

LUNA (Simulating the demand for Long-distance travel Using a Non-OD-matrix based Approach)



- **Start of development:** 2011
- **Topic:** Multimodal estimation of long distance travel demand (leisure and business trips)
- **Coverage:** EU27 plus Norway and Switzerland on a national level

- **Background:**   

- **Link:**

www.ivv.tuwien.ac.at/forschung/projekte/international-projects/origami-luna/ & www.transport-research.info/project/optimal-regulation-and-infrastructure-ground-air-and-maritime-interfaces



- **Modes of transport:** Private car, Bus/coach, Railway, Air and Maritime
- **Trip purposes:** Vacation, Business
- **Sub-Models/Modules:**
 - a population cohort model,
 - a household formation model,
 - a car ownership model,
 - a non-OD-matrix based transport demand model,
 - an aggregate transport supply model and
 - a module calculating evaluation indicators.
- **Time horizon:** 2010 to 2050 in time steps of one year

LUNA (Simulating the demand for Long-distance travel Using a Non-OD-matrix based Approach)



Simulating the demand for Long-distance travel Using a Non-OD-matrix based Approach

Version 3.0

Socio-demography and economy

- Population >
- Households >
- Employment >
- Household income >

Transport model

- Car availability >
- Trip rates >
- Transport demand >
- Transport supply >

Friction factors

- Car business >
- Coach business >
- Rail business >
- Air business >
- Maritime business >

Input

Definition of scenarios

Family	0
Life expectancy	2.7
Migration	3
Employment	4.2
GDP	6
Technology	0
Transport policy	0

Output

Calculation output indicators

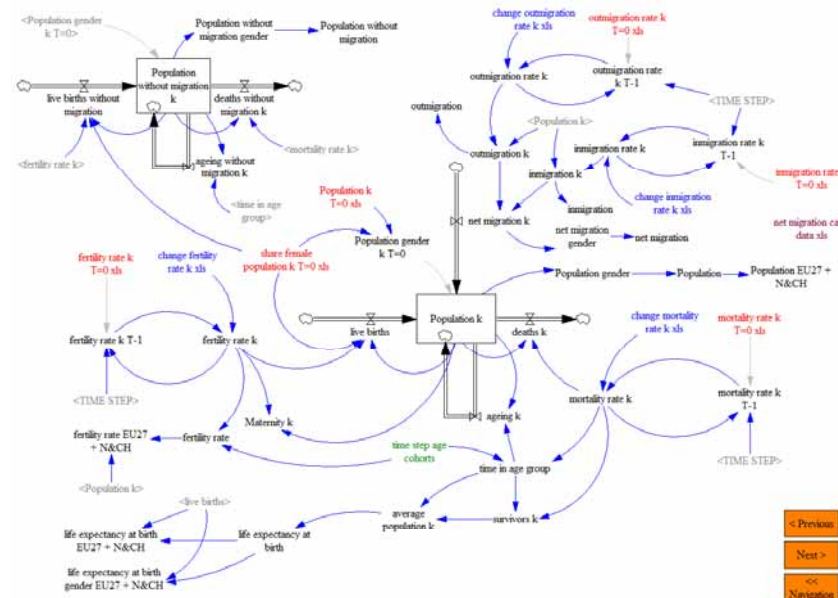
- Mobility indicators >
- User travel time >
- User travel costs >
- GHG emissions >
- PM emissions >
- Fuel consumption >
- Equity >
- Employment >

Output indicators

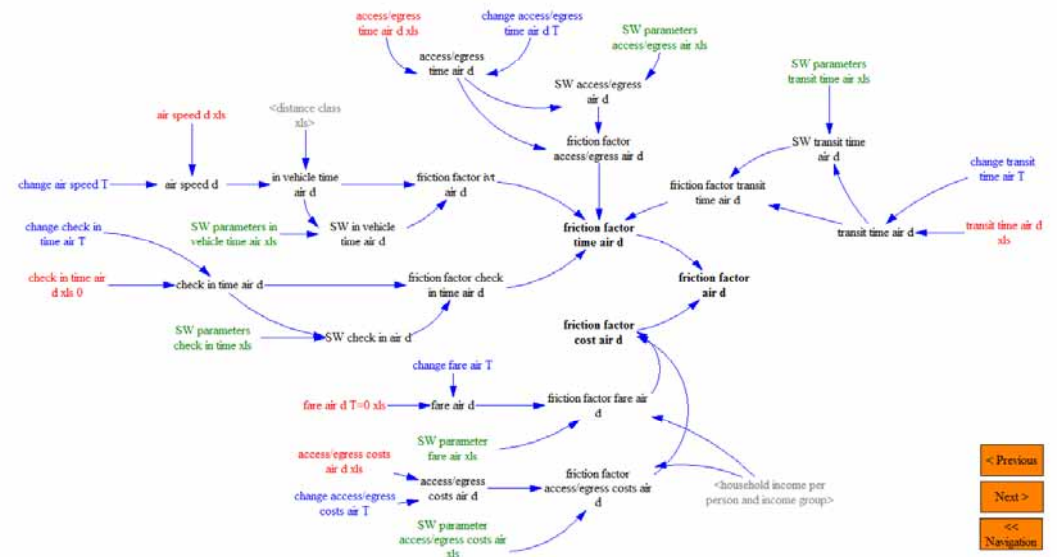
ORIGAMI
Central Population and Infrastructure for Ground, Air and Maritime Interfaces

