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Innovation Procurement In Action

*Complementarities, the Business Case Methodology,
& Case Studies*

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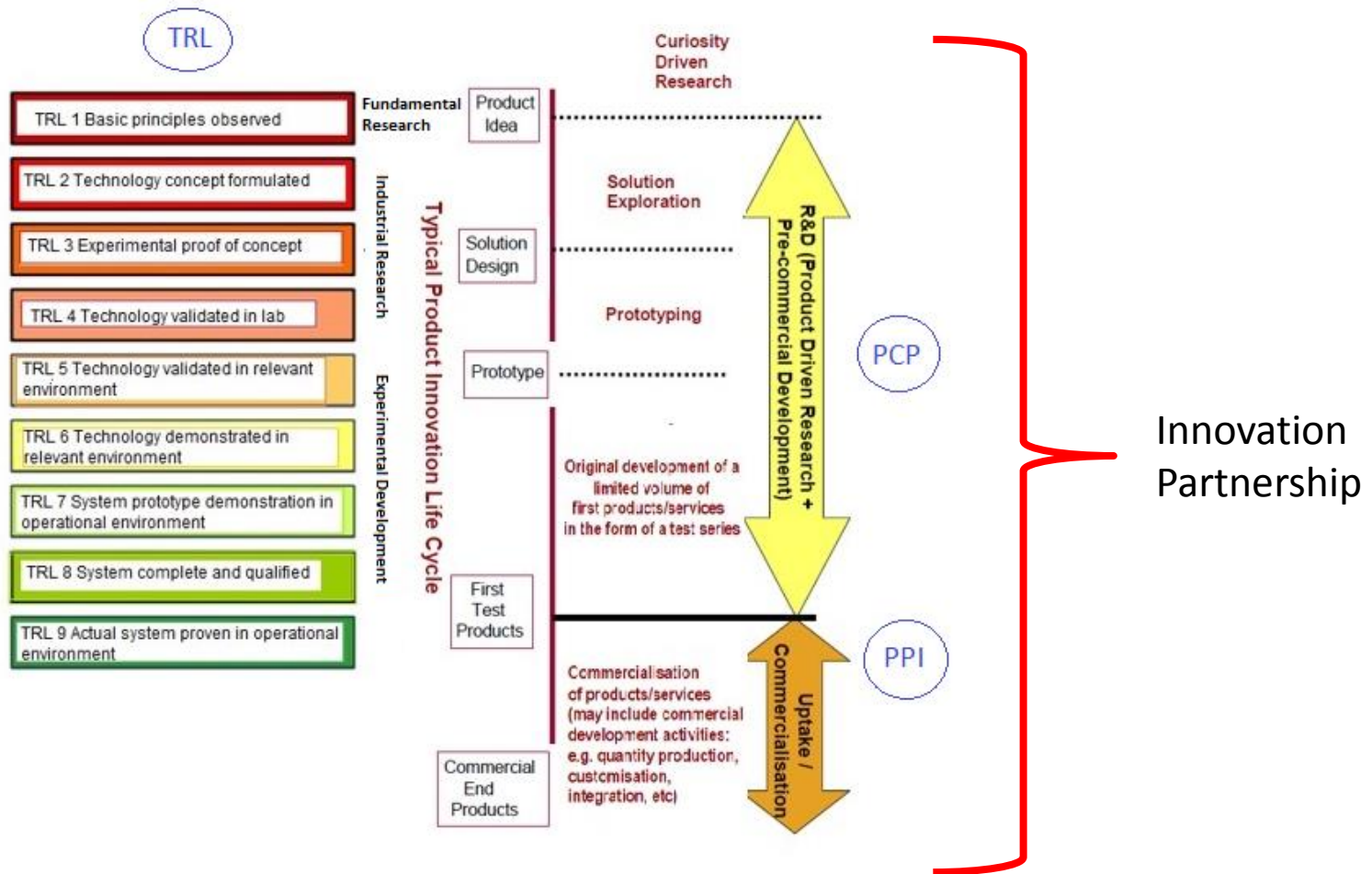
2nd SEREN3 Training for stakeholders on PCP/PPI in Secure Societies
30th of May 2017, Warsaw, Poland

