



Smart Transportation Alliance

# **2016 Annual Conference & Innovation Awards**

Brussels, Wednesday 3 February 2016



Smart Transportation Alliance

## **Thematic Session 2:**

Bringing Smart Transportation  
Infrastructures into Reality

*2016 STA Annual Conference & Innovation Awards*

# Case Studies

**Dr.Ing. Wim Van den Bergh**, *Ass. Prof Infrastructure, Research coordinator EMIB, Faculty of Applied Sciences, University of Antwerp*

**Dr José Manuel Menéndez**, *Director of the G@TV Research Group at the Technical University of Madrid*

**Mr César Bartolomé**, *Director for Innovation at the Spanish Institute for Cement and its Applications*

**Mr Patrick Asimus**, *President & CEO, Movea SAS*



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# Innovation for Sustainability

**César Bartolomé**

Spanish Institute for Cement and its  
Applications

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# Smart Sustainability



**Roman road in Mérida  
(Spain)**

- Natural resources? **YES**
- Performance? **YES**
- Comfortable? **YES**
- Durability? **YES**
- Would it be sustainable today? **NO**

**Sustainability = Innovation**

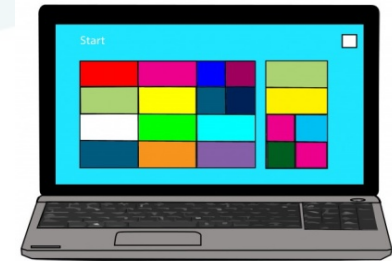
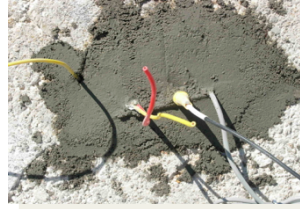
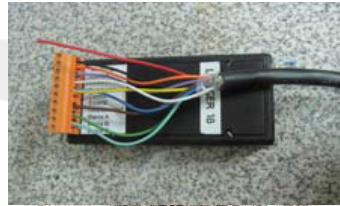
# Smart Monitoring Dynaport

## HOW TO INCREASE INFRASTRUCTURES SUSTAINABILITY?

- **What is Dynaport?** A research project aiming at developing a dynamic tool for the design and maintenance of ports.
- **Main concepts:**
  - LCA and LCCA
  - Performance indicators
  - Monitoring (sensors)
  - Real time data
  - Preventive maintenance

# Smart Monitoring Dynaport

Performance  
Indicators



Methodology

Monitoring

Sensors

Data Collection

Results

Less maintenance  
costs  
Higher durability

Higher  
sustainability

## HOW TO ASSESS SUSTAINABILITY OF INFRASTRUCTURES?

**LCE4ROADS:** A research project aiming at developing a new, holistic and EU-harmonised Sustainability Certification System for roads, integrating by a Life Cycle Engineering (LCE) all the sustainability pillars and road phases.