LUNA is a product of the project ORIGAMI co-funded by the European Commission within the Seventh Framework Programme, Theme 7 Transport.

(c) 2013, Paul Pfaffenbichler, Institute of Transportation, Vienna University of Technology



Vacation: air

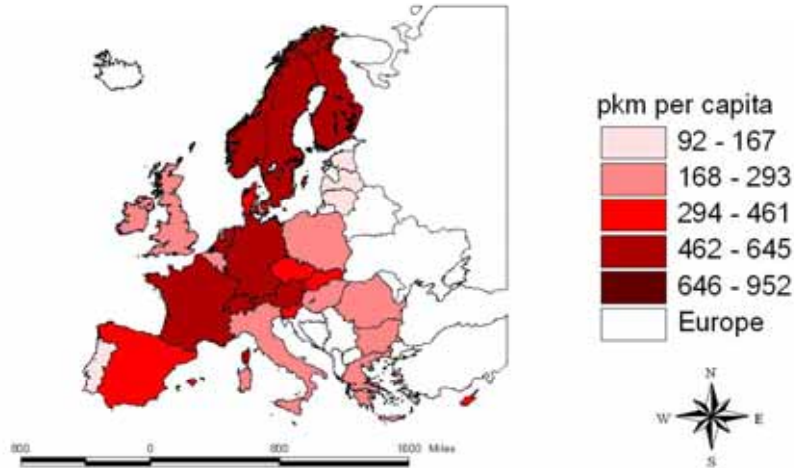


LUNA (Simulating the demand for Long-distance travel Using a Non-OD-matrix based Approach)

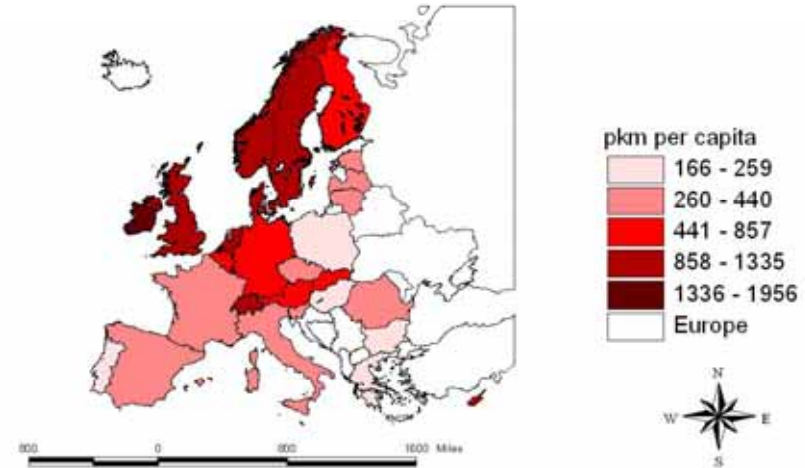


- Results

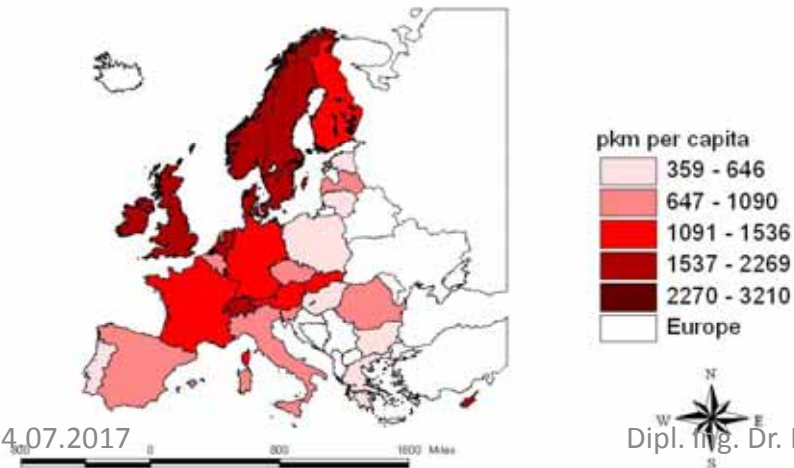
Car 2010



Air 2010



Total 2010



Difference Normative - Baseline 2050

