Pre Commercial Procurement
Austrian Pilot Calls

MLE Innovation Procurement,
November 29th 2017, Madrid

Jeannette Klonk, Austrian Research Promotion Agency
March 2011: concept of "innovation promoting public procurement" (IÖB)

The move towards implementation was prepared through a combination of measures at the strategic, operational, legal, monitoring and benchmarking level. (~ 2-5% of the procurement volume for IÖB)

In 2010-2011 the first national Austrian PCP pilot was prepared.
WHEN CHOOSE A PCP?

Needs assessment:
- Procurement needs
- Stakeholder opinions

Market consultation:
- What is state of the art?
- What are current developments?
- Do companies understand our challenge?
- Are challenge and scope feasible, given time frame and budget – or what should be changed to make it feasible?
- What do companies need to respond to the challenge?
- Which companies might apply?
PROCEDURE: BUDGET/ EVALUATION

**Budget**
- 50% procurer
- 50% funding authority

**Beneficiaries**
- enterprises
- Universities
- research bodies

**Evaluation**
- Relevance
- Quality
- qualification
- cost-benefit ratio
innovation needs time vs. problems need quick solutions

Pre-Commercial Procurement

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<tr>
<th>Call open</th>
<th>Feasibility 5 x 50 k€</th>
<th>Prototype 3 x 250 k€</th>
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Commercial Procurement

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Guide for Applicants

Quelle: Blust, bmvit
FFG-PCP PILOT CALLS

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<tr>
<th>Year</th>
<th>PCP Call</th>
<th>Phase 1</th>
<th>Phase 2</th>
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<tr>
<td>2011</td>
<td>PCP Call 2011</td>
<td>Budget: 0.5 Mio. €</td>
<td>Einreichung: 20 Projekte</td>
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<tr>
<td>2014</td>
<td>PCP Call 2014</td>
<td>Budget: 0.2 Mio. €</td>
<td>Einreichung: 6 Projekte</td>
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- Mobiles Verkehrsmanagement für Baustellen und Großereignisse (bmvi – ASFINAG – FFG)
- Detektion von Naturgefahren (bmvi – ÖBB Infrastruktur AG – FFG)

- eHybridlok elektrisch betriebene Lokomotive im Verschub mit und ohne Oberleitung (bmvi – ÖBB Produktion GmbH – FFG)
FIRST EXPERIENCES:
2 parallel PCP Pilot-Calls (2011-2014)
co-funded by bmvit, ASFINAG & ÖBB

- **ASFINAG**: Mobile traffic management system for road works and major incidents: to enable a temporary, intensive monitoring of traffic flow for construction sites and major events

- **ÖBB**: Detection of natural hazards: detection of natural disasters to achieve sufficiently early warning and timely "suppression" of avalanches, debris flows, rock falls, landslides etc
PILOT EXAMPLE: DETECTION OF NATURAL HAZARDS

- Risk of rock fall, floods, mudflows, landslides
- Timely warning and measures reduction
- Despite different approaches many similarities
  - Safe and durable sensors,
  - universal data interfaces and protocols
  - stable energy supply and data processing
  - aligned information transfer
- Market: offers innovative approaches and solutions
  >> but are often isolated solutions
  ➔ Pre commercial Procurement
1. Phase
   • 13 Ideas
   • 5 consortia invited for the feasibility study
     ➔ big variety of innovative ideas
     ➔ experimental and pre commercial approaches

2. Phase
   • 3 consortia developed a prototype
   • followed by a 6 month test phase
     ➔ difficult to test in a row: rare events
     ➔ test phase should last for a year
     ➔ nevertheless: positive performances of all prototypes
DETECTION OF NATURAL HAZARDS:
Experiences

- exits in phase 1 because:
  - too much experimental
  - technical difficulties

- all projects reach the overall goals of the PCP

**solution assessment needs:**
comparative ratings, to elaborate the procurement basis
- comparability through a standardized performance catalogue
- comparison in the field of technological implementation
- standard system architecture, data interface and modularization
– traffic flow monitoring and steering especially in sectors without traffic management systems
– spontaneous events (accidents, unpredictable damages of infrastructure, .. )
– Long term or predictable events (roadworks, events, …)
– Information on travel times/delays, alternative routes, availability of parking spaces…
Requirements: Traffic Management System

- Easy handling (quick and easy to install and to use)
- Island system, energy self-sufficient
- Reliability of data (traffic flow, congestion, transit times)
- Reliably data submission to infrastructure operators and e.g. police
- Protection against vandalism and theft
MOBILE TRAFFIC MANAGEMENT SYSTEM

- planning
  - Sensors
  - control station
  - components

- data collection
  - traffic
  - speed
  - travel time

- traffic info
  - LED/Tablet
  - proposals
  - free text messages
RESULTS: MOVEBAG/MOVEBEST

- modular system, components/overall system
- transport in existing track vehicles
- easy assembly and disassembly thereby quick commissioning
- low energy consumption, autonomous operation until 1 W
- high data quality: total cross-sectional sensors
- visualization through camera systems, travel time-tracing, travel time, speed, traffic volume
- full graphic LED – display, expanding of display symbolism possible
- Input and output unit = outdoor tablet
- connection to traffic control centre
- reliable decision base for control measures
SECOND PILOT-PHASE
Pilot-Call 2014-2016 co-funded by bmvit & ÖBB

- ÖBB: eHybridlok for electrical shunting (without the need of diesel)

- 6 Submissions
  - >> 4 feasibility studies selected
  - >> summer 2015: 2 selected for prototype-development
PCP PILOT
the learnings so far

- **competition** → to increase quality and innovation
- **R&D service contract** → 100% financed, results published
- **shared IPR** → non exclusive rights of use and exploitation for both client AND supplier

- PCP is an instrument for **public procurers**!
- **Most important** to start a PCP:

  You need a problem that will be **solved by procuring** an innovative solution.
R&D INNOVATION PARTNERSHIPS
FFG concept
New procedure: Directive 2014/24/EU

- aims at the development of an innovative product, service or works and the subsequent purchase of the resulting supplies, services or works

- combines PCP and commercial procurement

- one partner or several partners conducting separate research and development activities

- conclusion of the IP-contract via competitive procedure with negotiation
THE PROCEDURE

R&D Innovation Partnership

- adapted for the procurer’s problem
- multidisciplinary
- cooperative R&D projects
  (#single firm projects)

result: solution

public procurer

solution/product not available on the market
THE FUNDING INSTRUMENT

Implementation framework R&D Innovation Partnerships

- Call (1)
- Innovation Partnership

- Pre-qualification
- Tender

E.g.
- Problem
- Professional competence
- Reference projects, R&D experiences, technical equipment
- Number of partners

- Individual design (customized to the procurer's needs)

- Assessment & selection

- R&D phase (2)
- Purchase (3)

- Procurement

- Optional Selection step
- Prototypes

Funding instruments (FFG portfolio)
Flexible use, customized to the procurer

Parties
- FFG - procurement expert
- FFG - program manager
- Government (bmwi, BMWF, KUEN, etc.)
- FFG - thematic experts, external evaluators
- Companies
Further Information:
https://www.ffg.at/Beschaffung
https://www.ffg.at/europa/h2020/pcp-ppi
http://www.ioeb.at/