



# **Introduction and Use Case COBRA tool v0.31**

21 November 2012  
Delft, the Netherlands

- Demo of COBRA tool
  - Feedback on
    - Inputs
    - Outputs
  - Ease of use
- Background of project
- Methodology
- Bundles
- Tool

- COoperative Benefits for Road Authorities
- ERA-NET road programme
- Sept 2011 – Feb 2013
- 415K €
- Partners:



Project coordinator



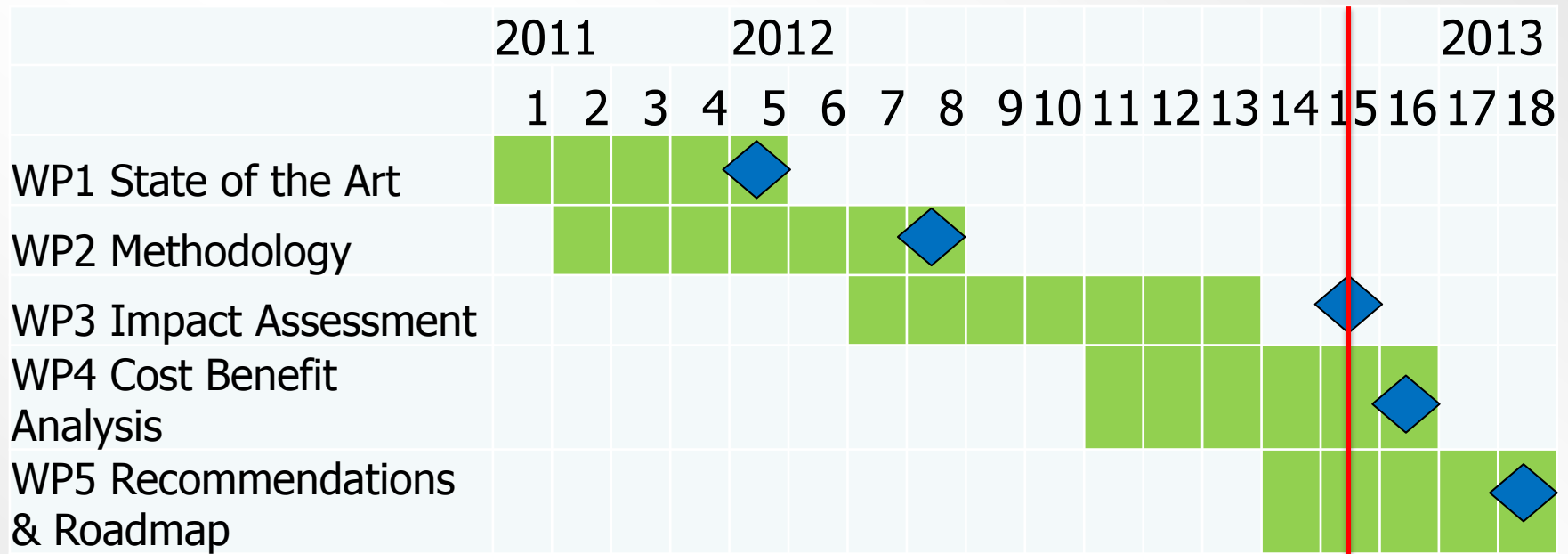
Project partner



Project partner



Subcontractor



- Aims to support investment decision by NRA to deploy CS
  - compare cooperative platforms
  - societal cost and benefits, and costs (savings) for NRAs
  - decision to be taken in next 5-10 years
- Flexible, can be expanded in the future

- Impact Assessment
  - Safety, traffic efficiency, environment
  - At Bundle level (3 in total)
- CBA: Depends on
  - deployment level
  - Legacy systems
  - Reference scenario
- BM
  - Several choices

- Local dynamic events
  - Hazardous location notification
  - Road works warning
  - Traffic jam ahead warning
  - eCall
- In-vehicle speed and signage
  - In-vehicle signage
  - Intelligent speed adaptation
  - Dynamic speed limits
- Information services
  - Traffic info and recommended itinerary
  - Multimodal traffic information
  - Parking information and guidance

