The objective of ILOS is the development and definition of indicators to describe the saving potential of transport journeys in urban areas using traffic information obtained through floating car data, as well as the development of appropriate quantification methods to determine these indicators from route analyses in order to achieve a possible saving potential in terms of time or distance. This in turn leads to savings in fuel, emissions and operating costs.

Benefits:
The main economic and environmental benefits were calculated and obtained using the ILOS method and selected indicators. The following potential benefits were evaluated for urban freight transport by using real time traffic data:
- Time: up to 60% reduction;
- Distance: up to 15% reduction;
- Fuel & Emissions: up to 20% reduction;
- Costs: up to 30% reduction.

Success Factors:
Availability of floating car data: This is a source of information that it is potentially available as an extensive and detailed data source for mapping the real time traffic situation within a city. Therefore there is a current focus in routing and navigation software development on developing services and applications based on these data and functionalities.

Supported Strategic Targets:
Improved utilisation of infrastructure;
Competitive logistics and transport system, Increased efficiency / productivity of logistics processes, Increased company profitability,
Reduced emissions, Conservation of resources.

Floating car data is based on the collection of positional data, speed, direction of travel and time information from mobile phones in vehicles that are being driven, and is an essential source for traffic information and intelligent transportation systems (ITS).

The routing suggestions obtained in ILOS are showing benefits and savings in routing and time spent running on the roads/streets and this result is made possible by an in-depth quantitative analysis of urban transport routes including the consideration of traffic information gathered through floating car data.

The main barrier for such optimisation attempts was identified. Previously, although suitable functions were available for pre-trip planning, there were limitations in the development of functions for real time applications and real time navigation. Comprehensive, detailed traffic information had not previously been included in the analyses of real time navigation solutions.

The motivation for the project was the lack of knowledge about the effects of traffic on economic and environmental aspects of urban freight transport routes. Real transportation scenarios and transportation routes from a logistics partner have been collected with on-board GPS-trackers in the vehicles. A simulation model has been set-up, using real time traffic parameter for travel times and travel routes in combination with alternative routing functions.

Using these tools allows the driver to identify the fastest route.
The evaluation approach developed in the ILOS project was conducted for the urban area of Vienna, Austria. Its transferability to other cities and area seems feasible, depending on available floating car data sources. One of the key condition is that floating car data should be legally available for use and integration within a navigation system tool. To facilitate the implementation and processing of these data for optimisation purposes within business applications, the use of the data should not be subject to restrictions such as political or regulatory frameworks.

The use of floating car data for real time navigation enhances the routing solution:

- The selection of optimal routes and the avoidance of stop & start driving conditions reduces emissions and saves costs.
- The route optimisation for planning urban transport reduces journeys time. This is achieved by calculating both faster and shorter journeys.
- Intelligent real time journey planning depends on time- and route-specific data and on the quality of the available floating car data information source.

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Transport mode or supply chain elements:

- Road / van for goods delivery

Main actors involved in ILOS
- Research
- Consulting
- Software
- Parcel Delivery Service

Pictures: Evaluation of driving behaviour and relevant indicators, especially for stop-and-go situations

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