International Transport Forum

Seamless Transport: Making Connections
2-4 May, Leipzig

2012 annual summit

Case Study Compendium

Japan Presidency 2012

OECD

INTERNATIONAL TRANSPORT FORUM

The International Transport Forum at the OECD is an intergovernmental organisation with 53 member countries. It acts as a strategic think tank with the objective of helping shape the transport policy agenda on a global level and ensuring that it contributes to economic growth, environmental protection, social inclusion and the preservation of human life and well-being. The International Transport Forum organises an annual summit of Ministers along with leading representatives from industry, civil society and academia.

The International Transport Forum was created under a Declaration issued by the Council of Ministers of the ECMT (European Conference of Ministers of Transport) at its Ministerial Session in May 2006 under the legal authority of the Protocol of the ECMT, signed in Brussels on 17 October 1953, and legal instruments of the OECD.

The Members of the Forum are: Albania, Armenia, Australia, Austria, Azerbaijan, Belarus, Belgium, Bosnia-Herzegovina, Bulgaria, Canada, China, Croatia, the Czech Republic, Denmark, Estonia, Finland, France, FYROM, Georgia, Germany, Greece, Hungary, Iceland, India, Ireland, Italy, Japan, Korea, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Mexico, Moldova, Montenegro, Netherlands, New Zealand, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey, Ukraine, the United Kingdom and the United States.

The International Transport Forum's Research Centre gathers statistics and conducts co-operative research programmes addressing all modes of transport. Its findings are widely disseminated and support policymaking in Member countries as well as contributing to the annual summit.

CASE STUDIES

A compendium of case studies related to seamless transport has been developed as an input to the Summit 2012.

Forum Member countries and inter-governmental and professional international organisations were asked to submit examples of good practice in seamless transport.

The case studies have not been substantively edited by the International Transport Forum and they reflect the author's opinions alone.

The case studies can be downloaded from: www.internationaltransportforum.org/2012.

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CASE STUDIES ON SEAMLESS TRANSPORT: FROM MEMBER COUNTRIES

Context

A compendium of case studies related to seamless transport has been developed as an input to the Summit 2012. Member countries were asked to submit examples of good practice in seamless transport. Since the theme comprises broad, strategic aspects of current transport policy, a wide variety of cases was expected to be collected.

The case studies were collected not only from the member countries but also from inter-governmental and professional international organisations.

Case Studies

Fifty case studies were received from countries and 44 case studies were submitted by international organisations.

Case studies submitted from the countries cover all modes of transport and contain various types of policy approaches including infrastructure investment, cross-sectoral arrangements, regulatory initiatives, technological innovations, and intermodal connections.

There is a good geographical balance of case studies as well as similar projects which allow comparisons among countries and regions.

The following outlines key features in terms of seamless transport found in the compendium.

Connecting regions by transport infrastructure

Many infrastructure projects are found in the compendium. Expanding the network with express-ways, bus-lanes, railways, tunnels and bridges is to facilitate seamless movement of passengers between and inside the regions. Highways and high-speed rail networks connect the more distant regions. Light Rail Train (LRT) facilitates passenger transportation within the regions. The case studies show that technological innovations, such as Intelligent Transport Systems (ITS), can significantly improve the performance of existing infrastructure.

Facilitating passenger transit at connections

Improvement of connections between modes at railway stations and bus terminals is pursued in many countries. Railways, buses, cycling, and walking come together at stations and terminals as passengers transfer from one mode to another. Structure of stations is designed for smooth passenger movement. Bicycle parking provided at stations for users' convenience. E-ticketing, used within and across various transportation modes, is shown as a technical innovation that can improve access to public transport and facilitate transfer of passengers.

Improving seamless cargo transport by intermodal arrangements

Connections between modes are also a target area for improved connectivity in freight transport. Maritime ports are highlighted in the case studies as one of the biggest bottlenecks for seamless cargo transportation. Cross-sectoral, intermodal arrangements are pointed to as a key to achieving smooth freight transfer at ports, since various stakeholders – port authorities and customs offices – are involved and need to be coordinated in the network.

CANADA

Country:	Canada
Activity Title:	Asia-Pacific Gateway and Corridor Initiative (APGCI)

Mode(s):	☐ Walking	☐ Light Rail
	☐ Cycling	☒ Heavy Rail
	☐ Private automobile	☒ Air
	☐ Bus	☒ Inland Waterways
	☒ Light or Heavy Goods Vehicle	☒ Maritime

Objective (s):	The Government of Canada's Asia-Pacific Gateway and Corridor Initiative (APGCI) aims to establish the best transportation network facilitating global supply chains between North America and Asia. Canada's west coast ports are closer to Northern Asia than any other. The APGCI seeks to build on this geographic advantage and to become the route of choice for importers and exporters moving goods between Asia and the North American heartland.

Timeframe:	Start: 2006	Finish:

Outline of case:	As one of the most trade-reliant countries in the world, Canada's prosperity depends on international commerce and its ability to meet the challenges of ever-changing global dynamics. These dynamics are driven by rapid, seamless and secure movements of goods and people.
	It was against this backdrop that the Government of Canada launched the APGCI in 2006. At the time, Canada's western transportation system faced many pressures: growing container traffic and increased trade with Asia were contributing to congestion in British Columbia's Lower Mainland and at ports; the reliability and efficiency of the gateway and corridor was being increasingly tested; and there were questions as to how much more capacity our transportation infrastructure could support without hindering our competitiveness.
	Federal action was required to address these pressures and the APGCI was the vehicle. Supported by a dedicated infrastructure program and guided by an integrated, multi-modal, public-private strategy, the APGCI combines strategic infrastructure investments with policy, regulatory and operational measures to improve the efficiency and reliability of the supply chain.

	By bringing together key stakeholders from all levels of government and from across the private sector, the APGCI's partnership model ensures coherent action and a 'systems'-based approach to investment, planning and policy development.
Outcome/Effects:	Since the launch of the APGCI, 47 infrastructure projects have been announced valued at over $3.5 billion, in partnership with Canada's four Western Provinces, municipalities and the private sector and including federal government investments of more than $1.4 billion. Projects were selected using a system-based approach for Canadian supply chains that supported international trade.
	For example, expansion of the Roberts Bank Rail Corridor – an important 70-kilometre stretch connecting Canada's largest container facility and major coal terminal at Roberts Bank with the North American rail network – will increase the capacity and efficiency of the corridor for trade-related traffic.
	Significant progress has also been made to support a competitive business environment in Canada through policy and regulatory changes and investments in innovation and research. For example, British Columbia's three port authorities in the Lower Mainland were amalgamated into a strategic single entity (Port Metro Vancouver) to better position themselves to become the preferred port of call for shippers from Asia. Other examples include the negotiation of expanded air services agreements through Canada's Blue Sky Policy, amendments to the Canada Marine Act to support the competitiveness of Canada's ports, and the development of evidence-based measures of port performance and of overall supply chain fluidity and reliability.
Web link:	**http://www.pacificgateway.gc.ca**
Key Words:	☒ Border Crossing ☒ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☒ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☒ Funding ☒ Planning ☒ Urban ☒ Information Sharing ☒ Regulation/Law ☐ Other_____
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FINLAND

Country:	**Finland**
Activity Title:	**Panda eco-system for various traffic payments through individual services**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective(s):	To create a market-driven eco-system to use common service platforms as a basis for traffic payments (taxes, insurance payments, leasing, parking etc). Analysis was made of how the data privacy concerns and data quality aspects and factors of a vehicle telematics-based payment system and driving data multi-service system should be evaluated. This multi-service platform is already used by thousands of private persons and companies in Finland and Germany.
Timeframe:	**Start:** 2007 **Finish:** ongoing
Outline of case:	Companies from different sectors joined forces to create a user-driven business eco-system for traffic users. Insurance company Pohjola, mobile map solution provider Nokia Location and Commerce, vehicle device manufacturer Aplicom and service providers Helpten, Taipale telematics and Ebsolut have been working closely with Finnish authorities (Ministry of Transport and Communications and Ministry of Finance, as well as several other key agencies) to create a multi-service platform that works for services as well as for payments. The aim is to deliver the possibility for intelligent payments without the extra costs of devices or heavy systems.
Outcome/Effects:	A new eco-system of services has been brought to market, and more participants in insurance and service provision sectors are attending. The positive results of market acceptance and privacy handling have been carried out and the next phase of market entry is in motion. The connection between vehicle and mobile phone in particular has been pinpointed as the next step in service evolution. Services such as automated calendar links to navigation, automated parking and driving style competitions will be launched in the second quarter of 2012 following user requests.
Web link:	http://www.helpten.fi/en/

Key Words:	☐ Border Crossing	☐ Infrastructure	☐ Rural
	☒ Congestion	☐ Intercity	☒ Standards/Uniformisation
	☒ Energy/Fuel	☐ Intermodal	☒ Supply Chain
	☒ Environment	☐ Interoperability	☒ Telecommunications
	☐ Freight	☐ Passenger	☒ Ticketing/Payment
	☒ Funding	☒ Planning	☐ Urban
	☒ Information Sharing	☒ Regulation/Law	☐ Other_____
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FRANCE

Country:	France
Activity Title:	**Grand Paris Metro**

Mode(s):	☐ Walking	☒ Light Rail
	☐ Cycling	☒ Heavy Rail
	☐ Private automobile	☐ Air
	☐ Bus	☐ Inland Waterways
	☐ Light or Heavy Goods Vehicle	☐ Maritime

Objective (s):	The aim of this new public transportation, called Grand Paris Metro, is to create a link between Paris, its airports and the future economic clusters all around Paris. Plus, it will create a direct link between all the closest suburbs of Paris.

Timeframe:	**Start:** 2010	**Finish:** 2025

Outline of case:	This new automatic line of metro around Paris aims at creating a direct link between suburbs without going through Paris. In this way, commuters will gain time, and the downtown metro will be less busy. It will also be a competitive alternative to car commuting, thereby reducing congestion and pollution. In addition, it will be easier to get to Le Bourget, Orly and Roissy airports. The public debate took place in January 2011. For some sections of this network, the first public inquiries will occur at the end of 2012, and will continue for the other sections during 2013. First works will start in 2014, in order to achieve and to commission the first section from 2018 on. The full commissioning should happen in 2025.

Outcome/Effects:	175 km of new railways and 57 new stations to reduce travelling time around Paris

Web link:	http://www.societedugrandparis.fr/ http://www.metrograndparis.com/Simulez-votre-itineraire-futur.html

Key Words:	☐ Border Crossing	☒ Infrastructure	☐ Rural
	☒ Congestion	☒ Intercity	☐ Standards / Uniformisation
	☒ Energy/Fuel	☒ Intermodal	☐ Supply Chain
	☒ Environment	☐ Interoperability	☐ Telecommunications
	☐ Freight	☒ Passenger	☐ Ticketing/Payment
	☐ Funding	☒ Planning	☒ Urban
	☐ Information Sharing	☐ Regulation/Law	☐ Other_____
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Country:	France
Activity Title:	**High-speed railways between Tours and Bordeaux**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective(s):	Connecting in the short-run South France and, in the long-run, South Europe to the European high-speed railways network; Improving the energetic efficiency of the European and French transport system
Timeframe:	**Start:** 2012 **Finish**: 2017
Outline of case:	The high-speed railway Tours-Bordeaux is the first and central section of a larger project called SEA (South Europe Atlantic), which aims at connecting Southwest European countries to the European high-speed railways network. The three other parts of this project are the sections between Poitiers and Limoges, Bordeaux and Toulouse, and Bordeaux and the Spanish border. The latter project will be connected to the Spanish high-speed railways network. The Tours-Bordeaux high-speed railway will be built by a private firm, called Lisea, which signed a works contract for about 8 billion current euros, with RFF – the French public railways operator – in 2011. This works contract is the most substantial one in Europe in the railway sector. Lisea will build the infrastructure and exploit it for 50 years. Its financial resources will be generated through the tolls paid by the trains circulating on the high-speed railways. The French state and several local authorities will fund this project 3 billion euros. The works will begin in March 2012. More than 10 000 jobs are expected to be created during the construction period. Several official authorizations are needed to take into account environmental protection and many compensatory measures are scheduled to be implemented to soothe the environmental effect of the project.
Outcome/Effects:	• 302 km of high-speed railways built by 2017; • Transport time reduced by 50 minutes between Paris and Bordeaux; • Increased capacity for passenger transport and freight by railways.
Web link:	http://www.lgvsudeuropeatlantique.org/

Key Words:	☐ Border Crossing	☒ Infrastructure	☐ Rural
	☐ Congestion	☒ Intercity	☐ Standards/Uniformisation
	☒ Energy/Fuel	☒ Intermodal	☐ Supply Chain
	☒ Environment	☒ Interoperability	☐ Telecommunications
	☒ Freight	☒ Passenger	☐ Ticketing/Payment
	☒ Funding	☐ Planning	☐ Urban
	☐ Information Sharing	☐ Regulation/Law	☐ Other
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Country:	France
Activity Title:	**Improving the daily mobility of senior citizens in downtown Nice**

Mode(s):	☒ Walking	☐ Light Rail
	☒ Cycling	☐ Heavy Rail
	☐ Private automobile	☐ Air
	☐ Bus	☐ Inland Waterways
	☐ Light or Heavy Goods Vehicle	☐ Maritime

Objective(s):	Upgrade a downtown area of the French city of Nice in order to improve the daily mobility of senior citizens.