Outline

- Complementarity of PCP and PPI
- The Innovation Partnership
- The Business Case methodology
 - Introduction to
 - Operationalization
- Case studies
 - Pre-commercial procurement (PCP)
 - Public procurement of innovation (PPI)
- Innovation partnerships in the new directives



Complementarity of PCP and PPI



Introducing the Innovation Partnership

- 2014/24/EU (art. 31)
- 2014/25/EU (art. 49)

- 2009/81/EC: not applicable !

Introducing the Innovation Partnership

Recitals

- Whether in respect of very large projects or smaller innovative projects, the innovation partnership should be structured in such a way that it can provide the necessary ‘market-pull’, incentivising the development of an innovative solution **without foreclosing the market.**
- **Contracting authorities should therefore not use innovation partnerships in such a way as to prevent, restrict or distort competition.** In certain cases, setting up innovation partnerships with several partners could contribute to avoiding such effects.

Introducing the Innovation Partnership

- Long-term vendor partnership that combines the purchase of R&D with the subsequent purchase of commercial volumes of end-products
- Development & purchase of “unique of specialized products/services”
- R&D and deployment in a single contract
- To avoid state aid- meet conditions of 2014 R&D&I State aid framework

PCP+PPI, or Innovation Partnership?

- How can a procurer choose between the two approaches?
- Both are equally valid; they are different procurement types for different situations
- Procurers should carefully weigh arguments for and against each
- Deployment must meet conditions of 2014 R&D&I State aid framework

	PCP + PPI (Separate)	Innovation Partnership
Applicability	No legal restriction PCP typically for non-exclusive development	Only in exceptional cases

Business Case Methodology - Review

- A **tool** to support investment decisions before, during and after the project:
 1. **before the project:** to determine whether there are enough economic reasons to start the project;
 2. **during the project:** to decide whether or not to proceed with changes to the project content, the environment, or the pattern of the project phases; and
 3. **after the project:** to assess whether the results achieved meet the public procurer's goals and, if needed, make adjustments accordingly.
- The following case studies will focus on the business case methodology before the project

Benefits of the Business Case – Before & During

1. Support for **project approval** – internally and externally
 - Outline alternatives
 - Define potential cost savings, benefits
2. Support **best value**
 - Become informed on market/technology potential
 - Translate **learnings** to improve:
 - Technical specifications
 - Key Performance Indicators (KPI)

Business Case Methodology

- Business case development
 - **Define** the problem to be addressed
 - **Gather** information to understand potential solutions
 - **Compare** costs, benefits, and risks
 - **Decide** on purchasing strategy
 - **Create** the right conditions for competition
- Inform the business case via
 - Stakeholder consultation – user needs, market consultation
 - Technology assessment – prior art analysis, IPR search
- Next we examine application of the business case methodology in a PPI and in a PCP
 - Cases gathered under the eafip initiative

Case Study – Business Case Methodology in PPI

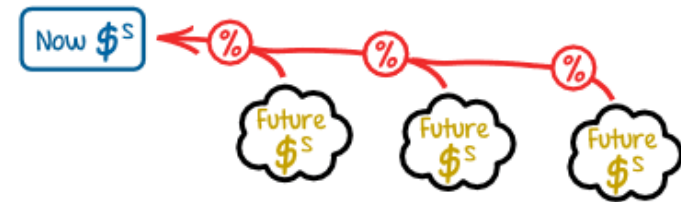
Case Study PPI – Problem Introduction

- Purchase of energy-efficient lighting
- Transport for London, 2014-2016
- For installation in 5 different areas
- Option of different lighting technology
 - **Current:** T8 Linear fluorescent lights (LFLs)
 - **Potential:** Light Emitting Diodes (LEDs)



