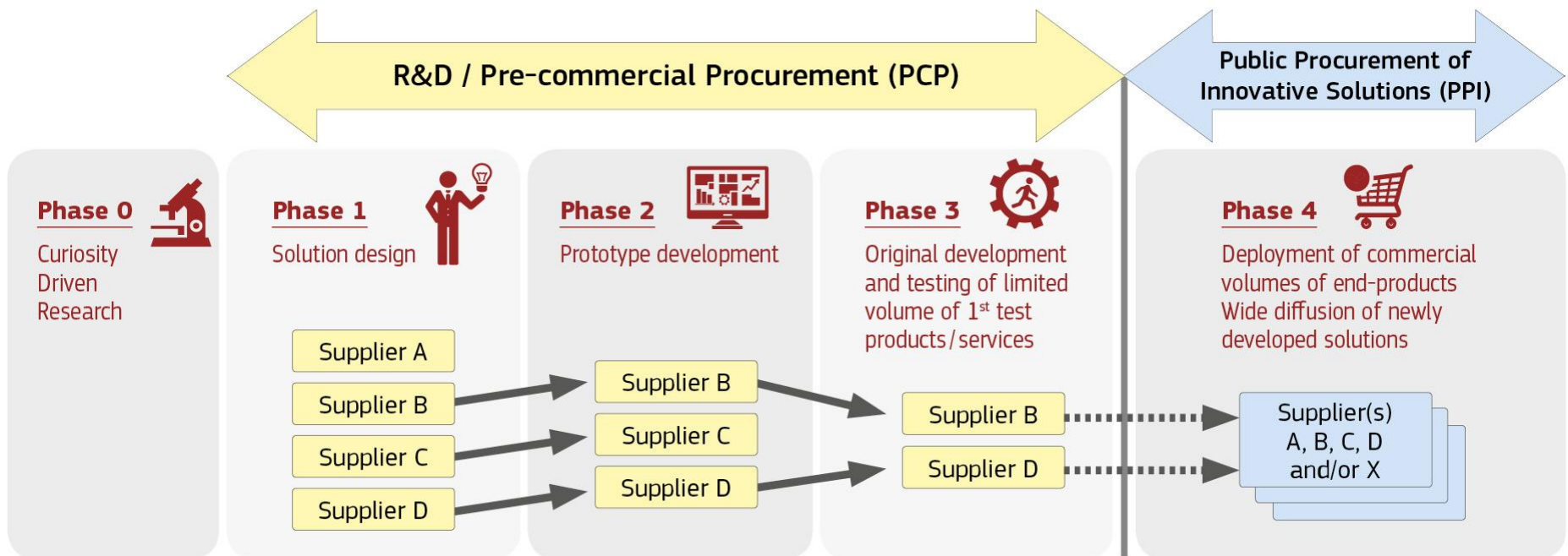# TACKLING PUBLIC CHALLENGES THROUGH INNOVATION PROCUREMENT

H2020 and ESIF support

Vassilis Tsanidis
Start-ups and Innovation Unit (F3)
DG CNECT
European Commission

Innovation Procurement:

- Procurement of R&D services to tackle specific public needs when solutions are not yet on the market (PCP)

- Procurement of solutions new to the market where the public sector acts as first customer (PPI)

R&D / Pre-commercial Procurement (PCP)

Public Procurement of Innovative Solutions (PPI)

Phase 0 — Curiosity Driven Research

Phase 1 — Solution design
- Supplier A
- Supplier B
- Supplier C
- Supplier D

Phase 2 — Prototype development
- Supplier B
- Supplier C
- Supplier D

Phase 3 — Original development and testing of limited volume of 1st test products / services
- Supplier B
- Supplier D

Phase 4 — Deployment of commercial volumes of end-products Wide diffusion of newly developed solutions
- Supplier(s) A, B, C, D and/or X

PCP – Pre-Commercial Procurement

European Commission

- ## 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 step change in the market** (e.g. moving from proprietary / vendor lock-in situation to better open systems and 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

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 within a specific time. After **potentially a test / certification / labelling**, the buyers group buys a significant volume of solutions.

European
Commission

- **Shortening of time-to-market:** customer drive & feedback-> solution design to tested product -full R&D- in 18 mths (e.g. THALEA PCP)

- **Min 20% cheaper products and higher product quality:** evidence from US defense multi-competitor, multi-phase PCP procurements

- **Removal of supplier lock-in -> 20% cost reduction:** outcome of benchmarking of e.g. Lombardy and CHARM PCP

- **Opening market to new players and stimulating cross-border company growth:** in EU funded PCPs 2,5 X more new players and 25 X more cross-border contracts compared to procurement average in EU

- **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)

- **Benefits on local economy:** increased local economic activity in sectors related to the innovative solution

●●● **5**

Why European cooperation on PCP-PPI?

