

SafetyCube

# Safety CaUsation, Benefits and Efficiency

[www.SafetyCube-project.eu](http://www.SafetyCube-project.eu)

**Pete Thomas, George Yannis, Eleonora Papadimitriou**

Transport Research Arena

18 April 2016

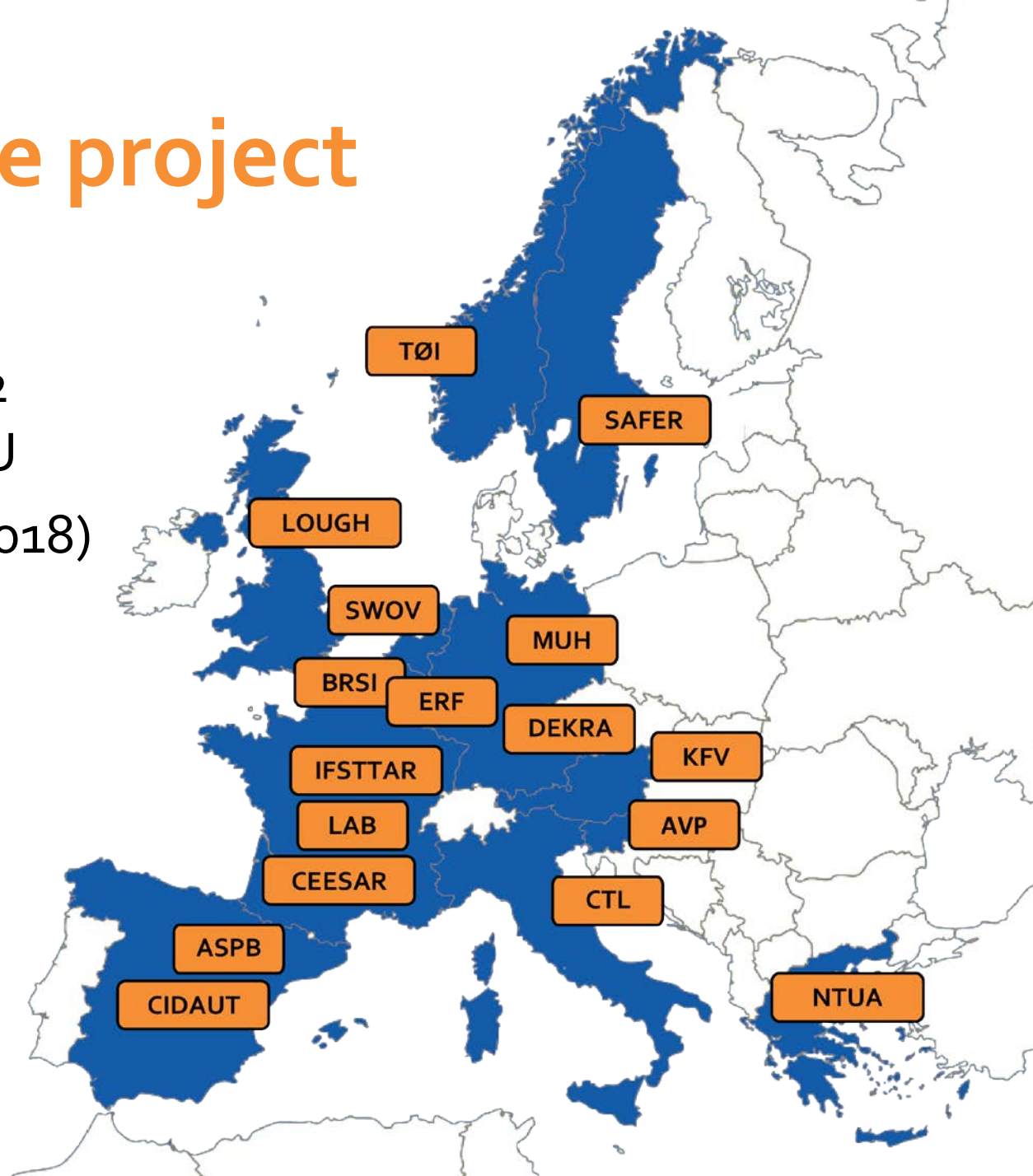


Co-funded by the Horizon 2020  
Framework Programme of the European Union

