PROJECT

MOWE-IT

Management of weather events in transport system

**Funding:** European (7th RTD Framework Programme)  
**Duration:** Oct 2012 - Sep 2014  
**Status:** Complete with results  
**Total project cost:** €2,351,047  
**EU contribution:** €1,641,564

![European Union flag]

**Call for proposal:** FP7-TPT-2012-RTD-1  
**CORDIS RCN:** 104378

### Background & policy context:

The ongoing WEATHER and EWENT projects have established how the different extreme weather events harm the safety and security of passengers and drivers, reduce the inter-urban and regional accessibility, disrupt logistics chains, delay cargo delivery, inflate supply costs for operators and consignees, and immobilise public infrastructure. However, there is still a need to find out how the air and surface transport systems may improve operational resilience by substituting each others services when suffering from traffic curtailment, infrastructure shutdowns, and/or capacity shortages caused by emergencies.

### Objectives:

The MOWE-IT project shall assess factors that prerequisite cross-modal transferability between the air and surface-based European transport systems in order to protect the passengers, shippers, European institutions and citizens against travel delays, cancellations and/or stoppages in freight transfer caused by extreme weather and/or other natural disasters.

### Methodology:

The MOWE-IT project shall assess how the companies in passenger and freight transport comply with the European users rights protection legislation shielding theses parties against travel delays, cancellations and/or disruptions, and in case of gaps in conformity, propose new guidelines for cross-modal alignment of decision-making, capacity planning and reserve-building models at transport service and infrastructure providers in addition to incentive structures and policy instruments for more effective legislation enforcement.

Such an assessment will also draw from the possibilities to use weather and other information technologies to aid the transport system and operators. The project will have 9 work packages, which focus on management and dissemination, transport-mode specific issues and cross-modal considerations and finally to short-term and long-term solutions and policy options for reducing the negative impacts of extreme weather and natural disasters.

### Parent Programmes:

**FP7-TRANSPORT** - Transport (Including Aeronautics) - Horizontal activities for implementation of the transport programme (TPT)

**Institute type:** Public institution  
**Institute name:** The European Commission  
**Funding type:** Public (EU)

### Lead Organisation:

Teknologian Tutkimuskeskus Vtt Oy
Address:
VUORIMIEHENTIE 3
02150 Espoo
Finland

Organisation Website:
http://www.vtt.fi

EU Contribution: €0

Partner Organisations:

Istituto Di Studi Per L'integrazione Dei Sistemi (I.s.i.s) - Societa'cooperativa

Address:
LARGO DEI LOMBARDI 4
00186 ROMA
Italy

Organisation Website:
http://www.isinnova.org

EU Contribution: €186,695

Ethniko Kentro Erevnas Kai Technologikis Anaptyxis

Address:
Charilaou Thermi Road
57001 Thermi Thessaloniki
Greece

Organisation Website:
http://www.certh.gr

EU Contribution: €118,770

Via Donau - Entwicklungsgesellschaft Mbh Fuer Telematik Und Donauschifffahrt

Address:
Donau-City-Strasse 1
1220 VIENNA
Austria

Organisation Website:
http://www.via-donau.org

EU Contribution: €65,163

Vaisala Oyj

Address:
Vanha Nurmijarventie 21
1670 Vantaa
Finland

EU Contribution: €63,879

Frauenhofer Gesellschaft Zur Foerderung Der Angewandten Forschung E.v.

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80686 MUNCHEN
Germany
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Technologies:

Information systems
ICT support system for multimodality

Development phase: Research/Invention

Key Results:

Optimised passenger transport during disasters and extreme weather

As extreme weather events are becoming more frequent better management of transport network and flow is needed. Building understanding of events and the ways in which different transport modes can adjust to these events is critical for decision-makers, operators and network users.

Air and surface transport systems in Europe can enhance operational resilience by better substituting each other’s services when dealing with infrastructure shutdowns, resource shortages, and traffic cut-offs and rerouting caused by natural hazards and severe weather phenomena.

To address the issue, the EU-funded http://www.mowe-it.eu/ (MOWE-IT) (Management of weather events in transport system) project aimed to assist transport operators, authorities and travellers to mitigate the impact of natural disasters and extreme weather incidents on transport system performance though concrete applications and cross-modal transport strategies.

A network of major airports in Europe was first selected for analysis. A report mapped travel alternatives in Europe in the case of disruptive events based on data gathered concerning time, costs and airport passenger flows associated with such choices.

As one of the project outcomes, an interactive visualisation tool was designed that is freely available on the project website. It provides information on past and future frequency of selected weather phenomena in 134 European locations, and the impact of selected extreme weather events on passenger flows for surface and air transport modes in 14 designated European hubs. The tool helps transport system planners and managers to understand the effect of climate change on their transport systems and informs travellers on impending closures and how to best alter travel plans.

A collection of guidebooks was produced to improve the resilience of rail, road, aviation, inland waterways and maritime transport. Short-term strategies and long-term policy recommendations were also delivered to enhance resilience. Final outcomes and recommendations were presented at three regional conferences.

MOWE-IT introduced a cross-modality approach to mitigate negative impacts. Various stakeholders now have at their disposal different tools for allowing connections between origins and destinations when normal transport operations are disrupted.

Documents:

Final Report Summary - MOWE-IT (Management of weather events in transport system)

STRIA Roadmaps: Other specified
Transport mode: Multimodal transport
Transport sectors: Passenger transport
Transport policies: Safety/Security
Geo-spatial type: Other