Timeframe:	**Start:** 2010	**Finish (or ongoing):** ongoing

Outline of case:	In order to enable senior citizens to socialise and stay independent, the city of Nice has renewed a central area in concert with its senior citizens. The project helps them to keep more in touch with their neighbourhood, and improve their health, through increased facilities for walking in a secure environment. A student housing facility was also built in order to increase the intergenerational character of the area. The area is both quieter and re-energized (more shops, students and more mobility by senior citizens while private car use is decreased). This policy is part of a broader voluntaristic public transport policy developed by the City, with new technologies use, a bike hire scheme, and an electric car hire scheme in order to reduce the proportion of private car use in daily commuting.

Outcome/Effects:	—

Web link:	http://www.nice.fr/Transport http://en.nicetourisme.com/

Key Words:	☐ Border Crossing	☒ Infrastructure	☐ Rural
	☐ Congestion	☐ Intercity	☐ Standards/Uniformisation
	☐ Energy/Fuel	☐ Intermodal	☐ Supply Chain
	☒ Environment	☐ Interoperability	☐ Telecommunications
	☐ Freight	☐ Passenger	☐ Ticketing/Payment
	☐ Funding	☒ Planning	☒ Urban
	☐ Information Sharing	☐ Regulation/Law	☐ Other

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GEORGIA

Country:	**Georgia**
Activity Title:	**Implementation of Open Sky Policy and integration of Georgia into the European Common Aviation Area**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☒ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective(s):	Implementation of Open Sky Policy and Integrate Georgia into the European Common Aviation Area; Improvement of national legislation in accordance with EU standards; Improve conditions for international flights; Set conditions to attract new airlines.
Timeframe:	**Start:** 2005 **Finish:** Ongoing
Outline of case:	The main challenge for Georgian civil aviation authorities throughout the past years was assurance of safe, secure and sustainable development of Georgian civil aviation. In 2005, the Government of Georgia announced an "open sky" policy in the field of civil aviation and reconsideration of existing bilateral air services agreements – and drafting of new ones – began in order to abolish restrictions on a number of air carriers allowed to perform flights, capacity, frequency, destination points, establishment of tariffs and to make Georgia's international flight regimes maximally liberal. New air services agreements were signed with: Turkey, Latvia, Austria, USA, Armenia, Switzerland, Azerbaijan, Ukraine, Czech Republic, UK, Poland, ECAA (European Common Aviation Area) Agreement, Qatar, Bulgaria, China and the Hashemite Kingdom of Jordan, based on the "open sky" principle. Simultaneously, many airline companies entered the Georgian aviation market. A "Common Aviation Area Agreement between the European Union and its Member States and Georgia" was signed on 2 December 2010. The agreement aims to integrate Georgia into a wider European air market, as well as harmonisation of its legislation with European standards.

	Georgia achieved significant success for improvement national civil aviation legislation. Simultaneously Georgia actively cooperated with international civil aviation organisations.
Outcome/Effects:	New airports were opened in Georgia. Tbilisi international airport and Batumi international airport were opened in 2007. The new Mestia Airport (Queen Tamar Airport) was officially opened in order to support mountain regions of Georgia and facilitate tourism development.

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Due to relevant legislative changes, the number of National Air Companies decreased from 24 to 10 and the number of registered aircrafts decreased from 79 to 44.

Civil Aviation Agency was established for technical regulation and implementation of state policy in civil aviation sector.

Implementation of an open sky policy, market access facilitation and increased levels of safety and security created an attractive environment and facilitated entrance of new airlines, like China Southern Airlines, Qatar Airways, Fly Dubai, Air Astana, ATA Airlines, Bora-jet and Ural airlines. Significant growth was achieved by Georgian international airports during 2011, and the number of passengers served by Georgian Airports increased by 30% comparing with the same period in 2010.

Success was achieved in relation to international civil aviation organisations:

• Twinning project funded by the EC was launched. Project is designed to support Georgia in accomplishing further advances in the field of civil aviation, including the harmonisation of all Georgian aviation regulations in Civil Aviation safety and licensing of air carriers with those of the EU, and to ensure that these are implemented by the aviation authorities and industry in Georgia.

• Activities related to the Legislation, Organization, Personal Licensing, Operations of aircraft, Airworthiness and Aircraft Accident and incident investigation were reviewed and discussed during the work sessions with European Aviation Safety Agency (EASA).

• Georgian Civil Aviation Authority is actively involved in EASA Pan European Partnership activities, the second meeting of which took place in Tbilisi, as well as a New Flight Plan Implementation workshop in Batumi organized by ICAO EUR/NAT office and EUROCONTROL, where representatives of 23 countries were involved.

• Transport Corridor Europe Caucasus Asia (TRACECA) Technical Assistance is underway in order to improve the National Civil Aviation Institutional Framework.

Success was made for the improvement of national civil aviation legislation, mainly:

• The development of a new air law was initiated.

• Many operating regulations and orders were developed and issued for the domains of Personnel Licensing (PEL), Operations (OPS) and Airworthiness of aircraft (AIR);

	• The necessity to recruit well educated specialists and train them to the latest standards was recognized; • A training effort was initiated; • A large progress was made in the development of the guidance material; • Licensing, certifications, authorizations and approvals were improved with the application of detail procedures; • The surveillance programme in the domains PEL, OPS and AIR has been structured.
Web link:	—
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☒ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☒ Regulation/Law ☐ Other_____
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Country:	Georgia
Activity Title:	**Opening of new grain terminal in Poti Sea Port**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☒ Maritime
Objective(s):	Transportation of grain from Middle Asia to African States through Poti Sea Port of Georgia
Timeframe:	**Start:** December, 2011 **Finish:** ongoing
Outline of case:	On December 14, 2011 a new grain terminal was opened in Poti Sea Port of Georgia. The terminal was built as a result of cooperation of the Ministry of Agriculture of Georgia and the Ministry of Economy and Sustainable Development of Georgia with APM Terminals and LTD "Agrikom", a subsidiary of International Grain Trading Company "BUNGE". Within the project, major technical reforms were carried out and new processing lines were installed at the former flour mill. 10 M USD have already been invested in construction works. In the first phase the terminal will be able to accept 22 000 tonnes of grain, while in the future its capacity will increase to 250 000 tonnes. In the first quarter of 2012, the port terminal will have a vacuum turbine, with which it will be possible to unload and load 30 000-35 000 tons of grain. This will enable Georgia to receive grain from the Central Asian and neighbouring countries, store it, and then transport to other countries (Egypt, Tunisia, Libya, Syria and etc). Currently, representatives of "Agrikom" and APM Terminals are considering elaboration of new infrastructural projects that will further increase the volume of re-exported grain by maritime transport.
Outcome/Effects:	Re-export of grain by Georgia, rising effectiveness of TRACECA corridor
Web link:	http://new.moa.gov.ge/index.php?pg=nw&id=293
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☒ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
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GERMANY

Country:	Germany
Activity Title:	**Rail&Fly with Deutsche Bahn AG and Airberlin**
Mode(s):	☐ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☒ Air ☒ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective(s):	Reduce the CO_2 Carbon Footprint, Enhance Passenger Convenience, Make travelling safer
Timeframe:	**Start** — **Finish:** X
Outline of case:	Travel within Germany from/to your desired airport from just € 25. The Rail&Fly ticket is valid for travel within Germany using any local or long-distance passenger train operated by Deutsche Bahn AG if the departure station and the departure airport are in different public transport regions. The Rail&Fly ticket is valid on the date of the flight, as well as one day before departure and one1 day after arrival. Stopovers on the journey to and from the airport are permitted. Children below 12 years of age accompanied by their parents or grandparents travel free of charge. Rail&Fly tickets can be booked online at airberlin.com when you are booking your flight. The offer is only valid in conjunction with an international flight from/to Germany.
Outcome/ Effects:	—
Web link:	http://www.airberlin.com/site/zug_zum_flug_rail_and_fly.php?LANG=eng&checkNavi=1
Key Words:	☐ Border Crossing ☐ Infrastructure ☒ Rural ☐ Congestion ☒ Intercity ☒ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☒ Ticketing/Payment ☐ Funding ☐ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____

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JAPAN

Country:	**Japan**
Activity Title:	**Improving Accessibility in Transport**
Mode(s):	☒ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective(s):	Accessibility improvement contributes to seamless transport for elderly and disabled people
Timeframe:	**Start:** 2006 **Finish:** ongoing
Outline of case:	Under the New Barrier-free Law 2006, newly-built or renovated public transport facilities (vehicles and stations) must conform to the Accessibility Standards so that elderly or disabled users can smoothly travel. The standards demand, for example, rail stations to provide step-free access from street level to the platform, adequate lightings and accessible lavatories; buses that accommodate wheel chairs, be low-floor vehicles and be equipped with visible and audible information systems. Transport operators are also requested to make best efforts to upgrading existing stations and cars to be compliant with the standards. The Law also demands certain categories of roads, buildings, parking facilities, and parks be accessible for elderly and disabled people. Local authorities may designate priority development districts, which contain facilities frequently used by elderly or disabled people such as rail stations, government offices or retail shops. For these districts, they establish Local Accessibility Plans to encourage district-wide development of accessible stations, buildings as well as step-free routes connecting these facilities. Transport operators, building owners and road administrators are expected to implement their accessibility improving measures according to the plan. Subsidies and tax exemption are prepared to support their accessibility improvement investment.

Outcome/Effects:	Accessibility improvements are: = stations (rail, bus, ferry and air) with more than 5 000 passengers/day; 85.5% with step-free access to vehicles in 2011 (28.9% in 2001) 83.2% with accessible lavatories in 2011 (0.1% in 2001) = Increase in the number of low-floor vehicle buses 27.9% in 2011, compared to 2.2% in 2001 = Increase in the Number of Local Accessibility Plans 379 in 2011 (249 in 2006)
Web link:	—
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☒ Other: Accessibility Universal design
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Country:	**Japan**
Activity Title:	**Improving Bus Punctuality**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	This policy helps bus passengers to reach their destination smoothly avoiding road congestion.
Timeframe:	**Start:** — **Finish:** ongoing
Outline of case:	In order to improve bus punctuality, the following measures are taken in Japan: 1. Road infrastructure: Road development changes shuttle bus routes so that a bus can avoid going through congested areas, and the development saves and improves the reliability of travel time. In addition, intersections are improved. New expressways or by-passes contribute to reduced traffic jams along bus routes, improving operating environment for buses. 2. Introduction and monitoring of bus lanes. Buses may be equipped with cameras to identify cars illegally driving in the bus-lanes. 3. Public Transport Priority Systems (PTPS): is a traffic signal system which changes the red light to green when a bus is approaching an intersection. In addition, the system identifies private cars using bus lanes.
Outcome/Effects:	Road development decreases the travel time. For example, opening a part of Higashi Hiroshima-Kure Expressway (from Kamiminaga IC to Takaya JCT/IC) decreases travel time between JR Kure station and Hiroshima airport from 90 minutes to 80 minutes. The length of road with PTPS is 744.1km as of 31 March 2010. By installing PTPS in Matsue City, the rate of bus punctuality increased from 23% to 63%.
Web link:	—
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other: bus-lane, PTPS, Punctuality

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Country:	**Japan**
Activity Title:	**Improvement of Cycling Environment**
Mode(s):	☐ Walking ☐ Light Rail ☒ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective(s):	This policy is to provide better bicycle access by improving the cycling environment.
Timeframe:	**Start:** 2007 (Bicycle-Friendly Model Areas) **Finish:** ongoing
Outline of case:	Measures to improve the cycling environment include: • development of cycling route network and bicycle parking facilities, • allowing passengers to carry bicycles on public transportation, • education of people on bicycle riding rules and manners; and • community programmes to encourage people to ride bikes. The Japanese government has designated 98 areas as "Bicycle-Friendly Model Areas" where efforts are concentrated to improve cycling environment. Subsidies are granted for those areas.
Outcome/Effects:	In the designated areas, a decrease in the number of bicycles accidents on the routes where spaces for bicycles has been provided.
Web link:	http://www.mlit.go.jp/road/road_e/pdf/chapter02.pdf
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☒ Regulation/Law ☐ Other
Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp

Country:	**Japan**
Activity Title:	**Earthquake countermeasures for infrastructure (railways and roads)**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☒ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective(s):	Improving safety of infrastructure for intercity transport.
Timeframe:	**Start:** 1995 **Finish:** ongoing
Outline of case:	Railway and road infrastructure has anti-seismic measures installed, which are necessary to protect passengers in case of earthquakes: • Seismic strengthening of bridges for roads and high-speed railways has been carried out after the Great Hanshin Awaji Earthquake in 1995, which caused the collapse of elevated railways and roads. • Early Earthquake Detection System has been introduced to Shinkansen, a high-speed railway in Japan which, on detecting the first wave of an earthquake, immediately makes a train slow down and stop, before the major vibrations hit the train. • L-shaped anti-derailment guides are attached to the axle boxes, which prevent a train from largely deviating from rails if it derails and reduces potential of a collision with another train.
Outcome/Effects:	At the time of Great East Japan Earthquake in March 2011: • Severe damages of bridges for road and high-speed railway were avoided, which made it possible for the quick recovery of transport after the disaster. • All high-speed trains in operation stopped safely and caused no casualties among passengers and crews.
Web link:	—
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp

Country:	**Japan**
Activity Title:	**Promoting Electric Vehicles (EVs)**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	Reducing CO2 emission from transport sector by promoting EVs as CO2 free vehicles
Timeframe:	**Start:** 2009 **Finish:** ongoing
Outline of case:	In order to promote EVs, the government is taking the following measures. A) Tax exemptions for EVs as of January 2012: • Car Acquisition tax is exempted. • Annual car holding tax (national tax) is exempted. • Annual car holding tax (local government tax) is reduced by 50%. B) Subsidies for purchasing EVs: • Subsidies are offered by national government for purchasing new EVs including buses and trucks (50% of the price). • Many local governments offer subsidies in addition to the national subsidy. C) Tax exemptions for electricity charging ports: • Property tax for electricity charging ports is reduced. Road transport industries are making the following efforts. A) Introduction of EV taxis • After the first introduction of EV taxis in Kashiwazaki city in Niigata in 2009, EV taxis have spread to cities at all over Japan. • Nippon Kotsu, a major taxi operator in Tokyo, conducted an EV taxi pilot project in 2010, where EV taxis with replaceable batteries operating in Tokyo visited a battery exchange station to exchange a used battery with a fully charged one. B) Taxi stations that are exclusively for EV or HV taxis. • In 2011, taxi stations exclusive to EV and HV taxis were set up at Osaka Station and Tokyo Station.