06-Mar-17

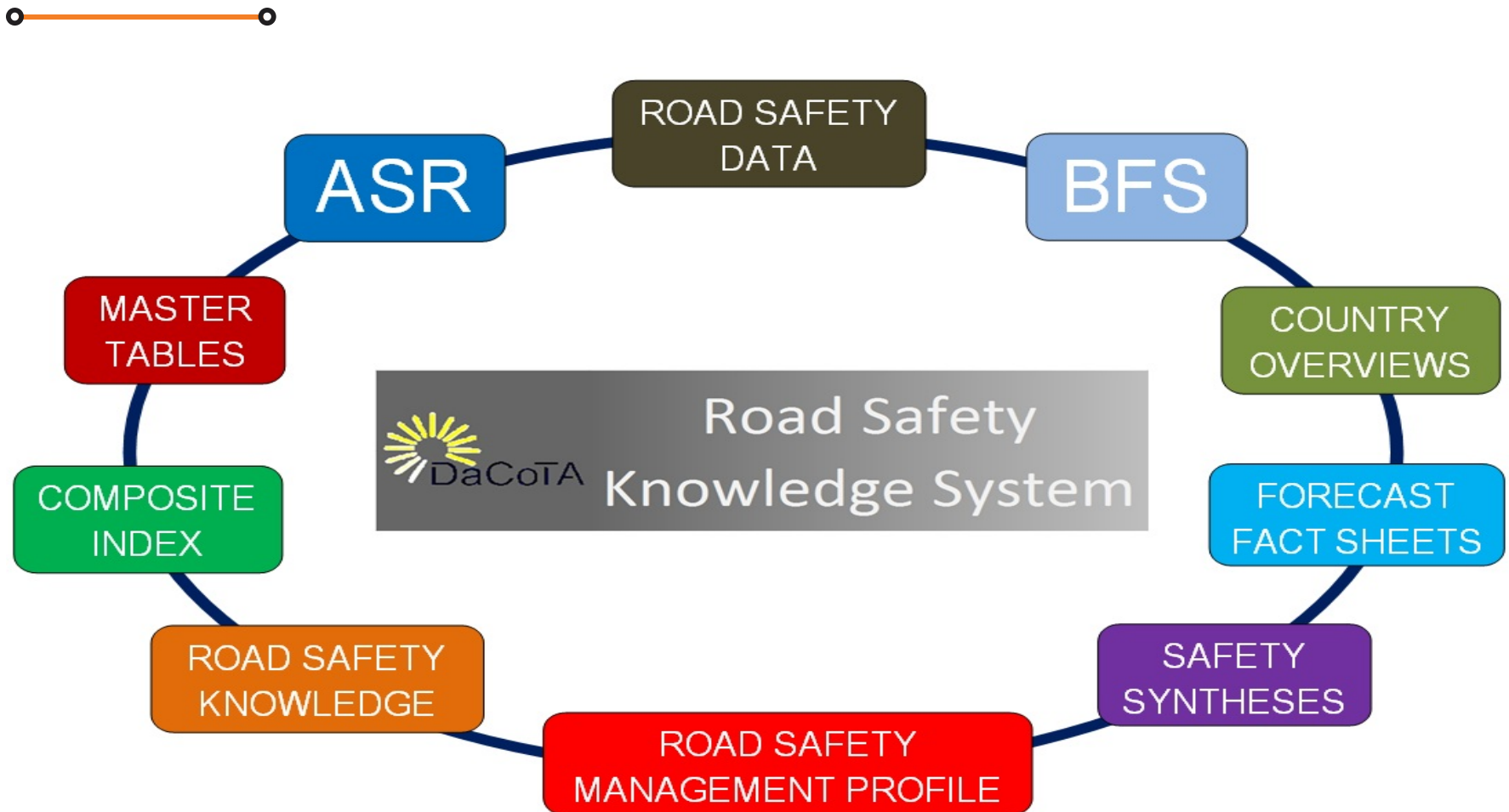
# SafetyCube project

17 partners from 12 countries within EU  
(May 2015 - April 2018)



# European Road Safety Observatory

A publicly accessible repository of data and knowledge developed to scientific standards



[www.erso.eu](http://www.erso.eu)

