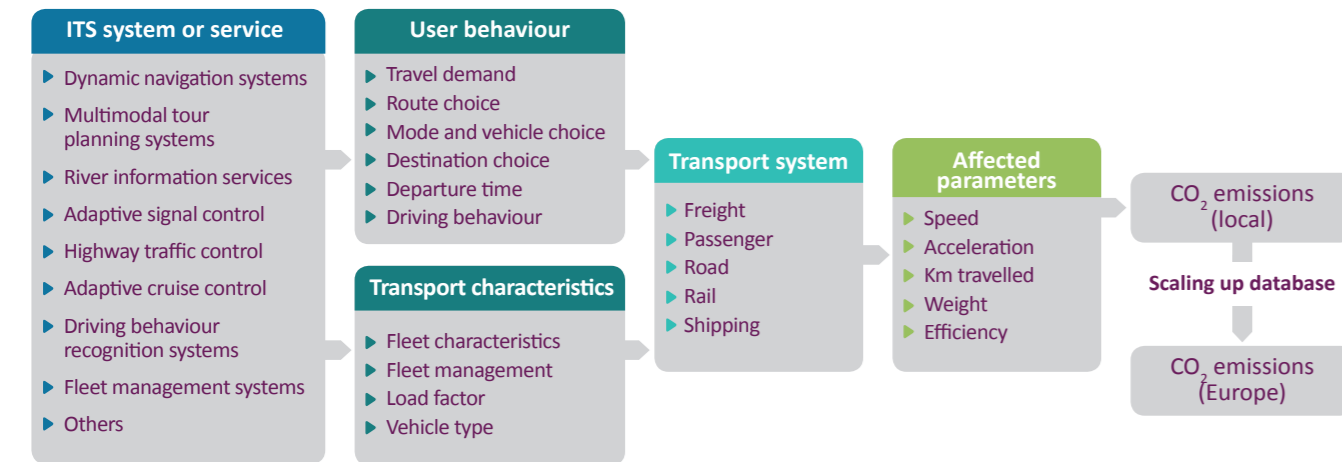


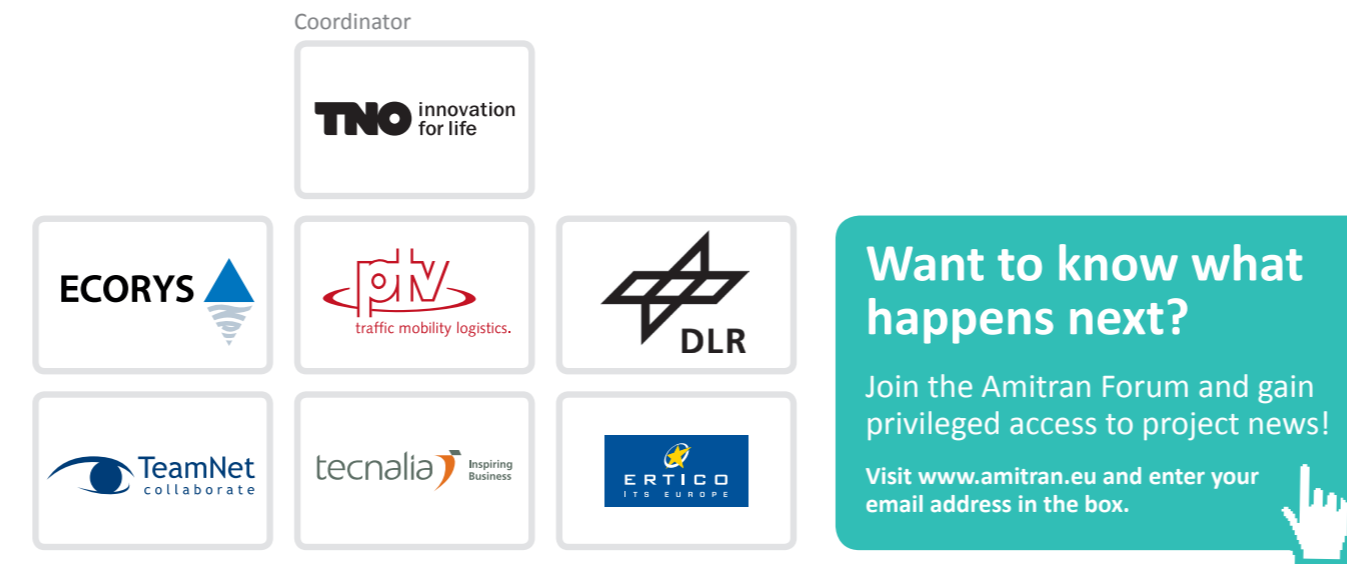
Amitran's assessment framework

Information and communication technologies (ICT) may impact transport CO₂ emissions through multiple pathways. For example, starting from the pre-trip phase, ICT might influence destination, route or mode choice – or even trip generation altogether. During the on-trip phase, a driver with a navigation device might be prompted to adjust his or her route, or receive advice on how to adopt a more environmentally friendly driving style.

For the public transport and freight sectors, factors such as vehicle choice, load factor and, more importantly, fleet management, have a substantial effect on fuel consumption and carbon emissions. Finally, in the post-trip phase, the user receives feedback about his or her performance and recommendations on how to tackle driving inefficiencies.



Consortium partners



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Duration: 30 months (1 November 2011 - 30 April 2014)
 Total cost: €2.6 Million
 EU contribution: €1.9 Million
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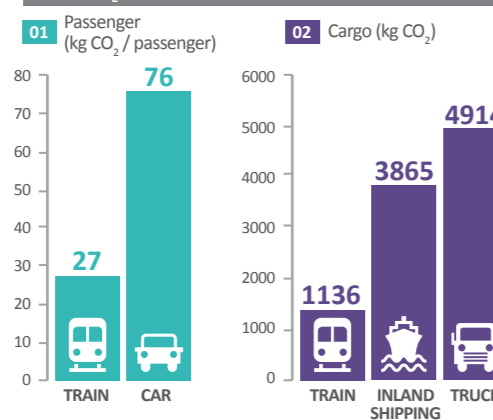