Outcome/Effects:	The number of EVs is increasing: = From around 1 000 in 2003 to over 9 000 in 2009 (Statistics by Next Generation Vehicle Promotion Center) The number of public electricity charging ports is also increasing: = By May 2011, 29 charging ports are established at service areas and rest areas on highways.
Web link:	—
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp

Country:	Japan
Activity Title:	Construction of high-speed railways
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective(s):	Connecting cities by high-speed railways in a sustainable manner and promoting regional economies' development.
Timeframe:	**Start:** 1959 **Finish:** ongoing

Outline of case:	High-speed railways in Japan, are now constructed based on the Nationwide Shinkansen Railway Development Law. The Laws prescribed among others network planning and construction cost sharing principles. 1) Network: A network of 2 400 km is in operation, with 420 km still under construction and about 540 km planned for construction. In addition to the planned lines, Chuo Shinkansen, the first MAGLEV system with the maximum speed of 550 km/h, is planned to start operation in 2027, connecting Tokyo and Nagoya (300 km). 2) Cost sharing: The costs for construction of new high-speed railway (except Chuo Shinkansen which is mainly paid by JR Central) are shared by national government and local governments along the line. National government pays 2/3 of construction costs, local governments bear the rest of it. The Japan Railway Construction, Transport and Technology Agency (JRTT) constructs high-speed railways by receiving funds from national and local governments. After completion, JRTT owns the tracks and lease it to the operators, Japan Railways (JR). JR pays JRTT a yearly rent for the tracks. In order to prevent building financially unviable railways, government approves construction when the project satisfies criteria of resources and project efficiency.
Outcome/Effects:	About 2 400 km of high-speed railways are now operated and about 420 km are under construction.

Web link:	http://www.jrtr.net/jrtr48/pdf/f06_Tak.pdf http://www.jrtr.net/jrtr57/index.html http://www.jrtr.net/jrtr40/pdf/f04_tak.pdf http://www.jrtr.net/jrtr40/pdf/f14_kit.pdf http://www.jrtr.net/jrtr40/pdf/f34_jre.pdf http://www.jrtr.net/jrtr40/pdf/photo.pdf http://english.jr-central.co.jp/company/ir/annualreport/_pdf/annualreport2011-05.pdf
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☒ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☒ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp

Country:	Japan
Activity Title:	**Securing Safety of Intermodal Container Transportation on Road**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☒ Maritime
Objective(s):	Improving cargo information-sharing in the supply chain helps proper truck driving, which secures safety of intermodal container transportation on roads.
Timeframe:	**Start:** 2012 **Finish:** ongoing
Outline of case:	Trailers carrying intermodal containers on public roads sometimes cause roll-over accidents injuring the drivers and other road users. In order to prevent these accidents, particularly ones caused by improper driving because of lack of information of cargo on the side of drivers, new safety regulations are proposed. At present, drivers are not necessarily provided information on the content of the container, its weight and how it is lashed, and that makes it difficult for drivers to drive properly according to the kind of cargo. Under the proposed regulations, shippers (consignees in case of import) are obliged to provide information about the cargo including item, weight and packing, to truck drivers via transport companies. When overweight or improper lashing is suspected, the container should be opened and the problems should be corrected at port.
Outcome/Effects:	N/A
Web link:	—
Key Words:	☒ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☒ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☒ Information Sharing ☒ Regulation/Law
Contact:	Name: International Policy Division, Policy Bureau Organisation: MLIT Japan Email: kokusaiseisakuka@mlit.go.jp

Country:	**Japan**
Activity Title:	**ITS (Intelligent Transport System) Spot Services**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	To reduce traffic accidents and time losses resulting from traffic congestion.
Timeframe:	**Start:** 2011 **Finish:** ongoing
Outline of case:	ITS Spot Services consist of three basic services that are made available as an all-in-one system by high-speed, high-volume road-to-vehicle communications. The first is Wide-Range Road Traffic Information. By transmitting road traffic information in real-time, car navigation systems can search wide-area expressways that cross prefectural borders, urban expressways and other roads, and select the fastest route based on the latest information. The second is safe Driving Support. ITS Spots provide wide-area road traffic information on a regular basis including traffic safety issues for specific roads. In emergencies, they provide information that supports safe driving. The third is ETC (Electronic Toll Collection System). ITS Spot Services utilises the same technologies as ETC, therefore existing ETC services can be enjoyed with a compatible car navigation system. Other services include information on tourist sites and updated maps which are provided over the internet with some car navigation systems.
Outcome/Effects:	Traffic accidents in Japan have increased, resulting in a death toll of about 5 000 persons per year. Additionally, traffic congestion in urban areas has caused economic losses amounting to 12 trillion yen, and time losses amounting to 5.6 billion person-hours. Major problems have surfaced with respect to transport safety and efficiency. Also, issues such as environmental deterioration along roads, disharmony with the global environment, and increased energy consumption are growing in severity and importance. Especially: • For expressways in urban areas, it is essential to guide the routes considering traffic information because of complex network of the roads. • In the metropolitan expressway, 50 000 accidents of falling object per year have occurred.
Web link:	http://www.mlit.go.jp/road/road_e/pdf/chapter02.pdf http://www.mlit.go.jp/road/ITS/

Key Words:	☒ Border Crossing	☐ Infrastructure	☐ Rural
	☒ Congestion	☐ Intercity	☐ Standards/Uniformisation
	☒ Energy/Fuel	☒ Intermodal	☐ Supply Chain
	☒ Environment	☒ Interoperability	☒ Telecommunications
	☐ Freight	☐ Passenger	☒ Ticketing/Payment
	☐ Funding	☐ Planning	☐ Urban
	☒ Information Sharing	☐ Regulation/Law	☐ Other_____
Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp		

Country:	Japan
Activity Title:	**Intelligent Transport System (ITS)**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	To reduce time losses resulting from traffic congestion.
Timeframe:	**Start:** 2001 **Finish:** ongoing
Outline of case:	The Intelligent Transport Systems is a new transport system which is comprised of advanced information and telecommunications network for users, roads and vehicles. ITS are steadily expanding with the popularisation of ETC (Electronic Toll Collection System) and VICS (Vehicle Information and Communication System), and have effectively smoothened traffic by providing real-time information, eliminating congestion at toll gates, and mitigating environmental impacts by differential toll discounts. (1) ETC ETC is a system which allows drivers to automatically pay tolls without stopping their vehicle at a toll booth. The system uses wireless communication between ETC on-board equipment installed in the vehicle and roadside device placed at the collection point. Since starting in 1997, this system is now available on expressways around Japan. ETC communication technology is also used by private operators for non-stop passage through parking gates and ferry boarding, among others. (2) VICS VICS transmit road traffic data, such as congestion and traffic restrictions on a real-time basis, to onboard vehicle navigation units and displays data in the form of text, simple graphics and maps. The service started in Japan in April 1996. VICS delivers information using three media: FM multiplex broadcasting, a radio wave beacon and an infrared beacon.
Outcome/Effects:	At the end of December 2011, there were about 34.24 million ETC-equipped vehicles in Japan. ETC users now account for 86.2% of all vehicles on expressways in Japan. The system has effectively eliminated congestion at toll gates. At the end of March 2011, over 30.13 million vehicles were equipped with VICS compatible onboard units.
Web link:	http://www.mlit.go.jp/road/road_e/pdf/chapter02.pdf http://www.mlit.go.jp/road/ITS/

Key Words:	☒ Border Crossing	☐ Infrastructure	☐ Rural
	☒ Congestion	☐ Intercity	☐ Standards/Uniformisation
	☒ Energy/Fuel	☒ Intermodal	☐ Supply Chain
	☒ Environment	☒ Interoperability	☒ Telecommunications
	☐ Freight	☐ Passenger	☒ Ticketing/Payment
	☐ Funding	☐ Planning	☐ Urban
	☒ Information Sharing	☐ Regulation/Law	☐ Other_____
Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp		

Country:	**Japan**
Activity Title:	**Low Carbon City Development Guidance**
Mode(s):	☒ Walking ☒ Light Rail ☒ Cycling ☒ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	To create a compact city with reduce traffic accidents and time losses resulting from traffic congestion, where people can travel smoothly and conveniently to/from work/school, shopping and other daily activities.
Timeframe:	**Start:** 2010 **Finish:** ongoing
Outline of case:	In 2010, Low Carbon City Development Guidance was made to support the initiatives of local authorities, by indicating what should be considered when promoting low-carbon city development, its basic concepts, as well as the necessary measures and methods of assessing their effects. The Guidance consists of three parts: "Part I: Concept of a Low-Carbon City" sets out the rationale for creating low-carbon cities. "Part II: Low-Carbon City Development Measures" describes the methods in developing a low-carbon city in three sectors, namely transportation and urban structure, energy (private homes and private businesses), and greenery. "Part III: Analysis of the Effects of Low-Carbon City Development Measures" explains the methodologies for assessing the effects of the measures. In the transportation and urban structure sector, a compact urban area where people can live closer to their workplaces is expected to reduce travel distances and alleviate transportation demand. Reduced travel distances, in turn, will promote a shift from passenger cars to bicycles or walking. Moreover, increasing the density of traffic demand can raise the profitability levels of public transportation, thereby improving its service levels, which can further promote a shift from automobiles to public transportation.
Outcome/Effects:	—
Web link:	http://www.mlit.go.jp/common/000136941.pdf
Key Words:	☐ Border Crossing ☒ Infrastructure ☒ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☒ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☒ Other Low Carbon City, Compact City, CO_2

Contact:	Name: International Policy Division, Policy Bureau
	Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan
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Country:	**Japan**
Activity Title:	**Compact City Development Using Public Transport (case of Toyama City)**
Mode(s):	☐ Walking ☐ Cycling ☐ Private automobile ☐ Bus ☐ Light or Heavy Goods Vehicle ☒ Light Rail ☐ Heavy Rail ☐ Air ☐ Inland Waterways ☐ Maritime
Objective (s):	To improve access to public transport.
Timeframe:	**Start:** April 2002 **Finish:** ongoing
Outline of case:	Toyama City (population: 418 000) is trying to convert its town structure from the current car-dependent spread city to a compact city along the public transport routes. The city is trying to improve service levels of its vital six rail/tram routes and 13 major bus routes: converting rail to tram, constructing a circle tram line in the downtown, increasing frequency of rail and bus services and improving transfer between rail and buses. The city has also designated "public transport residential area" along the routes and gives financial support to those who build houses in the areas. The share of the residents in these area, currently 30% of the total population, is aimed to be 40 % within 20 twenty years. As the first major project of the public transport improvement, a 8 km long railway which connects Toyama Station in the downtown and the north district was converted to a more user-friendly street-level tram line. The tram (Toyama Light Rail) operates at the intervals of 10 to 15 minutes until 23:00. All cars are low-floor and barrier-free. The tram line is expected to operate without subsidies although public money is spent on its infrastructure.
Outcome/Effects:	1. The number of passengers of the Toyama Light Rail per day increased from 2 200 in 2005 (before conversion) to 4 800 in 2007. 2. 13% of all bus users and 11% of all private car users became tram users, which means environmental load decreases. 3. By age, the number of passengers aged 60 and older has increased by 350%, which means the tram created opportunities for elderly people to go out.
Web link:	—

Key Words:	☐ Border Crossing ☒ Congestion ☒ Energy/Fuel ☒ Environment ☐ Freight ☐ Funding ☐ Information Sharing	☒ Infrastructure ☐ Intercity ☐ Intermodal ☐ Interoperability ☐ Passenger ☒ Planning ☐ Regulation/Law	☐ Rural ☐ Standards/Uniformisation ☐ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☐ Urban ☐ Other: LRT; Barrier-free Compact City
Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp		

Country:	Japan
Activity Title:	Highway Bus and Rail Ride

Mode(s):	☐ Walking ☐ Cycling ☐ Private automobile ☒ Bus ☐ Light or Heavy Goods Vehicle	☐ Light Rail ☒ Heavy Rail ☐ Air ☐ Inland Waterways ☐ Maritime

Objective(s):	This policy helps intercity bus passengers to reach their destination smoothly, avoiding road congestion.