# SafetyCube concept



- Problem
  - *Evidence based road safety policies are becoming more usual and there is much better availability of national data and state of the art knowledge*
  - *Effective road safety policies need good information about accident risk factors and about measures*
- SafetyCube will meet this need by generating new knowledge about **accident risk factors** and the **effectiveness of measures** relevant to Europe
- It will structure this information so it can be readily accessed at both top level and in-depth to meet the needs of all stakeholders



# Evidence-based policy-making



Identify and quantify risk factors

Long-term follow up

Select potential measures

Evaluate safety effects

Estimate expected costs and benefits

Implement interventions

SafetyCube



# What is a risk?



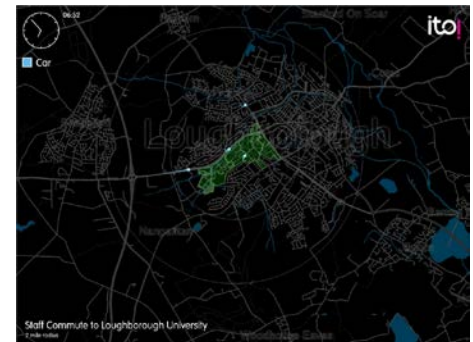
- “Risk factor” denotes any factor that contributes to accidents or injuries.
- There are risk factors related to all elements of the road system and the interactions between these elements.
- The importance of a risk factor can be defined as the size of the contribution it makes to accidents or injuries.



# What is a measure?



- A measure is any action intended to reduce the numbers of accidents or injuries.
  - *May reduce the risk of a crash*
  - *May reduce the risk of injury*
  - *May reduce exposure to risk*



# Challenges in evidence based approaches



- Do we have a comprehensive method to identify risks?
  - *Road, road users and vehicles*
- Do we have a comparable method to evaluate measures?
  - *Road, road users and vehicles*
- How do we estimate the likely casualty reduction of a measure that has not been introduced to the real-world?
- Do we have a comprehensive method to evaluate cost-effectiveness?
- How do we handle the situation where there are many measures of effectiveness but they disagree?





# Challenges to access the evidence base



- Much of the evidence on risks and measures is in the research literature – how can it be brought together?
- How can we assess transferability of measures from one country to another?
- How can the available information and data be synthesised?



# SafetyCube will meet these challenges



SafetyCube will

- Provide new information about the **effectiveness** of measures by bringing together published information
- Produce a comprehensive method to evaluate the **costs and benefits** of measures
- Produce new information about **seriously injured** casualties
- Produce a new **Decision Support Tool** that will enable easy access to information on risks and measures



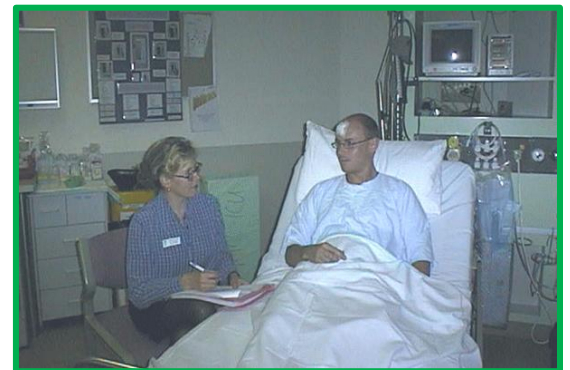
# SafetyCube will

- Improve the evidence base for road safety policy-making
- Develop a new Decision Support System
- Bring together data about risks, measures and cost-effectiveness within a single comprehensive framework



# Serious injuries

- — ○
  - Assess and improve the estimation of the numbers of serious road injuries
    - *Trauma registers*
    - *Correction factors*
    - *Record linkage*
  - Determine and quantify health impacts of serious road injuries
  - Estimate economic and immaterial costs related to serious road injuries
  - Identify key risk factors related to serious injuries and their health impacts.



# Contact



- [www.SafetyCube-project.eu](http://www.SafetyCube-project.eu)

- Pete Thomas

- Professor of Road and Vehicle Safety

- [p.d.thomas@lboro.ac.uk](mailto:p.d.thomas@lboro.ac.uk)

- Smart and Safe Mobility Research Cluster
- Loughborough University
- Leicestershire
- LE11 3TU
- United Kingdom
- Tel: +44 (0)1509 226931