Case Study PPI – Cost Breakdown

- Capital costs (CAPEX) - Costs of the product
- Operation expenses (OPEX) / Operations and maintenance (O&M)
 - Installation costs
 - Energy costs
 - Carbon tariffs
 - Cleaning costs
 - Storage costs
 - Maintenance costs
- Upfront vs future costs – discounting can apply



Case Study PPI – Exploring Feasibility

- **First cost comparison** (“back-of-the-envelope”) – for each area
 1. Calculate costs of current solution
 2. Calculate costs of a (typical) LED solution
- Estimate cost savings – **benefits**
- Found overall cost savings
 - Significant in two areas in particular
 - From **reduced maintenance** requirements
 - Overall benefit outweighed higher CAPEX

Case Study PPI – Informing Strategy

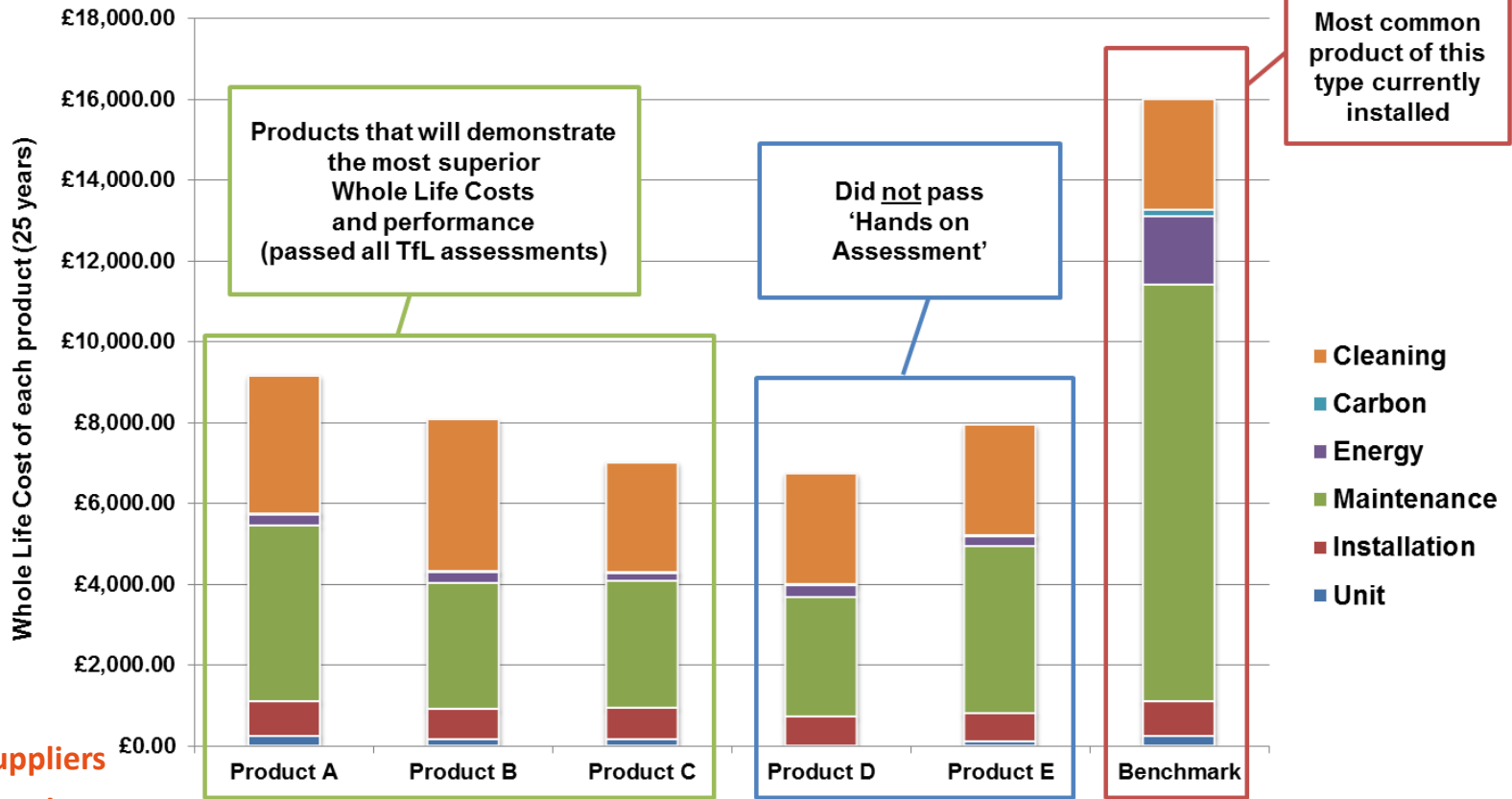
- Developed an implementation strategy to capture **highest short-term benefit**
- For areas with highest OPEX costs
 - Shorter pay-back time
 - Higher Return on Investment (ROI)
- Savings from this strategy could help cover higher upfront costs of the product
 - Made installation in other areas more attractive