Timeframe:	Start: 2010	Finish: ongoing

Outline of case:	A problem with inter-city highway bus to Tokyo is delay caused by heavy traffic congestion in Tokyo urban area. A "Highway Bus and Rail Ride" was designed to solve this problem. When an intercity bus to downtown Tokyo is caught in a traffic jam, its passengers may transfer to the metro at a station in the outskirts of Tokyo. The metro fare is discounted. When a bus is approaching Tokyo, information on traffic conditions ahead is provided to the onboard passengers to help them decide whether to transfer to the metro. Passengers who wish to transfer are issued discounted metro tickets and get off the bus at the Yoga stop, from where Metro Yoga station is within five minutes walking distance. This service was started in 2011 after a trial in 2010.
Outcome/Effects:	About 16 000 highway bus passengers transferred to trains under the pilot programme (in the span of almost ten months).
Web link:	—

Key Words:	☐ Border Crossing ☒ Congestion ☒ Energy/Fuel ☒ Environment ☐ Freight ☐ Funding ☐ Information Sharing	☐ Infrastructure ☒ Intercity ☒ Intermodal ☐ Interoperability ☒ Passenger ☐ Planning ☐ Regulation/Law	☐ Rural ☐ Standards/Uniformisation ☐ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☐ Urban ☐ Other_____

Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp

Country:	Japan
Activity Title:	**Improving Railway Stations as Transport Hubs**
Mode(s):	☒ Walking ☒ Light Rail ☒ Cycling ☒ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	This policy aims at providing passengers with seamless transfer between different modes of transport by improving station square, access road, pedestrian deck, station corridor and other facilities in the areas around the transport hubs.
Timeframe:	**Start:** 2009/2010 (Guidelines/Integrated Subsidy) **Finish:** ongoing
Outline of case:	A railway station is often a transport hub of the town, where passengers transfer between different modes of transport: railways, trams, buses, taxis and bicycles. Improving the smoothness of transfer by rebuilding facilities is desirable for users but not easy because many parties are involved: local governments, railway companies, bus and other transport operators. In order to facilitate the process of coordination, the following systems are in place: 1) Public financial support systems have been reorganized into a new subsidy, which allows municipal governments more flexibility in exercising local initiatives. 2) Guidelines for railway station corridors construction 2009 define roles and responsibilities, in particular cost sharing, of stakeholders in constructing or reforming railway station corridors, which provide free passage between two sides of the station. The guidelines encourage cooperation between municipal governments and railway companies. Under the new scheme, development projects including improving station squares, access roads and pedestrian spaces are being planned and implemented in the areas around transport hubs. Takaoka station is an example of ongoing projects. Kokura station and Gifu station are examples of those completed.
Outcome/Effects:	At Kokura station, the number of passengers of public transportation increased on the following year when the monorail was extended to the building of the railway station as well as the pedestrian deck.
Web link:	http://www.mlit.go.jp/road/road_e/pdf/chapter01.pdf Chapter 1 Road development in Japan

Key Words:	☐ Border Crossing ☒ Congestion ☒ Energy/Fuel ☒ Environment ☐ Freight ☐ Funding ☐ Information Sharing	☒ Infrastructure ☐ Intercity ☒ Intermodal ☐ Interoperability ☒ Passenger ☐ Planning ☐ Regulation/Law	☐ Rural ☐ Standards/Uniformisation ☐ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☐ Urban ☐ Other_____
Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp		

Country:	**Japan**
Activity Title:	**Ensuring Transportation to/from a Remote Island**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☒ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☒ Maritime
Objective (s):	Ensure access to remote islands.
Timeframe:	**Start:** 2011 **Finish:** ongoing
Outline of case:	Transportation to/from remote islands has been financially supported by the government as a crucial service to island residents. The present subsidy system, reorganized as a part of Project to secure, maintain, and improve local public transportation, in 2011, gives comprehensive and continuous support: a) subsidies for remote island transportation are supplied to compensate one half of the operating loss of each sea and aerial routes; b) subsidies are granted for the replacement or construction of ships used for the service, c) stakeholders, including operators, local governments and users are required to establish a council and the council should decide a Regional Transport Network Program, in which the remote islands service needs to be described. The government has other programmes, subsidies for purchasing aircrafts and installing a Satellite Based Augmentation System for remote island air routes. Until 2011, various subsidy systems for local public transportation were managed in parallel. These were mostly limited in the time frame and the field. Since local public transport is necessary for residents but hardly sustainable, those schemes need to be reformed to meet the needs of local society.
Outcome/Effects:	—
Web link:	—

Key Words:	☐ Border Crossing ☐ Congestion ☐ Energy/Fuel ☐ Environment ☐ Freight ☐ Funding ☐ Information Sharing	☐ Infrastructure ☐ Intercity ☐ Intermodal ☐ Interoperability ☒ Passenger ☐ Planning ☐ Regulation/Law	☒ Rural ☐ Standards/Uniformisation ☐ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☐ Urban ☐ Other_____
Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp		

Country:	**Japan**
Activity Title:	**Railway-station-based Community Rental Cycle System in urban area**
Mode(s):	☐ Walking ☐ Light Rail ☒ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	Improving last one mile transport from stations to encourage people to use railways, which is eco-friendly transport.
Timeframe:	**Start:** 2000 (Hankyu Rental Cycle) **Finish:** ongoing
Outline of case:	With the purpose of encouraging people to shift from cars to more eco-friendly railways and cycles, cycle rental systems based at railway stations have been introduced. Traditionally, many railways commuters have been using cycles between their home and railway stations. Often bicycle parking lots are constructed at railway stations. 1. Edogawa City, in Tokyo, started the pilot programme of rental bicycles, where registered members can use cycles at 5 ports nearby railway stations at the cost of 1 500 yen per month or 100 yen per day. Almost 10 000 people registered for the programme (525 pay by the month, 9 394 pay per day) and used 25 669 times per month. Cycle turnover at the program is 1.40 times per day and cycle riders have increased without construction of new parking facilities. 2. A questionnaire survey carried out by Policy Research Institute MLIT shows that community cycle rental systems based at railway stations encourage railway use by improving transport to and from the stations. And because of frequent turnover of cycle rental, rental bicycle ports need less space than parking lots for bicycle. It will be an advantage for local authorities or railway companies bothered by many bicycles parked on the roads around stations.
Outcome/Effects:	Community cycle systems increase the number of cycle users and may promote railway use. They will help improve both environmental conditions and mobility in urban areas.
Web link:	—
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Infrastructure ☐ Congestion ☐ Intercity ☐ Intercity ☐ Energy/Fuel ☒ Intermodal ☒ Intermodal ☒ Environment ☐ Interoperability ☐ Interoperability ☐ Freight ☐ Passenger ☐ Passenger ☐ Funding ☐ Planning ☐ Planning ☐ Information Sharing ☐ Regulation/Law ☐ Regulation/Law

Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp

Country:	**Japan**
Activity Title:	**Road development and improvement of access roads to airports and harbours**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective(s):	To improve access to destination.
Timeframe:	**Start:** — **Finish:** ongoing
Outline of case:	Under the fourth comprehensive national development plan, 14 000 km of Arterial high-standard highways and trunk roads are being constructed to improve access to tourist spots, airports, harbours and so forth, and to build comprehensive resilient road network. In all major Japanese cities, ring roads are being constructed on a priority basis to provide urban infrastructure, alleviate traffic congestion, reduce CO2 emissions, and create a favourable living environment. In the congestion-plagued Tokyo Metropolitan area in particular, three ring roads (Metropolitan Inter-city Expressway, Gaikan Expressway and Central Circular Route) are under construction as part of a three-ring, nine-radii network. Moreover, to ease chronic congestion in urban centres caused by through traffic, the traffic capacity of roads is being expanded through the construction of bypasses and the widening of existing roads. Today, 70% of 71 major airports and harbours in Japan are accessible from expressway interchanges within 10 minutes. To improve access, work is under way to construct access roads to major airports and harbours.
Outcome/Effects:	As of April 2011, completed sections of the arterial high-standard highways and trunk roads total 9 855 km (70% of the plan) and 95 % of all people in urban and rural areas can access the expressways and trunk roads within about one hour. Opening a part of the Central Circular Route (from Route 3 Shibuya Line to Route 4 Shinjuku Line) in 2010 has decreased congestion length by 30% and opening a part of the Metropolitan Inter-city Expressway (from Hachioji JCT to Akiruno IC) in 2010 decreases congestion length by 40%. 70% of 71 major airports and harbours in Japan are accessible from expressway interchanges within 10 minutes.
Web link:	http://www.mlit.go.jp/road/road_e/pdf/chapter01.pdf

Key Words:	☒ Border Crossing	☒ Infrastructure	☐ Rural
	☒ Congestion	☒ Intercity	☐ Standards/Uniformisation
	☒ Energy/Fuel	☒ Intermodal	☐ Supply Chain
	☒ Environment	☒ Interoperability	☐ Telecommunications
	☐ Freight	☐ Passenger	☐ Ticketing/Payment
	☐ Funding	☐ Planning	☐ Urban
	☐ Information Sharing	☐ Regulation/Law	☐ Other: Expressways
Contact:	Name: International Policy Division, Policy Bureau Organisation: Ministry of Land, Infrastructure and Transport (MLIT), Japan Email: kokusaiseisakuka@mlit.go.jp		

Country:	Japan
Activity Title:	**Encouraging Safety Management of Transport Operators**
Mode(s):	☐ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☒ Air ☒ Bus ☒ Inland Waterways ☒ Light or Heavy Goods Vehicle ☒ Maritime
Objective(s):	Connecting departure point to destination with safer transport service for passengers and cargoes
Timeframe:	**Start:** 2006 **Finish:** ongoing

Outline of case:

In order to prevent transport accidents caused by human error, the Transport Safety Management System was started in 2006. Under the system, transport companies – including road, rail, air and sea – are required by law to:

(a) nominate one executive officer as Safety Manager,

(b) establish Safety Management Rules.

Safety Management Rules should include a safety policy statement and the company's policies on; implementation and improvement of safety measures, internal and external communication, education and training, and internal audit.

It is expected that under this scheme:

(1) every part of the company becomes aware of safety as the top management priority;

(2) The Safety Management Plan will be vigorously implemented under the leadership of the top management;

(3) a PDCA cycle will work autonomously: Plan (planning safety system), Do (implementing the system), Check (reviewing the implementation) and Action (further improving the system); and

(4) as a result, the company's safety level will improve continuously.

MLIT (Transport Ministry) evaluation teams regularly visit the transport companies and conduct evaluation of the system, including interviews with officers at various levels; from top management to operation managers. The nature of the visit is not an inspection or supervision. The visiting team should try to offer advice to improve the company's safety levels, by for example, presenting the best practices of other companies.

Outcome/Effects:	Results of Survey by MLIT in 2010 (of 136 major transport companies):
	(A) 60.7% says the system is very effective, 37.7% slightly effective
	(B) The following improvements and merits were observed in the companies:
	1 Communication between management and the operating teams has improved.
	2 All levels of employees have become aware of safety.
	3 The company has become more responsive to problems and accidents.
	4 The internal audit is working effectively.
	5 The PECD cycle is working effectively.
Web link:	—
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☒ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☒ Information Sharing ☒ Regulation/Law ☒ Other: *Safety*
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Country:	**Japan**
Activity Title:	**Introduction and Interoperability of Smart Card System**
Mode(s):	☐ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	Providing public transport passengers with seamless transport by introducing smart card ticketing systems which overcome the between different modes and different operators.
Timeframe:	**Start:** 1998 **Finish:** ongoing
Outline of case:	The first major Smart Card ticketing system "Suica", of the East Japan Railways (JR East), was started in the Tokyo area in 2001. Since then, smart-card ticketing systems have spread throughout the country. Today, 70 million smart cards are in use. Users enjoy benefits: you don't have to buy a ticket before riding public transport and you can use all public transport of different member operators with a single card. Operators also enjoy merits: they can scale down ticket booths at stations, using the space for retailing and other services. The Greater Tokyo area has two Smart-Card systems: "Suica", with 35 million cards in circulation, is managed by JR East; and "PASMO", with 17 million, managed by a card company created by 11 rail and 19 bus operators. The two cards are completely interchangeable: you can ride public transport in the area operated by 100 different operators with either card. Major metropolitan areas other than Tokyo have their own smart-card systems. The 10 major card systems have agreed to make all cards interchangeable in 2013. When this is achieved, a passenger will ride almost all public transport systems in Japan with a single smart card.
Outcome/Effects:	79 out of 193 railway companies provide smart card service in the nation as of March 2011. The smart card system has brought not only improved convenience to passengers, but also a decrease in the cost of station services and enhanced prevention from improper use.
Web link:	http://www.jrtr.net/backissue/index_backissue.html (No. 50, September 2008, IC CARDS)

Key Words:	☐ Border Crossing ☒ Congestion ☐ Energy/Fuel ☐ Environment ☐ Freight ☐ Funding ☒ Information Sharing	☐ Infrastructure ☒ Intercity ☒ Intermodal ☒ Interoperability ☒ Passenger ☐ Planning ☐ Regulation/Law	☐ Rural ☒ Standards/Uniformisation ☐ Supply Chain ☐ Telecommunications ☒ Ticketing/Payment ☐ Urban ☐ Other_____
Contact:	Name: International Policy Division, Policy Bureau Organisation: MLIT Japan Email: kokusaiseisakuka@mlit.go.jp		

Country:	Japan
Activity Title:	Smart Inter Change

Mode(s):	☐ Walking	☐ Light Rail
	☐ Cycling	☐ Heavy Rail
	☒ Private automobile	☐ Air
	☒ Bus	☐ Inland Waterways
	☒ Light or Heavy Goods Vehicle	☐ Maritime

Objective (s):	To improve access to expressways

Timeframe:	Start: 2006	Finish: ongoing

Outline of case:	Smart Interchange, a staff-less and cash-less toll collection with dedicated ETC, reduces the costs of operating tollgates and solves the security problem of the gates. Smart Interchange requires only small structures and surface, reducing construction costs. In addition, the interchange function can be added to service/parking areas by connecting such areas with ordinary roads, and installing ETC gates at the entrances and exits.

