



ECTRI Annual Meeting Thematic Group Safety  
Brussels, November 16, 2023

# Advances for proactive road safety: The PHOEBE project

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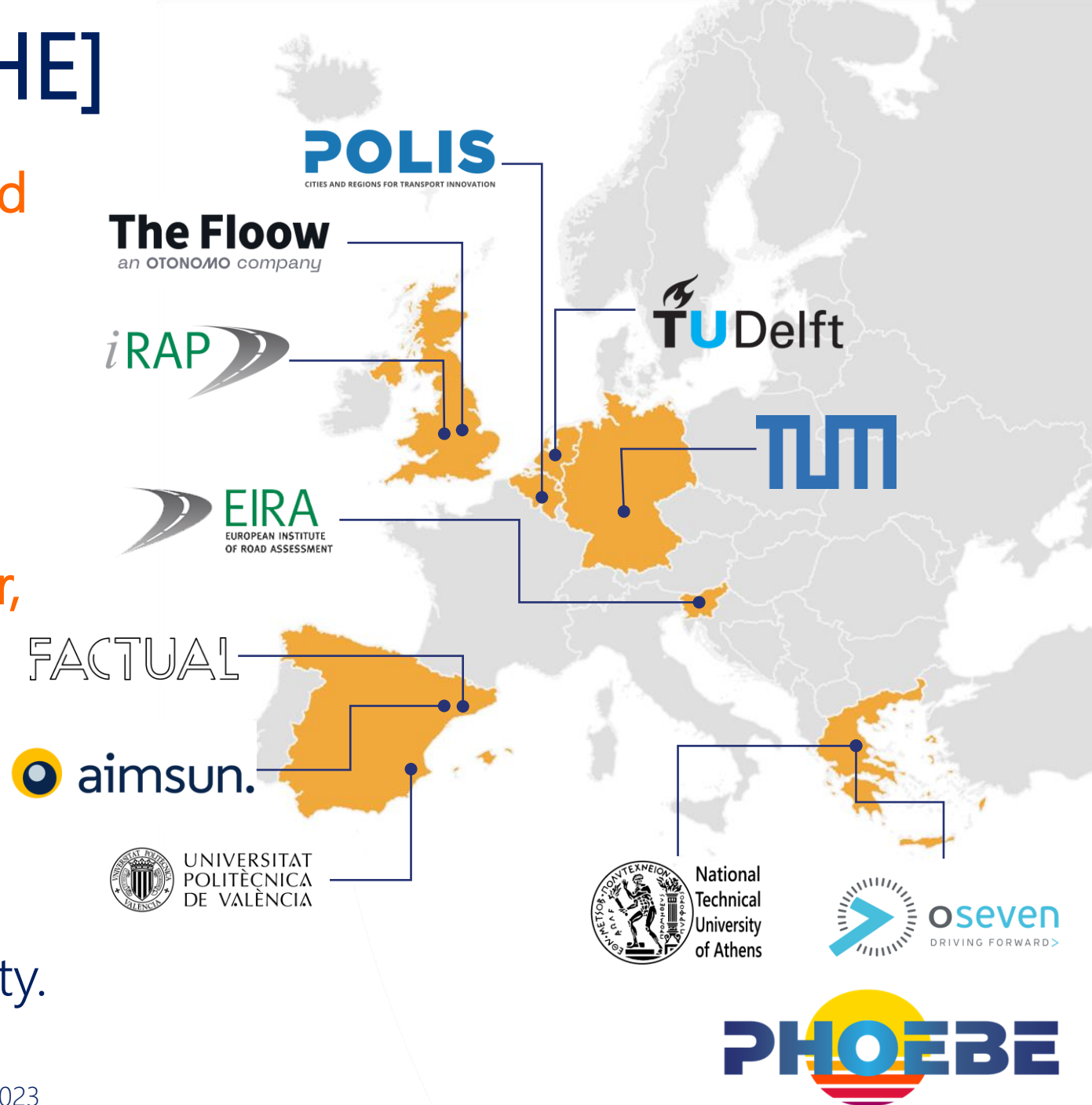


Department of Transportation Planning and Engineering,  
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# The PHOEBE Project [HE]

- Develops an **integrated, dynamic and scalable human-centred** predictive safety assessment framework for all road user types in urban areas.
- Combines **traffic simulation, road safety assessment, human behaviour, mode shift and induced demand modelling**
- Utilises **new and emerging mobility data** into a harmonised, prospective assessment framework for road safety.