Case Study PPI – Market Consultation & Internal Assessment

- Compared between **different LED technologies**
- Potential suppliers submitted **product** and **cost** information
- **Scored** potential solutions
- **Benchmarked** by comparing with current solution
- Predicted an average of 50% total cost savings over 8 years



Whole Life Cost comparison of Lighting Product Type 1 (1 of 16 types)



30 suppliers
170 products

5 Lighting products submitted by manufacturers (A-E), plus the most common product of the same type currently installed on the London Underground (Benchmark)

Case Study PPI – Outcome

- Awarded by Transport for London in June 2016
- Covered by 8 million euro framework contracts
- Eight-year long contracts were awarded to **13 manufacturers** to supply **45 products**
 - Incentives to keep improving over the contracting period
- New solution will save **25% of life cycle costs**
 - 75% on maintenance costs

Case Study PPI – Summary

Pre-Procurement

Public Procurement

Identify need
Calculate
baseline

Cost-Benefit
Analysis of the
new solution
(general)

Market
consultation

Cost-Benefit
Analysis of each
new solution
(specific)

Award best
solutions

Understand problem
& solution space

First look into
feasibility of a new
solution

Estimate range,
costs of potential
solutions

Compare potential
solutions

Compare
potential
solutions

70 suppliers
3000 products

30 suppliers
170 products

13 suppliers
45 products

Case Study – Business Case Methodology in PCP

Case Study PCP – Problem Introduction & Approach

- For improved quality/efficiency in healthcare service delivery
- Lombardy region in Italy, 2011, mid- to long-term scope
- Pre-selection – **end-user needs** assessment - WIBGI
 - Medical personnel, operators, clinical engineers, managers
- Reduction – market consultation, patent search
- Focus assessment on three possibilities
 - Automatic **robotic system** for venipuncture
 - Automatic and universal **bed mover**
 - **Universal interface** devices for home medical devices



Case Study PCP – Qualitative Cost-Benefit Analysis for Feasibility

- Current costs
 - Of equipment to be replaced
 - Due to **supply side concentration**
 - Due to **lack of open standards**/interoperability
- Expected benefits (Cost savings)
 - Due to **economies of scale**/potential market volume
 - Potential to **reduce supplier lock-in** costs
- Risks and technical complexity