- **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)

Progress PCP implementation
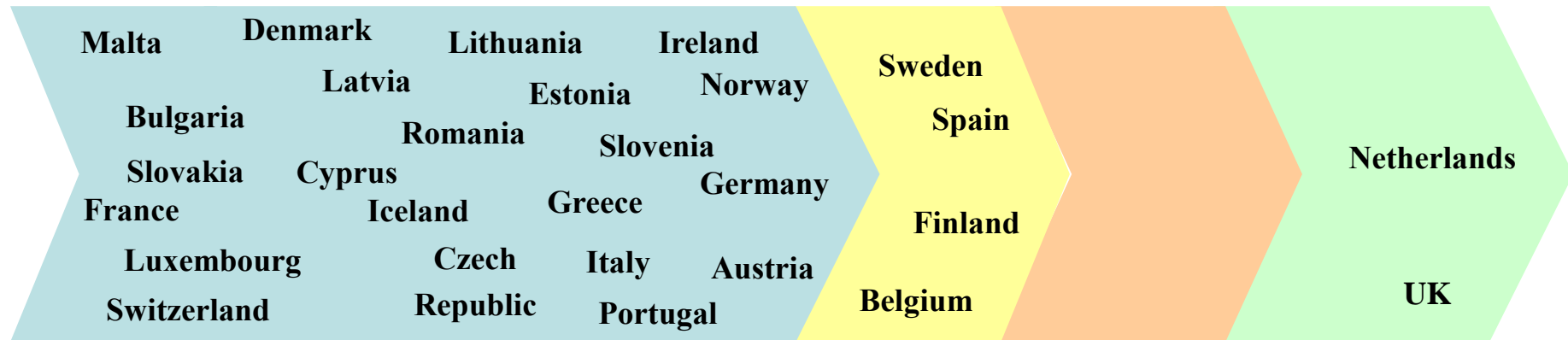# Learn from first movers

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, Greece, Germany, France, Iceland, Luxembourg, Czech Republic, Italy, Austria, Switzerland, Portugal	Sweden, Spain, Finland, Belgium		Netherlands, UK

2016

Awareness Raising Exploring possibilities	Working on framework	Framework identified and/or pilots in preparation	PCPs projects on-going or finished
Malta, Bulgaria, Cyprus	Iceland	Latvia, Czech Republic, Hungary, Luxembourg	Lithuania, Estonia, Finland, Sweden, Slovenia, Ireland, Romania, Netherlands, Poland, Greece, Spain, UK, Norway, Slovakia, Belgium, Italy, Portugal, Denmark, Germany, Switzerland, France, Austria
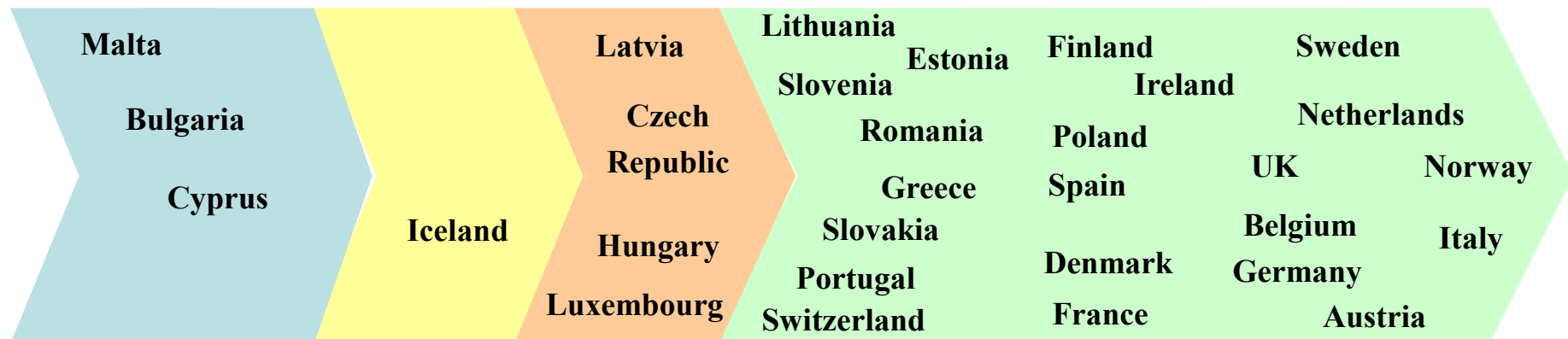
Examples of initiatives without EU support: http://ec.europa.eu/digital-agenda/news/innovation-procurement-initiatives-around-europe
Overview of EU funded PCPs/PPIs: http://ec.europa.eu/digital-agenda/eu-funded-projects

7

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 (identifying common challenges, 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 (90% funding rate):

- Provide EU co-financing 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 Actions (35% funding rate):

- Provide EU co-financing 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)

! New !

