INNOVATION PROCUREMENT FOR ROADS

Road Safety, a continuous challenge
WORKSHOP CEDR-DIRCAIBEA

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Spanish Road Technology Platform, is a discussion forum for all Science-Technology-Enterprise stakeholders with a significant role in the promotion of employment, competitiveness and growth of Spanish road infrastructures. R&D is our business.
Innovation procurement, is it new?

Only the name, but the core idea was born in 60’s.
Innovation procurement

Culture change
Why supporting innovation procurement?

R&D strategies often require specific approaches depending on the characteristics of supply and demand.
Why supporting innovation procurement?

- 18%-19% of EU GDP is public procurement.
- R&D takes place in a supply-demand environment.
- R&D depending only on grants will not survive.
What about demand?

- System based on guarantees.
- Tenders based on product / service specifications, not on performance.
- Lack of a deep analysis of existing needs / challenges / problems.
What about demand?

+ [more for less]

- Lack of financial resources.
- Citizens demand top quality service
What about supply?

Constraints on innovation

- Market based on price.
- Almost 100% customers are public sector.
- Industrial rights protection.
- Profitability
Why supporting innovation procurement?

Innovation

Innovation means market uptake
A structured dialogue with stakeholders is needed to foster and accelerate the application of results
Negative effects of slowness in applying innovation:

- Discourages R&D investment.
  - Lack of profitability
  - Competitors have time to copy and improve ideas (patents are not “wellcome”)
- Particularly harmful for SME’s, universities and technology centers.
Two procedures to implement innovation procurement.

- **CPTI** (public procurement of innovative technologies). Intended for products/technologies close to market.

- **PCP** (pre-commercial procurement). Intended for the supply of R&D services.
Innovation procurement contracts

- **PCP** to steer the development of new solutions towards concrete public sector needs, whilst comparing/validating alternative solution approaches from various vendors and enabling new players to prove themselves against established ones.
- **PPI** to act as launching customer / early adopter / first buyer of innovative commercial end-solutions newly arriving on the market.

**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

[Diagram showing the phases and suppliers involved in PCP and PPI processes]
First experience of innovation procurement in the road sector in Spain
LACK OF VISIBILITY BECAUSE OF THE FOG

- 4.5 Km in a mountain.
- Elevation fog.
- Very dense fog: visibility under 50 m.
- Can last several days
- Seasonal: summer
Implemented actions: most of the commercial state of the art.

- **Carteles y señales de refuerzo**: alta reflectancia, limitación de velocidad 80 km/h, prohibición de adelantamiento de vehículos pesados y obligatoriedad de alumbrado.

- **Paneles de mensajería variable**: informar al usuario acerca de las condiciones meteorológicas, restricciones de tráfico, incidencias y desvíos.

- **Visibilímetros y estaciones meteorológicas adicionales**.

- **Refuerzo señalización del viento y balizas de niebla**: en márgenes de la plataforma e interconectados con el Centro de Gestión de Tráfico del Noroeste.

- **Radar de tramo**: en la calzada izquierda.

- **Protocolo de actuación con niebla densa y viento entre la DGT, Guardia Civil, Ministerio de Fomento y Protección Civil (similar a Planes de Vialidad Invernal)**.
Preliminary market consultation

• 26 proposals
• PCP procedure
Objectives

Close the gap, boosting innovation
Close the gap

Early “reality check”
Close the gap

- Workshops to identify needs, challenges, and problems.
- Focused on functional requirements.

Almost half of the identified needs have to do with road safety.
Close the gap

Innovative technologies/products catalogue
Roadmap for innovation procurement

- Public administrations must identify challenges / problems / needs.
- Ask the "market" how needs can be solved.
- Choose the best way:
  - Standard procurement.
  - PPI
  - PCP

Culture change
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