Case Study PCP – Problem Reduction

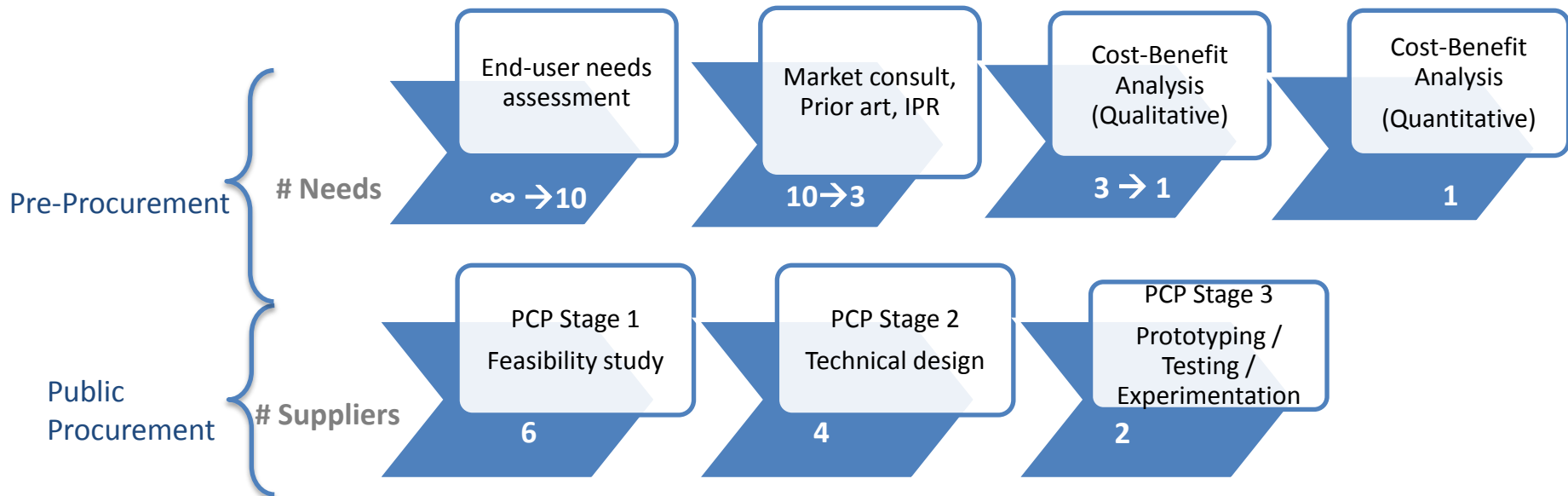
- Combined findings of market consultation and qualitative cost-benefit analysis
- Reduced the number of potential focuses to one
 - **Robotic system** had low anticipated user acceptance
 - **Universal interface** devices are less suitable to address regionally
- Identified greatest potential in addressing the **bed mover** need

Case Study PCP – Cost-Benefit Analysis (Quantitative)

- Calculated the **value** of meeting the bed moving need
- Costs
 - Current cost of bed movements – €1,843,200/year
 - Cost of R&D (PCP) – €750,000
- Benefits
 - Wide applicability – 40% of beds
 - Efficiency gains – 20% increase
 - Cost savings – €921,600/year
- 40% **expected cost savings** (labour savings, efficiency gains)
- Conclusion: R&D **investment recovered** in less than a year post-PCP



Summary – Informing a PCP Decision



Take-Aways

- Focus on pre-procurement
 - Make **informed** purchasing decisions
 - Maximize **value** of a purchase
- Business case methodology
 - Compare between **competing needs** for selection
 - Compare values of **possible solutions**
 - Inform implementation strategies
 - Based on cost/benefit analysis
- Outcomes can be highly dependent **on interactions with suppliers**



Changes with the Innovation Partnership

- Innovation Partnership covers the R&D procurement **and** the procurement of the resulting innovative solution
- **!!!** Innovation partnerships will need to be announced to the European Commission **prior to deployment** (and reviewed against the EU state aid legislation), unless:
 - It covers the development and subsequent purchase of **unique or specialised products or services => exclusive development**
 - Meaning that the procurer is the only potential buyer and all capable providers are engaged in the partnership
- Implications for value-for-money, risks, degree of R&D/innovation achieved
- How will a business case methodology change for an innovation partnership?

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Thank you!

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Discussion