Outcome/Effects:	59 Smart Interchanges are available on highways managed by the East Nippon Expressway Company, Central Nippon Expressway Company or West Nippon Expressway Company.

Web link:	—

Key Words:	☒ Border Crossing	☐ Infrastructure	☐ Rural
	☒ Congestion	☐ Intercity	☐ Standards/Uniformisation
	☒ Energy/Fuel	☒ Intermodal	☐ Supply Chain
	☒ Environment	☒ Interoperability	☒ Telecommunications
	☐ Freight	☐ Passenger	☒ Ticketing/Payment
	☐ Funding	☐ Planning	☐ Urban
	☒ Information Sharing	☐ Regulation/Law	☐ Other_____

Contact:	Name: International Policy Division, Policy Bureau
	Organisation: MLIT Japan
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KOREA

Country:	Republic of Korea
Activity Title:	**Technology for Transport Connectivity and Transfer System**
Mode(s):	☒ Walking ☒ Cycling ☒ Private automobile ☒ Bus ☐ Light or Heavy Goods Vehicle	☒ Light Rail ☒ Heavy Rail ☒ Air ☐ Inland Waterways ☐ Maritime

Objective (s):	To improve transfer centres for convenient, comfortable, and safe transit services, reduce unnecessary traffic, and lead a culture by providing a transit-oriented transportation system.
Timeframe:	**Start:** September 2006	**Finish:** June 2011
Outline of case:	This research pursues the following objectives: reduce transfer time; enhance travel rights for the mobility impaired; optimise transfer facilities; and promote standardisation and integration of transfer-related technologies. To achieve these goals, the research team developed technologies related to intermodal connections and transfer systems, and conducted related field surveys. Through these activities, the research team ultimately aims to realise convenient and safe intermodal connections and transfer systems.
Outcome/Effects:	The research team developed the following technologies: P1. Transfer Center Feasibility Evaluation Manual P2. Connectivity Analysis System of Public Transport Networks D1. Transfer Center Design and Placement Criteria D2. Transfer Center Electronic Design Manual D3. Transfer Center Design Analysis Program(Design- PED) O1. Integrated Opearing System for Intermodal Connectivity (Garatagi Centre) O2. Mobile Information Program for Intermodal Connectivity (Garatagi Mobile) O3. Transfer Centre Operation Analysis Program (3D-PED)
Web link:	—

Key Words:	☐ Border Crossing ☐ Congestion ☐ Energy/Fuel ☐ Environment ☐ Freight ☐ Funding ☐ Information Sharing	☒ Infrastructure ☐ Intercity ☒ Intermodal ☐ Interoperability ☒ Passenger ☒ Planning ☒ Regulation/Law	☐ Rural ☒ Standards/Uniformisation ☐ Supply Chain ☒ Telecommunications ☐ Ticketing/Payment ☐ Urban ☐ Other_____
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THE NETHERLANDS

Country:	**The Netherlands**
Activity Title:	**OV-fiets (Public Transport Cycling)**
Mode(s):	☐ Walking ☐ Light Rail ☒ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	To provide train passengers with an alternative for after-rail transport: an easily available bicycle.
Timeframe:	**Start:** 2003 **Finish:** Ongoing
Outline of case:	OV-fiets (Public Transport Cycling) is an inexpensive (€ 3 per trip / 24 hours) rental bike available at a large number of train stations in the Netherlands and used quite often to travel to the final destination. OV-fiets is also available outside train stations, for instance at metro and bus stops, and at Park & Ride sites. Both the number of customers of OV-fiets and the number of trips made by OV-fiets are rapidly growing since the start in 2003 (2011: 100 000 subscribers, 1 million trips). Since 2008, OV-fiets is part of NS (Dutch railways).
Outcome/Effects:	A 2010 customer survey among 11,500 OV-fiets customers reports that: • 8 % of all users indicate they used to travel by car to the location they reach most often by OV-fiets; • 3 % used to be collected by car; • 15 % indicates replacing at all OV-fiets instances 1 or several car trips by a combination of train and OV-fiets. The major reasons to prefer an OV-fiets are stated to be the ease of use, freedom, speed, low costs and environmental reasons.
Web link:	www.ov-fiets.nl (in Dutch) www. fietsberaad.nl
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____

Contact:	Name/Organisation: The Dutch Cycling Embassy Foundation Trans 3 3512 JJ Utrecht The Netherlands Tel. +31 (0)30 230 4521 Fax. +31 (0)30 231 2384 Email: info@dutchcycling.nl

Country:	The Netherlands
Activity Title:	**ULTIMATE Efficient Multimodal Hinterland Networks**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☒ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	The DINALOG ULTIMATE project develops an approach to pro-actively push containers into the hinterland of a seaport. For this purpose, an appropriate network of sea- and hinterland terminals needs to be developed (with the right level of security, IT systems and quality of operations). At the same time, the processing in the seaport to release containers to be moved into the hinterland has to be streamlined in order to avoid delay. In this respect, ULTIMATE contributes to the development of seamless hinterland transport networks. ULTIMATE is a project funded by the Dutch Institute of Advanced Logistics (DINALOG)
Timeframe:	**Start:** June 2011 **Finish:** May 2014
Outline of case:	Extended gates of sea terminals are developed in the hinterland of the Netherlands, Germany and Belgium. A network of sea terminals and hinterland terminals/extended gates facilitates efficient hinterland transport, efficiency gains in the seaport as well as in the transportation between seaport and hinterland locations. A major issue is the balance in the network between operational standards in all nodes in the network, as well as an agreement with the major stakeholders (shipping lines, shippers and customs) that certain administrative, inspection and release activities can be deferred from the seaport to hinterland locations. Another major issue is the legal framework for developing this kind of complex multimodal hinterland transport service. For one, the role change of a terminal in offering transport services and forwarding activities is complex. In addition, the legal framework enabling multimodal transport services is not well developed. The terminal operator ECT is developing this concept in a commercial setting under the brand European Gateway Services. The network of hinterland terminals is constantly expanding. Development of integral IT systems to control the booking of transport and the flow of containers and administrative processes is underway, and the basis booking platforms and IT systems are expected to be finalised in 2012/2013.

Outcome/Effects:	Efficiency gains at sea terminals (use of space and equipment productivity, cost savings in hinterland transport due to increased use of inland shipping and rail, and eventually the sustainability of the accessibility of the seaport). The DINALOG ULTIMATE project plays an important central role in a cluster of projects around the seamless transport of containers through seaports into the European Hinterland. These projects address related IT infrastructure development (EU FP7 projects CASSANDRA, I-CArgo and COMCIS), pilots in advanced multimodal transport solutions and innovative concepts such as pre-notification of trucks and re-use of empty containers. (see also attached image).
Web link:	http://www.europeangatewayservices.com
Key Words:	☒ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☒ Supply Chain ☐ Environment ☒ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☒ Information Sharing ☒ Regulation/Law ☐ Other_____
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Country:	The Netherlands
Activity Title:	**Cross chain consolidation: 4C4MORE & 4C4D**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective(s):	The Dinalog projects 4C4More and 4C4D (city distribution) both focus on opportunities for so-called Cross Chain Control Centres, in short 4C. The key idea behind it is to create economies of scale and scope through inter- and intra-supply-chain collaboration. Economies of scale refer to more efficient use of scarce physical resources and materials, whereas economies of scope refer to more effective use of scarce human resources. Creating such economies of scale and scope boosts profitability of companies involved in 4C activities, enlarges the potential for multimodal transport solutions, while more efficient use of scarce resources and materials contributes to a sustainable planet. Also in urban areas, there is a huge potential for bundling of distribution flows that are now fragmented. Although there are first signs of co-operation between logistic service providers and retailers, recent reviews show that there are hardly any examples of commercially successful, environmentally sustainable collaborative solutions (in e.g. urban areas) within Europe.
Timeframe:	**Start:** October 2012 **Finish:** January 2015
Outline of case:	The idea of inter- and intra-supply-chain collaboration is not new, but effective and sustainable forms of such collaboration are scarce. This is mainly for two reasons: sharing benefits of collaboration in a fair way is far from trivial, and operational collaboration requires sharing very sensitive data about sales and orders. 4C4More initially focuses on intra- and inter supply collaboration of total supply chains and 4C4D focuses on collaboration in city distribution and coordination between logistics service providers and between LSPs and retailers, i.e. the bundling of physical good flows into (urban) areas, resulting in fewer negative impacts (decongestion, less nuisance in cities). The Dinalog 4C4More and 4C4D projects are focussing on collaboration in the FMCG value chain. This implies collaboration between retailers and shippers about forecasts and shipment frequencies and timing. This implies collaboration between shippers and logistics service providers about time windows at DC's and stores. This implies collaboration between logistics service providers to maximize vehicle utilization and thereby minimize cost and emissions. Clearly, all of this has been noted many times before. But as with many ideas, translation from the concept of 4C and intra- and inter supply chain collaboration to actual day-to-day practice is a challenge. Therefore the projects look into aspects such as the development of 4C architectures (i.e. functional and organizational designs including

	appropriate business models) for innovative, collaborative distribution structures (for urban areas), the development of business models, ICT and operational decision support tools, methods for fair gain sharing etc.
Outcome/Effects:	The projects should yield more efficient transport and warehousing processes by a better orchestration of the different physical flows, thereby lower (transportation) costs, lower usage of scarce resources. The projects also lead to more effective use of human and physical resources, a substantial capital cost reduction. A short-term revenue improvement for the companies involved, both shippers and service providers.
	A significant reduction in (city) emissions in transport by less energy usage and less emissions due to less trucks and less movements. Improved air quality (e.g. carbon footprint) in cities.
	The projects are closely related to international projects and initiatives such as the EU FP7 project CO3 and the Joint Program Initiative 'Urban Europe' as well as various demonstration projects in e.g. the automotive industry, healthcare, and fashion.
Web link:	http://www.dinalog.nl
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☐ Intermodal ☒ Supply Chain ☒ Environment ☒ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☒ Planning ☒ Urban ☒ Information Sharing ☒ Regulation/Law ☐ Other_____
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Country:	The Netherlands		
Activity Title:	**NS Zonetaxi**		
Mode(s):	☐ Walking ☐ Cycling ☒ Private automobile ☐ Bus ☐ Light or Heavy Goods Vehicle		☐ Light Rail ☐ Heavy Rail ☐ Air ☐ Inland Waterways ☐ Maritime
Objective (s):	More reliable combination train –- taxi		
Timeframe:	**Start:** 2009	**Finish:** ongoing	
Outline of case:	To improve door-to-door transport, Dutch railways NS and the Dutch taxi employer association KNV Taxi started in 2009 a pilot in 5 cities to offer a (more) reliable taxi service after a train ride. NS Zonetaxi is a taxi concept for train passengers that stands out due to the guaranteed quality and the transparent zoned tariffs. There are maximum tariffs of six, nine and twelve euros, building up per two-kilometre zone. That is 20% cheaper than normal taxi rates on average, so it is highly competitive. NS Zonetaxi is positioned as part of the door-to-door train journey for all train passengers, with particular emphasis on the social/leisure market. In the longer term, NS Zonetaxi will also be suitable for business customers as an addition to the existing taxi products for business customers. The train passenger has to book the taxi in advance; paying will be afterwards by direct debit. Recognisability of NS Zonetaxis on the station forecourt will be achieved by using a separate "taxi post", a separate rank for waiting in, and identification symbols on the taxis.		
Outcome/Effects:	NS and KNV are planning to increase the number of NS zone taxi stations to some 20 by the end of 2012. Passengers will be obliged to order the NS Zonetaxi by phone in advance, in combination with paying on account.		
Web link:	www.ns.nl/zonetaxi (in Dutch)		
Key Words:	☐ Border Crossing ☐ Congestion ☐ Energy/Fuel ☐ Environment ☐ Freight ☐ Funding ☐ Information Sharing	☐ Infrastructure ☐ Intercity ☒ Intermodal ☐ Interoperability ☒ Passenger ☐ Planning ☐ Regulation/Law	☐ Rural ☐ Standards/Uniformisation ☒ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☒ Urban ☐ Other_____
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Country:	New Zealand
Activity Title:	Northern Busway project
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	The objective of the Northern Busway project was to provide North Shore commuters with fast, efficient bus travel to Auckland CBD. This fits under the "connecting people" theme.
Timeframe:	**Start:** 2003 **Finish:** November 2008
Outline of case:	The Northern Busway is the first dedicated busway infrastructure in New Zealand. The bus lane sits alongside state highway one in a broad north-south line between Albany and the Auckland Harbour Bridge. It includes a two-way 6.24 km road for buses, 2.5 km of single bus lanes and five stations. The busway project also included improved facilities for cyclists and pedestrians at busway stations and improved safety and motorway access for motorists and trucks. The busway project planning started in the late 1980s and construction commenced in 2003. Due to the lack of any rail corridor in that part of Auckland, a busway was considered ideal as it provided a cost effective and versatile mass transit option for the area. The busway, opened in February 2008, forms a key part of Auckland's rapid transit network. It improved journey speeds, reliability and provided an attractive alternative to private vehicle use and reduced the demand for more road infrastructure. The busway has also supported the first public transport service linking the North Shore with Auckland Airport, with the Northern Flyer. From 2009, shuttles were also permitted to use the busway, taking between 20 and 30 minutes off travel times in peak hours.