## APPROACH



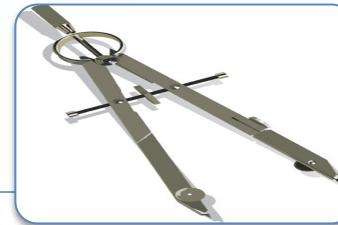
SOCIAL



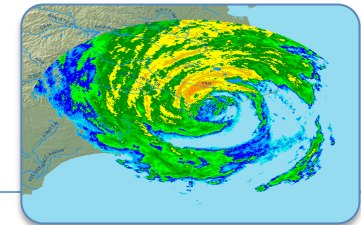
ENVIRONMENTAL



ECONOMIC



TECHNICAL



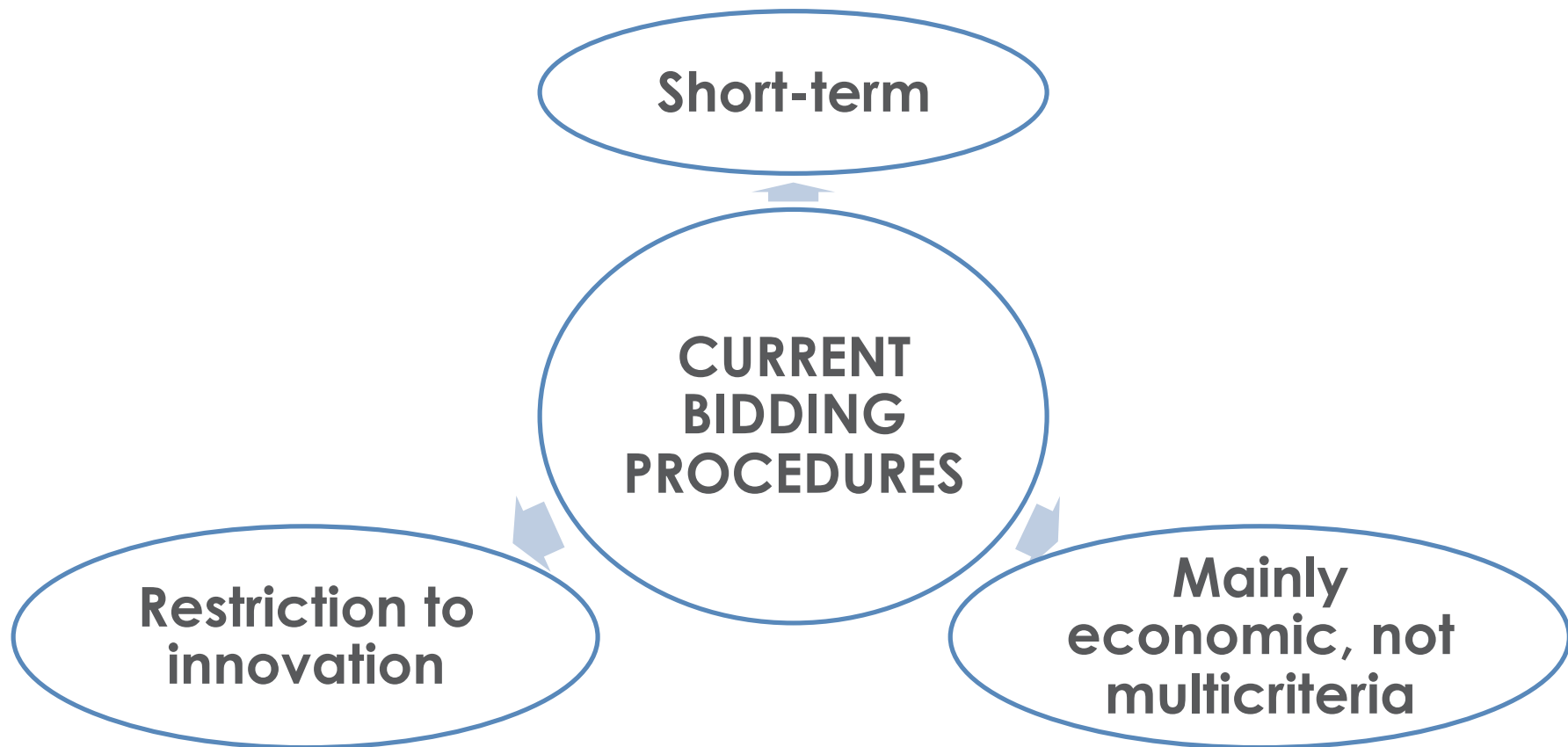
CLIMATE RESILIENCE

## Results:

- LCE4ROADS certification system guide and software tool.
- Implementation strategies to foster GPP
- Initial activities towards standardization.

# Sustainable Bidding Innovative Public Procurement

## HOW TO PROMOTE SUSTAINABILITY OF INFRASTRUCTURES?



# Sustainable Bidding Innovative Public Procurement

**What is Innovative Public Procurement?** A procurement procedure where the owner demands a product that is not in the market.



**Deteriorated pavement in  
Huelva**

- Specific solution? **NO**
- Performance:
  - Thin overlay (10 cm)
  - Low noise (90 db(A))
  - Durability (20 years)
  - ADT heavy vehicles: 4.000

**Innovation**



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**Thank You for Your Attention**

**César Bartolomé**

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