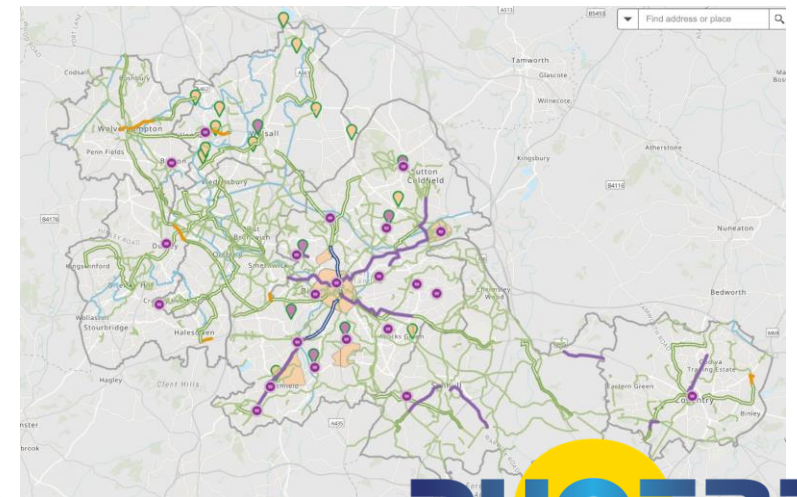
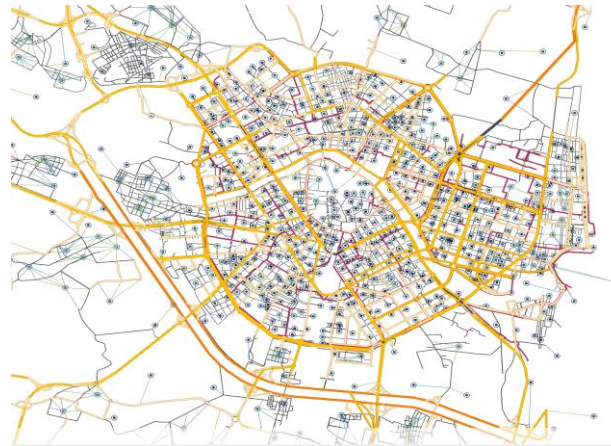
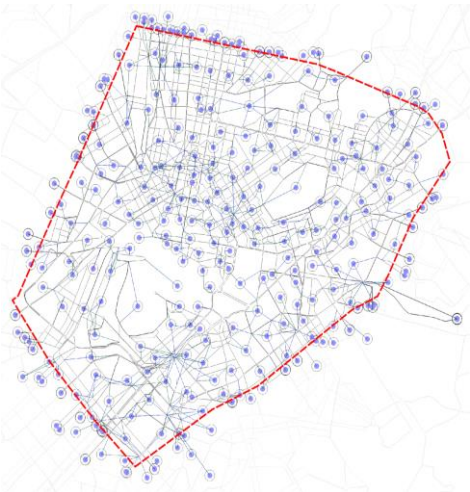
# Project Objectives

- To develop a new, replicable methodology for **dynamic safety prediction and socio-economic evaluation**
- To **harmonise safety definitions** in traffic simulation models
- To develop **enhanced and integrated urban risk assessment models and tools**
- To **embody social components into risk assessments** to take into account changes in human behaviour, and mode & trip choices
- To **exploit big data and telematics** through AI and ML data analysis techniques that are innovative and efficient
- To apply the proposed methodological framework and enhanced and integrated predictive modelling tools in an **experimental multi-use-case**





