Demand driven innovation through public procurement

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Policy debate that lead to EC activity on public procurement driving research & innovation

- 2006: Aho report recommended EC actions driving demand for innovations through public procurement

- 2007: Lead Markets Initiative and PCP communication

- 2008-today: Council conclusions and EP resolutions asking EC to support public procurement of research and innovative solutions

- 2010: Digital Agenda for Europe, Innovation Union and Regional EU2020 flagships calling also Member States for more PCP & PPI
  - DAE: PCP key to double annual public ICT R&D spending from 5,5 to 11 €Bn
  - Innovation Union: from 2011, MS dedicate €10Bn per year on PCP and PPI
  - Regional flagship: calls on regions to do PCP & PPI also via structural funds

- 2011: Revised industrial policy communication calling for innovation procurement in support of European industrial policy
Why? To get best value for money solutions developed for public sector challenges

- Health care
- Climate Change
- Energy Efficiency
- Transport
- Security
- Public sector efficiency...

• Public sector is faced with **important challenges**.
• Addressing these, often requires public sector transformations for which **no commercially stable** solutions exist yet.
  - In many cases, solutions are near the market and would be provided if clear requirements/sufficient demand expressed by the market (**PPI**)
  - In other cases, still R&D required to de-risk technology, still different competing solution approaches to compare before committing to deploy (**PCP**)
• Public procurement is 'the tool' that enables the buyers to steer industrial R&I to its needs. However, public procurement driving R&I from demand side is **underutilised in EU**.
Why? To shorten time to market & provide first customer reference

Normally functioning procurement market (e.g. in US, Asia):
- 2,5% of ‘innovator’ type customers (PCP)
  - Who invest in R&D with suppliers ($50Bn/Y in US <-> €2,5Bn/Y in EU)
- 16% of ‘early adopters’ (PPI)

ICT public procurement market in Europe:
- 0,5% of ‘innovator’ customers (PCP)
- 5% of ‘early adopters’ of new tech in e-gov (PPI)

PCP 2,5%
Early Adopters 13,5%
Early Majority 34%
Late Majority 34%
Laggards 16%

CEF = Connecting Europe Facility
SF = Structural/Cohesion Funds
H2020 = Horizon 2020
Why? To create growth and jobs 'in Europe' How? PCP-PPI combo

- **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

Because of split between PCP and PPI:
- PCP falls outside WTO rules (conditions possible ensuring job creation 'in Europe'),
- Regardless whether follow-up PPI is only for ltd PCP test series or for large volumes requiring quantity production to recup R&D cost (normally not exempted from WTO)
EC support to PCP & PPI

Why EC support needed?
- PCP /PPI in some EU countries but not spread across rest of Europe
- Defragmenting demand side for challenges of common European interest (common requirements setting, de facto standard creation)

2009: First EU calls for proposals creating European networks of public procurers on PPI (LMI CIP) and on PCP (ICT theme FP7)

2011-2013: EC support for PCP via FP7 and for PPI via CIP
- **DG CNECT and ENTR** are piloting support to PCPs by procurers (FP7 grant: co-financing up to 75% of the price of procured R&D)
- **DG ENTR, ENV and CNECT** are piloting support to PPIs done by public procurers (via CIP grant: co-financing up to 20% of the price of the innovative solutions procured/deployed)

2014-2020: Horizon 2020 (+ possibilities in SF & CEF)
- EC can co-finance PCPs/PPIs carried out by grant beneficiaries
- EC or EU funding bodies (e.g. agencies) can carry out PCPs/PPIs on their own behalf or jointly with Member States
Projects in dotted-line are cross-border EC funded PCP projects that have started:
SILVER: started January 2012 (Supporting Independent Living of Elderly through Robotics)
CHARM: started September 2012 (Common Highways Agency / Rijkswaterstaat Model for traffic management of the future)
V-CON: started October 2012 (Virtual Construction / Modelling of Roads)
SMART@FIRE: started Nov 2012 (Integrated ICTs for Smart Personal Protective Equipment for Fire Fighters and First Responders)
DECIPHER: started February 2013 (new applications based on Distributed EC Individual Personal Health Records)
PRACE 3IP: started July 2012 (PRACE 3rd phase on high energy efficient high performance computing)

- Regulatory requirement to seriously reduce CO2 emissions by 2016 without negative effects on health/environment, beyond what market is able to offer
- PCP started in 2011, currently comparing solution approaches of 5 vendors, time-to-market shortened
- Follow-up procurement for deployment in preparation for 2014 (open to whole market)

Potential Value to NHS:
- The NIC has supported the development of innovations to improve the quality of the patient experience and generate significant cost savings to the NHS (£236m).

Value to the economy:
- With the support of the NHS National Innovation Center (NIC), a number of innovations have been able to attract significant financial investor funding (£290m).

7 Local and regional contracting authorities from 5 EU Member States carrying out this PCP jointly: city of Odense and region of Southern Denmark (Denmark), city of Västerås (Sweden), city of Vantaa and Oulu (Finland), city of Stockport (UK), city of Eindhoven (Netherlands).

SILVER contracting authorities procure R&D services via the PCP to get robotics solutions developed and tested in the 5 participating countries that will allow by 2020 to care for 10% more elderly people living independently at home with the same amount of care staff.

SILVER call for tender is 'OPEN NOW'. Potentially invited tenderers are invited to info meetings in March-April and to make offers by 12 June (see SILVER website and tender publication in OJEU)!
PPI examples
In Europe

Low carbon healthcare PPI started 2006
Introducing more energy efficient LEDs in network of over 20 hospitals in 8 EU countries
(cross border PPI cooperation funded by EC/DG ENTR)
• 30% energy consumption saving
• 88% maintenance savings
Total cost savings enable take-in of +10% patients
For more info: http://lowcarbon-healthcare.eu/
UK brand name for PPI = Forward Commitment Procurement (FCP)

Swedish environmental/energy efficiency PPIs done by NUTEK/STEM agency:
(PPI is called teknikupphandling in Sweden)
• heating-ventilation-cooling of buildings
• public transportation (hydrogen busses)
• office blocks (sun shading, lighting)
• white appliances (washing machines, fridges)
• wind energy parks

Result: Reduced the SE dependency on nuclear energy with 15% through PPIs in combination with product certification/labeling, take-up subsidies & tax incentives