Examples EU funded transnational PCPs E-learning

IMAILE

Innovative Methods for Award Procedures of ICT learning in Europe

Project Timing: February 2014 (42 months)
Value PCP: € 4,6M
Project website: http://www.imaile.eu

IMAILE procurers are: Halmstads Kommune (SE) and Alexandersson University Institute Varberg (SE),University of Magdeburg (DE), Municipality of Konnevesi (FI), City Council Viladecans (ES).
Other partners: Region Saxony Anhalt (DE), Oulu IT Center of Excellence (FI), INOVAMAIS (PT), ENTER (Austria), INOVA Eszak-Alfold Regional Development and Innovation Agency (HU)

The IMAILE PCP will focus on new technologies and services for e-learning which address the challenge of providing the next generation of Personal Learning Environments (PLE) for primary and secondary school. This should address students within the topics of Science, Math and Technology, support different learning styles in an individualized way and be accessible from any device including to bring your own device (BYOD).

Example transnational PPI Elderly Care

Project Timing: April 2014 (36 months)
Value PPI: € 17,2M
website: stopandgoproject.eu

STOP AND GO contains 6 procurers: Regional Health Agency Campania (IT), Health agency province Catanzaro (IT), Health agency Rome (IT), Eastern Cheshire Clinical Commissioning Group (UK), Health procurement agency/Junta de Andalucia (ES), Gemeente Helmond (NL)

The €17,2M PPI aims to trigger the market to deliver <u>ICT based telecare services </u>that enable to care for frail elderly that suffer from multiple conditions at the same time such as heart failure, diabetes, etc.

Examples EU funded network of procurers Public admin domain

COMPLETE

Project Timing: January 2015 (36 months)
Project website: www.photonics-complete.eu

COMPLETE is a coordinating and networking project with partners: Poznan computing and networking center PSNC (PL), Greek research and technology network GRNET (GR), Czech education and scientific network CESNET (CZ)

COMPLETE will create a common information platform and support National Research and Education Networks and other public entities in <u>coordinating procurement procedures of novel optical network solutions</u>, while synchronising Horizon 2020, national and Structural Funds financing sources. The aim is to improve the quality of decision making and optimize spending of public resources when purchasing broadband transport network equipment and related services.

OVERVIEW UPCOMING H2020 CALLS ON INNOVATION PROCUREMENT (PCP+PPI) IN 2016-2017

2017 (~84 M€)

- **PCP actions**
  - Robotics smart cities: 7 M€ ([ICT-27(d)](#))
  - Soil decontamination: 5 M€ ([SC5-26](#))
  - Broadband coms security: 10 M€ ([4-DRS](#))
  - Forensics: 10 M€ ([9-FCT](#))
  - Border control: 10 M€ ([13-BES](#))

- **PPI actions**
  - E-health standards: 8,26 M€ ([PM-19](#))
  - Supercomputing: 26 M€ ([EINFRA-21](#))
  - Energy efficiency: part of larger call ([EE-19](#))

- **CSA actions**
  - Competence centers & procurer networks any area preparing PCP/PPIs: 4 M€ ([ICT-33](#))

PCP actions: co-finance (90%) actual procurement cost for joint PCPs + coordination costs
PPI actions: co-finance (35%) actual procurement cost for joint PPIs + coordination costs
CSA actions: co-finance (100%) only coordination costs e.g. procurer networks preparing future PCPs/PPIs

Possible Synergies between the ESIF and H2020 on Innovation Procurement

SYNERGIES BETWEEN H2020 AND ESIF ON PCP/PPI WHY?

BECAUSE:

❖ The value of support for research, development and innovation could be further enhanced by combining funding resources (increase of effects at regional level)

❖ Procurers could **choose** for higher **ESIF co-funding** rates **instead of H2020 co-funding** rates' whilst participating to H2020 funded PCP/PPIs.

❖ Better communication between "regional development community" and "Horizon-Science community"

❖ A regional development scheme through the participation in a H2020 project acquires a European perspective

GENERAL RULE

IT IS NOT ALLOWED !!!!!!

- **To use ESIF and H2020 funding accumulatively to finance the same cost/expenditure item**

- **To finance the own contribution of the participant from H2020 or ESIF**

CATEGORIES OF POSSIBLE SYNERGIES BETWEEN H2020 AND ESIF ON THE PCP/PPI IMPLEMENTATION

Joint or simultaneous use of funds

Sequential funding

Additional funding

Alternative funding

DSM webpage on innovation procurement

More info on our DSM webpage on innovation procurement
https://ec.europa.eu/digital-single-market/en/innovation-procurement

- Info & FAQs about what / why innovation procurement
- Info on EU funding for PCP/PPI / overview calls
- Overview EU funded innovation procurement projects
- Overview MS initiatives on innovation procurement
- Overview EU policy initiatives on innovation procurement
- Events, news, newsletter

the brochure on the PCP/PPI projects that are currently EU Co-funded
http://ec.europa.eu/digital-agenda/en/news/innovation-procurement-power-public-purse

European Assistance for Innovation Procurement (Eafip):
http://eafip.eu/

Guide on the synergies between H2020 and the ESIF: http://ec.europa.eu/research/regions/pdf/publications/h2020_synergies_201406.pdf

Thank you very much for your attention

Vassilis Tsanidis Dr.Jur
Start-ups and Innovation Unit (F3)
DG CNECT
European Commission
Vasileios.Tsanidis@ec.europa.eu