Outcome/Effects:	The Northern Express, the bus service which operates up and down the Busway exclusively, had doubled its passengers since the Busway opened in February 2008. For the 12 months to October 2011, the Northern Express bus service had 17.3 percent more passengers than the previous year. By comparison, the growth in the Auckland bus patronage other than the Northern Express was 7 percent for the same 12 months period. The more than average growth in patronage of the Northern Express bus service means fewer cars are making the trip from the North Shore to the Auckland CBD, which would result in reductions in fuel consumption and vehicle emissions. Data source: Auckland Transport October 2011 Statistics Report
Web link:	http://www.nzta.govt.nz/network/projects/project.html?ID=15 http://www.aucklandtransport.govt.nz/improving-transport/completed-projects/RapidTransit/Pages/TheNorthernBusway.aspx
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
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Country:	New Zealand
Activity Title:	High Productivity Motor Vehicle (HPMV) system
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	The objective of the HPMV system is to improve the efficiency of freight movements, enable a given amount of freight to be carried with fewer trips, without reducing the safety of road users. This is achieved by making appropriate changes to the Land Transport Rule to allow suitable heavy vehicles to carry longer and/or heavier loads on suitable routes under permit. The implementation of this new practice fits under the "Connecting systems" theme.
Timeframe:	**Start:** 1 May 2010 **Finish:** ongoing
Outline of case:	The Vehicle Dimensions and Mass Rule Amendment 2010 came into effect on 1 May 2010 which allows for a new vehicle type called High Productivity Motor Vehicles (HPMVs) to carry longer and/or heavier divisible loads on suitable routes under permit. The HPMV system encourages road transport operators to identify areas where there could be significant productivity gains through matching freight task, vehicle capability and infrastructure capability. HPMV permits are issued by local councils for local roads and by New Zealand Transport Agency (NZTA) for the state highway network. The NZTA also issue permits for over-length HPMVs. To develop network availability for HPMVs the NZTA has worked with local councils and the road transport industry to identify potential end-to-end freight routes for HPMV use. Assessments are also made to determine the suitability and any network upgrade requirements for those routes. The NZTA has published regional maps of the HPMV routes that have been approved on the state highway network and guidance maps showing network capability for full and limited HPMV permits. Maps showing the investment priority for the state highway network have also been developed. The NZTA provides funding assistance to local authorities for the assessment and development of HPMV routes.
Outcome/Effects:	Trials carried out in 2008 and 2009 found that under the right conditions, increasing the amount of freight moved per trip could increase productivity by between 10 to 20 percent, including reducing fuel use (and associated emissions) by up to 20 percent. During the first year of operation to April 2011, a total of 501 HPMV permits have been issued. The September 2011 review (note) of the VDM Rule confirmed that the HPMV permits being issued were providing, on average,

	productivity gains of a 20 percent decrease in trips for the same freight task under higher-mass permits and a 14 percent decrease in trips for over-length permits. The annualised transport cost reductions was estimated to be in the order of $9 million for the HPMV permits issued so far without any network upgrade cost to date.
	It is too early to fully gauge the expected safety and environmental impact benefits from reduced HPMV trips. However, the reduced truck movements from improved freight efficiency will provide some safety benefits through lower crash risk exposure. Additionally, the new "built-to-purpose" over-length HPMV vehicles all have advanced safety features such as electronic stability control and anti-lock braking systems.
	Note: Stimpson and Co (2011), "Monitoring, evaluation and review of the Vehicle Dimensions and Mass Rule: May 2010-April 2011", Report to New Zealand Transport Agency (http://www.nzta.govt.nz/vehicle/your/hpmv/docs/mer-summary-report-september-2011.pdf)
Web link:	http://www.transport.govt.nz/ourwork/Land/Pages/VDMAmendment2010.aspx http://www.nzta.govt.nz/hpmv/
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
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Country:	Spain
Activity Title:	**Intermodal exchange stations for connecting urban transport modes: Madrid case study**
Mode(s):	☐ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	Identify and quantify the social benefits of having good intermodal exchange stations for connecting urban transport modes in urban areas
Timeframe:	**Start:** 2008 **Finish:** Finished
Outline of case:	The City of Madrid is putting into operation Intermodal Exchange Stations (IESs) to make connections between urban and suburban transportation modes easier for users of public transportation. The purpose of this study is to evaluate the actual effects that the implementation of IESs in the City of Madrid has on the affected stakeholders: users, public transportation operators, infrastructure managers, the government, the abutters and other citizens. We develop a methodology intended to help assess the welfare gains and losses for each stakeholder. Then we apply this methodology to the case study of the Avenida de América IES in the city of Madrid. We found that it is indeed possible to arrive at win-win solutions for the funding of urban transportation infrastructure, as long as the cost-benefit ratio of the project is high enough. Commuters save travel time. Bus companies diminish their costs of operation. The abutters gain in quality of life. The private operator of the infrastructure makes a fair profit. And the government is able to promote these infrastructure facilities without spending more of its scarce budgetary resources.
Outcome/Effects:	The construction of the IES is thus a good example of a win-win strategy. The users are pleased since they save time without paying a larger fare for using the metropolitan buses. The bus companies are also happy since, even though they now have to pay a fee to the IES concessionaire, this amount is smaller than the transportation costs they save. Moreover, the bus companies are also pleased since travel by bus has substantially increased since the construction of the IES. The concessionaire is pleased since it can take advantage of a profitable business opportunity. The abutters gain in quality of life. The community, and even the country, benefits from a reduction in emissions.

Web link:	http://www.crtm.es/servlet/CambiarIdioma?xh_TIPO=12
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☒ Funding ☒ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
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Country:	Spain
Activity Title:	**Electronic t2l initiative included in the monitoring operations services for motorways of the sea (mos4mos) project**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☒ Maritime
Objective (s):	The electronic T2L initiative (developed as part of the MONITORING OPERATIONS SERVICES FOR MOTORWAYS OF THE SEA (MOS4MOS) TEN-T Project, Project code: 2010-EU-21102-S, TEN-T Motorways of the Sea Call 2010) aims to define procedures to make intra-Community sea transport simpler and less cumbersome for its users, introducing new methods for simplifying formalities for ships arriving and/or departing to/from European ports, and more particularly facilitating and simplifying Customs controls at ports while enhancing security. These goals can be achieved by adopting electronic documentation and using electronic data transmission systems.
Timeframe:	**Start:** 21 March 2011 **Finish:** 31 May 2012
Outline of case:	The release of foreign trade containerised flows at most European Union (EU) ports nowadays is simpler and requires less paperwork, thanks to advanced electronic procedures and risk analyses, than the release of Community goods transported on a non-authorised regular shipping service. Automatic controls on inbound and outbound intra-Community freight are not in place yet and a paper form named T2L (or an equivalent document) needs to be presented for the EU Customs' officers to sign and stamp. This situation is hindering the development of Motorways of the Sea (priority project 21 in the Trans-European Networks for Transport). The electronic T2L is a feasible solution for proving the Community status of goods using Customs electronic data transmission systems instead of paper documents. This system provides a secure single window environment using digital authentication and signature for submitting data, carries out automatic checks and authenticates electronically T2L declarations. The electronic T2L, designed as part of the MOS4MOS project, is one of the 22 proposals, aiming to reduce administrative burdens, included in the Spanish Action Plan for the Reduction of Administrative Burden, approved by the Agreement of the Spanish Council of Ministers signed on 16 September 2011.
Outcome/Effects:	The general procedure to prove the Community status of goods often requires that paper T2L documents are generated and presented by an agent to Customs in the Member State of departure, accompanied by a commercial invoice. Then, Customs authorises the documents with a stamp and signature. Once stamped and signed, the documents have to be transferred from the port of origin to the port of destination. There are

several ways for documents to reach their destination. Original documents usually travel on board; or they are transferred by mail or express mail, if it is important that the documents reach their destination before the vessel arrives so that customs formalities can be fulfilled in advance. Once the documents arrive, they have to be presented to Customs in the Member State of destination where an additional stamp and a signature is required, so that the goods can leave the port of destination. The original T2L is retained in the Customs Office of the final EU port.

Problems from this procedure arise when the vessel arrives before the paper documents are delivered, or when the customs offices are closed but the freight is waiting to depart from the port, as the status of the goods must be verified for authorizing and controlling the departure of these goods from the port.

The current procedures bear important costs in terms of personnel, printing, courier services and other forms of transport of documents, errors and delays.

Although procedures that are based on the presentation of the shipping manifest may be used, this simplified procedure usually requires the physical presentation of an original paper document, which has to be authorised by means of a signature and a stamp from Customs Authorities. The use of paper is the rule instead of using electronic information and electronic registries. Consequently, it is very difficult for Customs Authorities to effectively control and trace the flow of intra-Community goods by sea.

This situation could even lead to fraudulent practices. Goods for example could leave a port in one Member State following an export procedure and, thus, avoid paying VAT taxes, but then enter again in a subsequent port in another Member State stating that the goods have a Community status, avoiding the payment of customs duties. As there lacks an electronic registry or automatic verification between the Customs of exit and the Customs of entry, this possible situation would be very difficult to detect.

The electronic T2L is based on current e-Customs systems that are already in use in Europe. The Spanish Customs Department, jointly with the Tax IT Department, is developing an IT solution that will be applied all over Spain in order to introduce the electronic T2L. The features of this electronic platform are the following:

- An electronic channel will be available to submit electronic T2Ls before the departure of the goods via maritime transport. This channel will make it possible to transmit electronically the T2L in XML format with an electronic signature, via Web Services. The technical solution will be similar to the one that was adopted for the submission of Entry Summary Declarations (ENS) and Exit Summary Declarations (EXS).

- A web page associated to the web site of the Tax Agency will be available in order to type in the information of the T2L and then submit it electronically. It is mandatory that a copy of the document that proves the Community status of the goods be attached by using the web page designed to this purpose.

- The information fields that are being considered for the electronic T2L message are the following:

    Box 1.3. Document type (T2L, T2LF, …): Mandatory

    Box 2. Shipper (Name, Address, EORI): Mandatory

    Box 5. Total number of shipments included in the declaration: Mandatory

    Box 6. Total number of packages included in the declaration: Mandatory for control purposes

    Box 8. Consignee (Name, Address, NIF or EORI): Optional data. If a NIF or an EORI are indicated, they will be validated.

    Box 14. Declaring agent/representing agent (EORI): Mandatory

    Box 17. Destination Country Optional. If it is mentioned it must be valid and pertaining the EU.

    Box 21. Active means of transport at border (Vessel name): Optional

Shipment list:

For each consignment, the following information will be included:

    Box 31. Goods description (Text, number of packages, container numbers): Mandatory

    Box 32. Order number of the consignment: Mandatory

    Box 33. Goods code (8 digit Codification): Mandatory

    Box 35. Gross Weight: Mandatory

    Box 38. Net Weight: Mandatory

    Box 40. Precedent Document: There is no precedent document

    Box 44. Submitted documents (Type, Reference and Date): One of the documents that prove the Community status of the goods must be submitted (e.g. commercial invoice, B/L, SAD…)

    Box 54. Place, date and signature: Mandatory. The hand-written signature will be replaced by an electronic signature, using a valid digital certificate.

- A computer-assisted risk assessment will be done immediately after the declaration, which will result in the assignment of a green, orange or red circuit. The Web Service that is used will send as a response an electronic message that will assign a number to the T2L by a MRN and the assigned circuit. A green circuit implies the Customs clearance and a control number will be associated to the operation. The information about the Customs clearance of the T2L submitted electronically will be transmitted to the Port authorities for them to apply the export paperless release procedure.

- An electronic channel will be available in order to present the accounting of the Community goods associated to a T2L when they arrive at the

border Customs area following the same technological solution that is used for the electronic T2L declaration.