# Use Cases [1/2]



# Use Cases [2/2]



**ATH**



**VLC**



**WM**

## Type of intervention

Enhanced VRUs space  
Optimised parking arrangements  
Speed management

Micromobility facilities update  
Speed management  
Increase in e-scooter usage

Changes to speed limits  
Active travel and micro-mobility  
Bus services  
Autonomous vehicles

## Scope of analysis

Area

Corridors

Intersections + corridor

## Validation

Before and after analysis

Control sites

Forecast

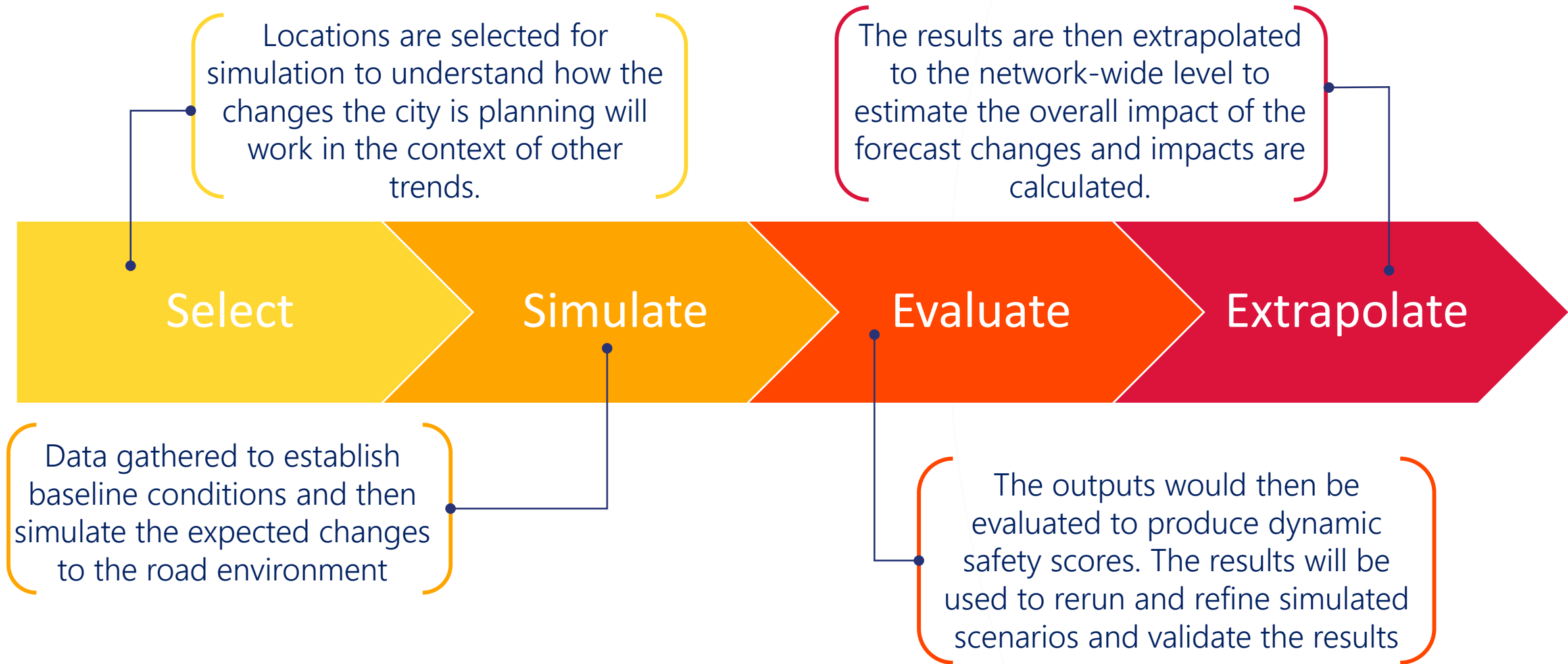
## Model availability

Ready to use

Need development in  
the micro level

Ready to use

# The Methodology







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