CO₂ Assessment Methodology for ICT in Transport

CO₂ assessment methodology for ICT in transport

The European Commission has set the ambitious target of reducing transport CO₂ emissions by 60% from 1990's levels by 2050. To achieve this goal, specific targets in terms of city logistics, low carbon fuels and modal shift were also set. Intelligent transport systems (ITS), by applying information and communication technologies to the transport sector, will become major contributors in achieving such targets if successfully deployed.

Currently, there is no standardised method for estimating the impact of ITS measures on CO₂ emissions. Different projects and organisations are free to employ various methodologies, which leads to difficulties in comparisons and benchmarking, perhaps even inaccuracies.

CO₂ emissions for a hypothetical journey

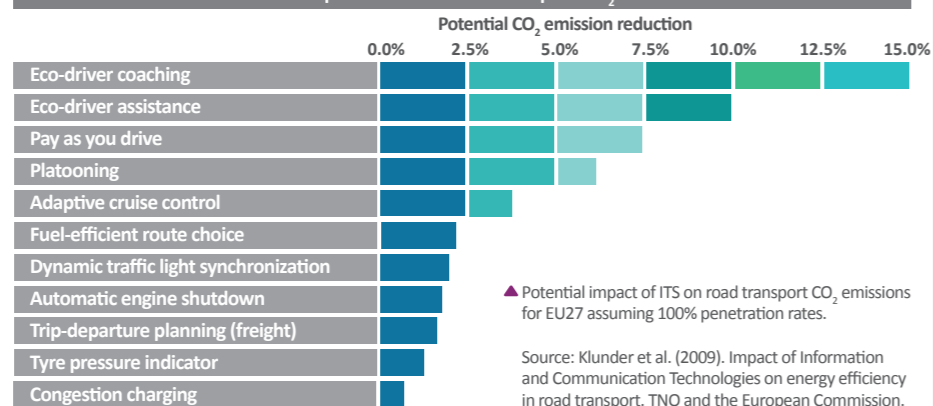


CO₂ emitted to transport a passenger (left graph) or 100 tons of containerised cargo (right graph) from the Port of Rotterdam to Berlin Adlershof (DLR's site). Estimations include emissions produced during energy provision, production and distribution, as well as during vehicle operation.