- The pieces of information that are considered for the accounting message of Community goods associated to a T2L document are:
  - Document Type (Copy number 4 of SAD, endorsed cargo manifest…): Mandatory
  - Declaring agent of the accounting (NIF or EORI): Mandatory
  - Country where the T2L is submitted: Mandatory, and must be an EU country.
  - MRN Number assigned to the T2L: Mandatory (Number that is assigned to the T2L by the Customs where it is declared)
  - Date of declaration of the T2L: Mandatory
  - Total number of packages included in the declaration: Mandatory for control purposes. It will determine whether the accounting message is valid or not (the number of packages in the declaration must be the same as the sum of packages that are accounted in the shipments of the Summary Declaration). It is not allowed that only a part of the goods declared in a T2L document are accounted electronically.
  - Total Gross Weight of the goods included in the T2L document: Mandatory for control purposes. It will determine whether the accounting message is valid or not (the total gross weight in the declaration must be the same as the sum of gross weights that are accounted in the shipments of the Summary Declaration).
  - List of accountings of goods that are listed in the Summary Declaration for Temporary Storage.
  - Number of the Summary Declaration for Temporary Storage: Mandatory
  - Order Number of the consignment in the Summary Declaration for Temporary Storage: Mandatory
  - Gross weight that is accounted
  - Number of packages that are accounted

- At destination, another computer-assisted risk assessment will be done immediately after the declaration, which will result in the assignment of a green, orange or red circuit. The Web Service that is used will send as a response an electronic message that will assign a reference to an exit document (JCE or proof of Community goods). A green circuit implies the Customs clearance and a control number will be associated to the operation. The information about the accounting of the T2L submitted electronically will be transmitted to the Port Authorities for them to apply the import paperless release procedure. The received information can be printed by the agent that declares the accounting, so that it can be used as a clearance document that authorises the exit from the border Customs area. Once a T2L document is accounted, it cannot be accounted again. Partial electronic accounting of a T2L document is not allowed.

- A web system to perform consultations will be available. This system will be used to get a printed version of the T2L document in PDF format from the virtual site of the Tax Agency (copy number 4 of the Single Administrative Document, SAD). This consultation system can be accessed by Customs of other countries as a verification measure of the authenticity of the document, as well as by maritime operators in order to get remotely a printed copy of the T2L document, which is valid in other Member States. The T2L document in PDF format can be recovered typing in the control number that was assigned by the Customs where the document was declared. The civil servant's signature and the Customs stamp where the document is declared will no longer be necessary and will be replaced by a generated control number.

- The fact that there is a web page in the virtual site of the Spanish Tax Agency that enables the verification of the T2L document generated by the Customs service implies a significant improvement in switfness and flexibility compared with the solution applied by Belgian Customs, because in Belgium this verification has to be done via e-mail and be carried out by a Customs civil servant.

- The conclusions derived from the analysis and design study performed by the Spanish Customs Department, with the collaboration of the Port Authority of Valencia and the Valenciaport Foundation, have clearly exceeded the initial expectations of this initiative. Spanish Customs is going to implement this initiative after the testing phase of the prototypes within the framework of the MOS4MOS Project. It is expected that the system will be fully operational in the second semestre of 2012.

- As part of MOS4MOS, a financial feasibility analysis of implementing the electronic T2L and using this system for a period of 20 years at the port communities of Valencia, Barcelona and Salerno instead of continuing using current procedures has been carried out. Implementing the e-T2L instead of continuing using current procedures would be a profitable project for non-vessel operating common carriers (NVOCCs) and shipping agencies at the ports of Valencia, Barcelona and Salerno. Their net present value, after discounting the flow of net benefits at a 10% rate, would be 2 709,583 and 2 230 494 Euros respectively. The internal rate of return (IRR) cannot be calculated for NVOCCs since the net benefits flow is always positive. For shipping agencies, the project shows an IRR of 64.11% and the payback point is reached in year 3. The project for Spanish and Italian Customs results in an IRR of 0.57% if the electronic T2L were to be implemented only in Valencia and Barcelona in Spain and only in Salerno in Italy. This situation is highly unlikely as Customs would only implement the project to make the new process compulsory at national level. Customs and port authorities would only invest in the implementation of the electronic T2L if the project as a whole would have net economic benefits. This is the case, as considering only the port communities of Valencia, Barcelona and Salerno plus Spanish and Italian Customs, the results of the implementation of the electronic T2L would be of 2,774,720 Euros in terms of NPV, the IRR would be 17.63% and the payback point would be reached in year 11.

	• According to the Spanish Government (estimations carried out using the simplified method for measuring administrative burden and the economic effect of its reduction, based on the standard cost methodology shared by all Spanish Public Administrations), the estimated savings of implementing this initiative will be approximately 38 million Euros a year in the whole of Spain. Additionally, this solution will boost the development of Motorways of the Sea in the Trans-European Transport Networks and contribute to the start up of more innovative and integrated intermodal transport solutions in Europe.
Web link:	www.mos4mos.eu
Key Words:	☒ Border Crossing ☐ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☐ Environment ☒ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☒ Information Sharing ☒ Regulation/Law ☐ Other
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SWEDEN

Country:	**Sweden**
Activity Title:	**The Swedish Doubling Project**
Mode(s):	☐ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☒ Inland Waterways ☐ Light or Heavy Goods Vehicle ☒ Maritime
Objective (s):	Doubling of the public transport market share in Sweden. Seamless transport is dependent on keeping public transport attractive and efficient, a doubling of the market share therefore ensures a continued and enhanced seamlessness in Sweden's transport system.
Timeframe:	**Start:** 2008 **Finish:** ongoing
Outline of case:	In 2006 only 18% in Sweden used public transport for daily travel. A united public transport sector has therefore decided to double its market share. The sector has started a form of partner co-operation – known as the Doubling Project – in order to double the public transport market share. It is being conducted by the Swedish Public Transport Association, the Swedish Bus and Coach Federation, the Swedish Taxi Association, the Association of Swedish Train Operating Companies, the Swedish Association of Local Authorities and Regions and the Swedish Transport Administration. The aim is to encourage all employees and interested parties in the sector to work together in order to develop the next generation of public transport. An openness to new ideas, trust and confidence in each others' willingness and ability are building blocks in the co-operation. One important task is also to encourage the Government, Parliament and authorities to create the right preconditions with respect to infrastructure, urban planning, tax issues, legislation, research and development. The vision has been developed with a basic starting point in the Swedish Transport Policy Goals. The vision is: "Public Transport is a natural part of travelling in a sustainable society."
Outcome/Effects:	A doubling of the public transport market share produces major benefits for society. The goals are to significantly reduce carbon dioxide emissions and to increase energy efficiency throughout the entire transport system. A doubling will also give better road safety, less congestion and a transport system that offers equal opportunities. Public transport also contributes to growth and regional development.

Web link:	www.doublingproject.se
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☒ Congestion ☒ Intercity ☒ Standards/Uniformisation ☒ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☒ Environment ☒ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☒ Ticketing/Payment ☐ Funding ☒ Planning ☒ Urban ☐ Information Sharing ☒ Regulation/Law ☒ Other Public transport
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Country:	Sweden
Activity Title:	The Swedish Green Corridor project

Mode(s):	☐ Walking ☐ Light Rail
	☐ Cycling ☒ Heavy Rail
	☐ Private automobile ☐ Air
	☐ Bus ☒ Inland Waterways
	☒ Light or Heavy Goods Vehicle ☒ Maritime

Objective (s):	Seamless transport depends on sustainable transport corridors. In the Green Corridor project we will create a seamless, environmental-friendly and safe transport corridor from Olso to Rotterdam by Gothenburg.

Timeframe:	**Start:** 2010	**Finish:** ongoing

Outline of case:	Green corridors is a European Commission initiative aimed at strengthening the logistics industry's competitiveness and create sustainable solutions.
	Green corridors will enable large-scale and long-term transport solutions through sufficient and attractive infrastructure and supportive regulatory frameworks.
	In October 2008 Sweden, led by the Swedish Logistics Forum, decided to start a big project within the Green corridor concept. In 2010 they appointed the Swedish Transport Administration (Trafikverket), the Swedish Maritime Administration (Sjöfartsverket) and the Swedish Agency for Innovation Systems (VINNOVA) to develop the concept for Green corridors in cooperation with companies, public sector and universities.
	Until the end of 2012 the aim of the project is to:
	– establish a Green corridor from Oslo to Rotterdam by Gothenburg;
	– find new efficient sustainable solutions through development projects;
	– test new technical solutions in the corridor;
	– spread information about Green corridor.

Outcome/Effects:	Through this project the first Green Corridor will be established.

Web link:	http://www.trafikverket.se/Foretag/Trafikera-och-transportera/Planera-godstransporter/Grona-korridorer/

Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural
	☐ Congestion ☐ Intercity ☐ Standards/Uniformisation
	☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain
	☒ Environment ☐ Interoperability ☐ Telecommunications
	☒ Freight ☐ Passenger ☐ Ticketing/Payment
	☐ Funding ☐ Planning ☐ Urban
	☐ Information Sharing ☒ Regulation/Law ☐ Other_____

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Country:	**Sweden**	
Activity Title:	Railport Scandinavia	
Mode(s):	☐ Walking ☐ Cycling ☐ Private automobile ☐ Bus ☐ Light or Heavy Goods Vehicle	☐ Light Rail ☒ Heavy Rail ☐ Air ☐ Inland Waterways ☒ Maritime
Objective (s):	Reduce emissions from carbon dioxide, increase volume of goods, increase seamlessness by replacing a vast number of trucks with rail at efficient and purpose-built terminals, as well as implementing a system characterised by simplicity and a ready-made concept.	
Timeframe:	**Start:** 2000	**Finish:** ongoing
Outline of case:	In 2000, a project to operate direct trains to and from inland terminals began. Inland terminals are logistics hubs based in important towns across Sweden. During the past decade, the volume of freight transported by train has increased by 300% and 26 daily rail shuttles now transport around 400 000 containers per year between the Port of Gothenburg and other towns in Sweden and Norway. There are significant environmental benefits to the RailPort Scandinavia system and its network of inland terminals. It is not just the environment and the intensely-used road networks that benefit. Thanks to the deliberate and long-term investment in rail transport, local employment opportunities have been created in the towns hosting inland terminals. Moreover, import and export companies benefit from the rail shuttles; instead of transporting their goods to and from the port by truck, they can transport goods with ease, low costs and minimal environmental impacts to their nearest inland terminal, with their own VAT and toll declaration points. In addition, the Port of Gothenburg has successfully widened its catchment area and increased its attractiveness to major regions in Sweden and Norway. With increasing volumes, Gothenburg can attract an increased number of direct transoceanic liner calls, which supports development in the whole of Nordic region.	
Outcome/Effects:	Environmental benefits, less wear and tear on major roads, local employment opportunities, increased seamlessness in transport and reduced costs for operators, widened catchment area, increased volumes and thereby increased attractiveness for transoceanic liners.	
Web link:	http://www.portgot.se/prod/hamnen/ghab/dalis2b.nsf	
Key Words:	☐ Border Crossing ☐ Congestion ☒ Energy/Fuel ☒ Environment ☒ Freight ☐ Funding ☐ Information Sharing	☒ Infrastructure ☐ Intercity ☒ Intermodal ☒ Interoperability ☐ Passenger ☐ Planning ☐ Regulation/Law	☐ Rural ☐ Standards/Uniformisation ☒ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☐ Urban ☐ Other_____

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Country:	Sweden
Activity Title:	**The Swedish Green Corridor project**
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☒ Inland Waterways ☒ Light or Heavy Goods Vehicle ☒ Maritime
Objective (s):	Seamless transport depends on sustainable transport corridors. In the Green Corridor project we will create a seamless, environmental-friendly and safe transport corridor from Olso to Rotterdam by Gothenburg.
Timeframe:	**Start:** 2010 **Finish:** ongoing
Outline of case:	Green corridors is a European Commission initiative aimed at strengthening the logistics industry's competitiveness and create sustainable solutions. Green corridors will enable large-scale and long-term transport solutions through sufficient and attractive infrastructure and supportive regulatory frameworks. In October 2008 Sweden, led by the Swedish Logistics Forum, decided to start a big project within the Green corridor concept. In 2010 they appointed the Swedish Transport Administration (Trafikverket), the Swedish Maritime Administration (Sjöfartsverket) and the Swedish Agency for Innovation Systems (VINNOVA) to develop the concept for Green corridors in cooperation with companies, the public sector and universities. Until the end of 2012 the aim of the project is to: – establish a Green corridor from Oslo to Rotterdam via Gothenburg; – find new efficient, sustainable solutions through development projects; – test new technical solutions in the corridor; – spread information about Green corridor.
Outcome/Effects:	Through this project the first Green Corridor will be established.
Web link:	http://www.trafikverket.se/Foretag/Trafikera-och-transportera/Planera-godstransporter/Grona-korridorer/
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☒ Regulation/Law ☐ Other_____
Contact:	Name: Kenneth Wåhlberg Organisation: Trafikverket Email: Kenneth.Wahlberg@Trafikverket.se