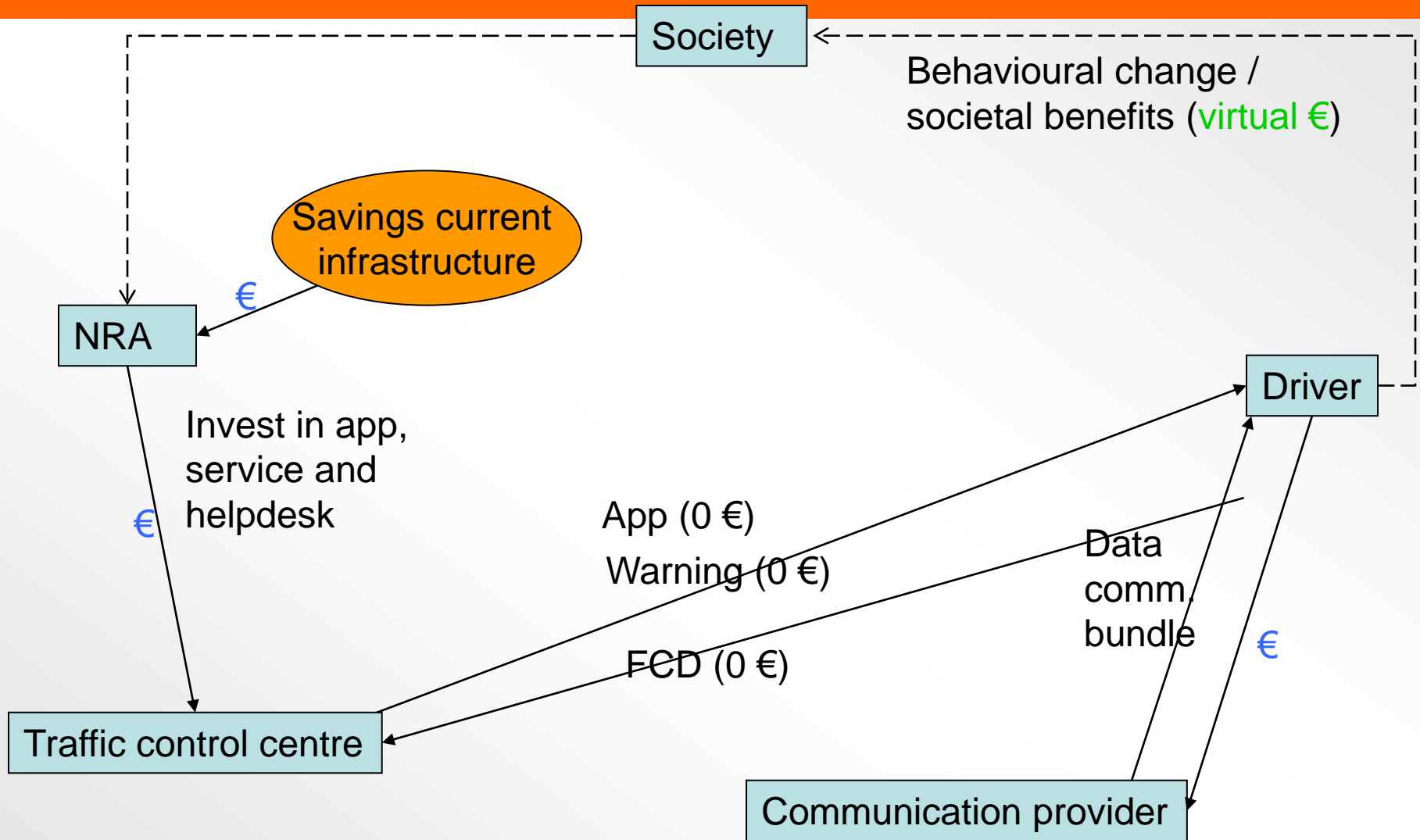
# Combinations Bundles and Platforms

Bundle	Cellular	Wireless Beacons
Local dynamic events		
In-vehicle speed and signage		
Information services		N/A



- BM1 - Free RA app (Cellular)
- BM2a - commercial app (Cellular)
- BM2b - Navigation extended (Cellular)
- BM3 - Public travel time information (Cellular)
- BM4 - Private dynamic navigation (Cellular)
- BM5 - Public road-side (Wireless beacons)
- BM6a - PPS (road-side private; app by NRA)  
(Wireless beacons)
- BM6b - PPS (road-side by NRA; app private)  
(Wireless beacons)
- BM7 - Private road-side (Wireless beacons)

# Example Business Model: Free road authority app



- UK
- Local dynamic event warnings
- Cellular
- Business Model 1
- Low penetration level

Thank you for your attention

Kerry Malone

Kerry.malone@tno.nl

Tel: 00 31 88 86 68559