Source: simulations in EcoTransit (www.ecotransit.org) and EcoPassenger (<http://ecopassenger.hafas.de>) websites.



Potential impact of ITS on road transport CO₂ emissions



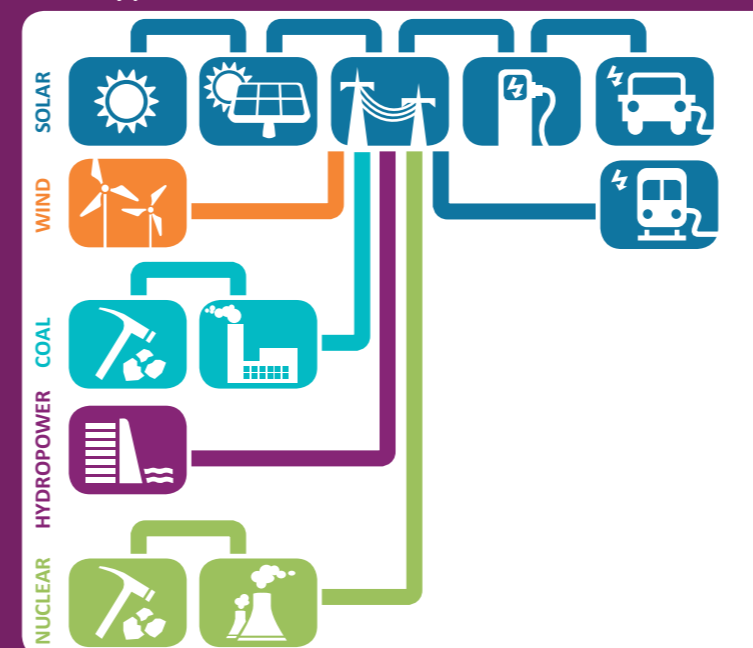
Potential impact of ITS on road transport CO₂ emissions for EU27 assuming 100% penetration rates.

Source: Klunder et al. (2009). Impact of Information and Communication Technologies on energy efficiency in road transport. TNO and the European Commission.

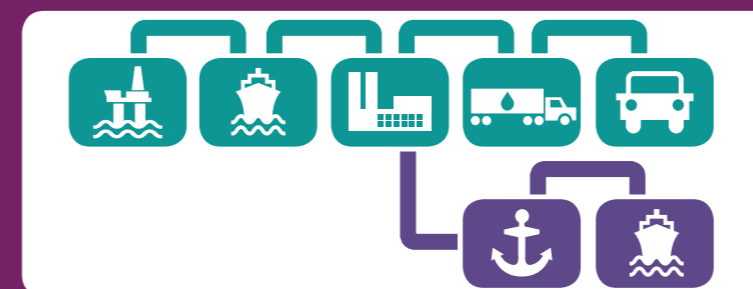
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The Amitran project will define a methodology to assess the impact of intelligent transport systems on CO₂ emissions. The methodology shall be used as a reference by future projects and covers both passenger and freight transport through a comprehensive well-to-wheel approach. Road transport is the main focus, but rail and shipping (short sea and inland navigation) will also be assessed.

Electricity production



Combustion of fossil fuels



Amitran goals

Amitran will...



1 Develop a CO₂ assessment methodology for ICT measures that includes multimodal passenger and freight transport and takes into account the whole chain of effects (from user behaviour to CO₂ production).



2 Validate the proposed methodology taking into consideration data from other projects or studies and the opinion of Amitran stakeholders.

3 Establish a generic scaling up methodology and publicly available database with statistics to translate local effects to a European level.



4

Design open interfaces for models and simulation tools implementing the project's methodology.



5 Produce an online checklist and handbook that can be used as a reference by future projects.