SWITZERLAND

Country:	**Switzerland**
Activity Title:	**Rail 2000 and follow up projects**
Mode(s):	☐ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	Develop to a maximum an interconnected public transport system including railway (intercity, interregional, regional, sub/urban), buses, boats, cable cars etc., based on a 1 hour / 30 minutes time schedule in order to offer more frequent and speed-optimised high quality services, interlinkages also to a car sharing system called "mobility" with more than 2 000 vehicles available at hundreds of railway stations and dispatching points. A concept which is part of the overall strategic objective of modal shift to public transport, both for passengers and freight, with a view to a sustainable mobility policy.
Timeframe:	**Start:** 1987(referendum), 1994 phasing in two stages, 1998 part of referendum for financing fund of public transport projects **Finish:** Dec 2004 (first stage), further ongoing with specific optimisation projects (5.4 bio CHF)
Outline of case:	Huge concept including more than 100 infrastructure measures (1st stage 5.9 bio CHF) for reducing distances or increasing speed for operation concept with spiders / nods distant of max 1 h to the next one, including new cab signalling systems (ETCS level2) on new high speed sections (200-230 km/h), especially one section Mattstetten-Rothrist (45km) between Olten and Berne, adaptation of rolling stock in order to obtain max 1 hour distance between spiders by introducing tilting trains running faster on curvy sections, introduction of high capacity rolling stock ("Doppelstock") on main lines, interoperability concept for cross border rolling stock.
Outcome/Effects:	After first step 2005 increase of public transport use of 25-30%, increase of mobility demand by phasing a modal shift of most of it to public transport, transport increase without any CO_2 emission (hydro-electric power).
Web link:	http://www.uvek.admin.ch http://www.bav.admin.ch http://www.sbb.ch http://www.mobility.ch/en/pub/index.cfm

Key Words:	☐ Border Crossing	☒ Infrastructure	☐ Rural
	☒ Congestion	☒ Intercity	☐ Standards/Uniformisation
	☐ Energy/Fuel	☒ Intermodal	☐ Supply Chain
	☒ Environment	☒ Interoperability	☐ Telecommunications
	☐ Freight	☒ Passenger	☒ Ticketing/Payment
	☒ Funding	☒ Planning	☐ Urban
	☐ Information Sharing	☐ Regulation/Law	☐ Other_____
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TURKEY

Country:	**Turkey**
Activity Title:	**KAYBİS, Kayseri cycle path project**
Mode(s):	☐ Walking ☐ Light Rail ☒ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	The aim of this project is to promote cycling not only for recreation and sport, but also as an alternative form of transportation, particularly for access to school and work.
Timeframe:	**Start:** April 2010 **Finish:** October 2010
Outline of case:	A new structure, namely the KAYBIS system, which has enabled easier access to the city centre, was created. The KAYBIS system, a cycling for transport project, has been put into service with 25 bicycle parking stations established in various parts of the city. Citizens who wish to use the service from KAYBIS bicycle points, shall apply to the Kart38 Processing Centre, and will receive personalised cards enabling them to benefit from this service.
Outcome/Effects:	With bicycle paths established at 25 locations, transport becomes more practical. The system has positive effects on health for bicycle users. Areas out of reach of public transport may be easily accessed.
Web link:	http://www.kayseri.bel.tr/web2/uploads/dokumanlar/kayseray-kilavuz.pdf
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☒ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
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Country:	Turkey
Activity Title:	CitySDK (ICT PSP 1.5 Open Innovation for Internet-enabled services in "smart cities")
Mode(s):	☒ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☒ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	Build on existing: • Best Practices and Best Assets in selected cities • Platforms, both technological and infrastructural • Developing incentive tools, such as Apps4Cities competitions, DevCamps, BarCamps Aim for high ecosystem impact, and low technical investments – "No New ICT Server Hardware" Select key domains where the most easily available and technically superior assets are: • Mobility / Public transport • Participation / Feedback • Tourism • Environmental sensors
Timeframe:	**Start:** February 2012 **Finish:** August 2014
Outline of case:	In Istanbul, the existing web-based IMM Public Transit Travel Assistance System will be added with the new components from PTA and CitySDK, including, most importantly, the Mobile Personal Travel Assistance application as well as open interfaces for 3rd party developers. Waag and Logica work on ensuring the PTA application is deployable and IMM will work on backend, localisations and user assessments.
Outcome/Effects:	Creation of an open source CitySDK – a service developer toolkit for European Smart City applications. Through the Istanbul pilot application; • Reliable and accurate use of public transport by citizens • Standardization of public transit related data
Web link:	http://ec.europa.eu/information_society/activities/livinglabs/docs/workshop_2012-01-24/factsheets/citysdk_fact_sheet_2011-09-12.pdf
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☒ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☐ Environment ☒ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☒ Planning ☒ Urban ☒ Information Sharing ☐ Regulation/Law ☐ Other_____

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Country:	Turkey
Activity Title:	**Marmaray Project**

Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime

Objective (s):	The Marmaray Project will offer a long-term solution to the transport problems of İstanbul, and by shortening the travel time of more than 1 million people per day, will bring savings in time and energy. By reducing motorised traffic on the peninsula, it will reduce adverse effects on the historical environment. It will also reduce the traffic density on the existing bridges. When the Marmaray Project commences operations, the noise and air pollution in İstanbul will be substantially reduced.

Timeframe:	**Start:** 2004	**Finish:** Ongoing (28 Oct. 2013)

Outline of case:	Within the scope of the Marmaray Project, commuter rail lines on both sides of the Istanbul Strait will be connected to each other by a railway tunnel passing under the Istanbul Strait. The line will go underground after passing the Kazlıçeşme Station, and will pass through Yedikule, Yenikapı and Sirkeci, and will be connected to Usküdar passing by the Bosphorus and then will surface at Söğütlüçeşme. Within the scope of the project; immersed tunnel, 3 underground and 1 surface station construction works and complete replacement of the existing 2 tracks with 3 new tracks throughout the entire 63 kilometre length, except for the Bosphorus Crossing on either side of the Istanbul Strait, 36 new and upgraded surface stations will be completed and 440 vehicles will be supplied.

Outcome/Effects:	With a carrying capacity of 75 000 passengers per hour in each direction it will provide a high-capacity, safe, high-quality and cheap transport system. Travel times will shorten. The percentage of urban railway systems will increase. Becoming operational with the other rail systems to be integrated in the Marmaray Project, Istanbul's railway share of transport is expected to attain up to 30%.

Web link:	www.marmaray.com.tr

Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☒ Congestion ☒ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____

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Country:	**Turkey**	
Activity Title:	**Istanbulkart**	
Mode(s):	☐ Walking ☐ Cycling ☒ Private automobile ☒ Bus ☐ Light or Heavy Goods Vehicle	☒ Light Rail ☒ Heavy Rail ☐ Air ☒ Inland Waterways ☐ Maritime
Objective (s):	• To provide citizens with urban services by buying contactless smart cards. • To be used as an electronic ticket in all public transportation modes including taxis. • To provide more qualified parking services. • To be used for payment of basic municipal services such as water supply, natural gas supply, municipal museum entrances, etc.	
Timeframe:	**Start:** Last quarter of 2007	**Finish:** ongoing
Outline of case:	Istanbulkart is part of the Electronic Fare Collection System - a secure, fast and accurate information management system that provides users with pre-paid travel over all transportation modes. Istanbulkart is the contactless smartcard that will be used in the municipal services of Istanbul's metropolitan municipality. It is designed to be integrated with all municipal services. Citizens will use only one card for payment of all these services and will give ease of use. But the first step of the project is using the card on Istanbul's public transportation system. In the following steps "Istanbulkart" will be used as a loyalty card and a membership card for civic services: event ticketing, car parking, social aid identification and access control, e-health, electronic passport, electronic ticket, e-campus, etc. It can also be used to pay for parking, taxi fares, cinema / theatre, personnel attendance control systems, social services (e.g. food, fuel, service distribution) etc. Being a user-friendly system with its contactless property, Istanbulkart can fit in a wallet and be used easily. It is highly secured against counterfeiting. Its large memory storage capacity enables multiple applications and a flexible structure. It allows different scenario building according to the fare policy. Istanbulkart is up to the international standards for contactless smart cards (ISO 7816 and ISO 14443). The technology employed is the first of its kind in Turkey and one of the first worldwide.	
Outcome/Effects:	• Using an individual card for all urban services. • Supporting public transportation.	
Web link:	http://www.belbim.com.tr/en/products/Pages/istanbulkart_en.aspx	

Key Words:	☐ Border Crossing ☐ Congestion ☐ Energy/Fuel ☐ Environment ☐ Freight ☐ Funding ☒ Information Sharing	☐ Infrastructure ☐ Intercity ☒ Intermodal ☐ Interoperability ☒ Passenger ☐ Planning ☐ Regulation/Law	☐ Rural ☐ Standards/Uniformisation ☐ Supply Chain ☐ Telecommunications ☒ Ticketing/Payment ☒ Urban ☐ Other_____
Contact:	Name: Ms. F. Betul GUNEY AKBIYIK Organisation: Istanbul Metropolitan Municipality Email: betul.guney@ibb.gov.tr		

Country:	Turkey
Activity Title:	**Eskişehir Light Rail Transportation System**
Mode(s):	☐ Walking ☐ Cycling ☐ Private automobile ☐ Bus ☐ Light or Heavy Goods Vehicle ☒ Light Rail ☐ Heavy Rail ☐ Air ☐ Inland Waterways ☐ Maritime
Objective (s):	Energy efficient, ecologic, high-capacity public transportation
Timeframe:	**Start:** 11 July 2002 **Finish:** 24 December 2004
Outline of case:	In 2004, in order to provide high-capacity, fast and efficient transportation, as well as aiming to reduce traffic and air pollution; the Eskisehir light rail transit system -- the first transportation line in Turkey to use 100 per cent low-floor Bombardier FLEXITY Outlook trams -- was opened to passenger service. The complete network is designed to carry passengers at a top speed of 50 km/h in mixed traffic although it is capable of reaching speeds of up to 70 km/h. The project was completed in less than two years and was awarded by the UITP (International Association of Public Transport) in 2004 in recognition of its actions in favour of Light Rail.
Outcome/Effects:	Between 24 December 2004 and 31 October 2011 a total of 203 322 370 passengers were carried, representing 9 991 321 km travelled and 1 192 578 trips made by Eskisehir Light Rail System. Public transport solutions and time recovery for passengers are the effects of the Project.
Web link:	www.estram.com.tr
Key Words:	☐ Border Crossing ☐ Congestion ☒ Energy/Fuel ☒ Environment ☐ Freight ☐ Funding ☐ Information Sharing ☒ Infrastructure ☐ Intercity ☐ Intermodal ☐ Interoperability ☒ Passenger ☐ Planning ☐ Regulation/Law ☐ Rural ☐ Standards/Uniformisation ☐ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☐ Urban ☐ Other_____
Contact:	Name: H. Seher KARA Organisation: Eskişehir Hafif Raylı Sistem İşletmesi (ESTRAM) Email: seher.kara@estram.com.tr

Country:	Turkey
Activity Title:	**Kayseri Rail Transit System**
Mode(s):	☐ Walking ☒ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	To make public transport reliable, accessible, fast and of high quality and to increase the rail transit system's share in urban transport. To simplify passenger flow through minimizing traffic congestion and making transportation safe.
Timeframe:	**Start:** 1st phase: 2006 **Finish:** 1st phase: 2009
Outline of case:	The route for the 1st stage of the Kayseri Rail Transit System continues to transfer passengers in an uninterrupted manner from the east to the west of the whole city. The total length of the route is 17.4 km and there are 28 stations along the route. Project planning studies are being conducted for the 2nd and 3rd stages of the route. The 2nd stage is planned as the eastern extension of the 1st stage. The İldem route, which has 11 stations, is 9 km in length. Stage 3 is planned as the southern extension of Stage 1. The Talas route has 11 stations and is 7.4 km in length.
Outcome/Effects:	Pedestrian and vehicle traffic congestion has significantly diminished, and passenger transportation is provided in a safe manner. • A passenger information service is provided in vehicles and on stations. This increases passenger satisfaction. • The rail transit system helps to shorten passenger travel time, compared to rubber-tyred vehicles, because of its right of way.
Web link:	http://www.kayseri.bel.tr/web2/index.php?page=rayli-sistem
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☒ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
Contact:	Name: Burcu Erşekerci Organisation: Ulaşim Planlama ve Rayli Sistem Daire Başkanliğ Email: bersekerci@kayseri.bel.tr

Country:	Turkey
Activity Title:	**Public Transit Travel Assistance System**
Mode(s):	☒ Walking ☐ Cycling ☒ Private automobile ☒ Bus ☒ Light or Heavy Goods Vehicle ☒ Light Rail ☒ Heavy Rail ☐ Air ☒ Inland Waterways ☐ Maritime
Objective (s):	• Creating network analysis for "faster time", "shorter distance" and "minimum cost" for pedestrians and drivers • Enlightening citizens about public transport • Synchronizing different types of transportation
Timeframe:	**Start:** Pre-Beta version as January 12 **Finish:** ongoing
Outline of case:	Designing and creating a web-based and mobile travel and analysis system for use by citizens and decision-makers
Outcome/Effects:	• Reliable and accurate use of public transport by citizens • Standardization of public transit related data
Web link:	—
Key Words:	☐ Border Crossing ☐ Congestion ☐ Energy/Fuel ☐ Environment ☐ Freight ☐ Funding ☒ Information Sharing ☐ Infrastructure ☐ Intercity ☒ Intermodal ☒ Interoperability ☒ Passenger ☐ Planning ☐ Regulation/Law ☐ Rural ☒ Standards/Uniformisation ☐ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☒ Urban ☐ Other_____
Contact:	Name: Murat Güneri Organisation: Istanbul Metropolitan Municipality Email: murat.guneri@ibb.gov.tr

USA

Country:	**USA**
Activity Title:	**Chattanooga Riverfront Parkway**
Mode(s):	☒ Walking ☐ Light Rail ☒ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	To create roadway design that accommodates shifts in economic geography and provide better vehicular and pedestrian connections to multiple destinations.
Timeframe:	**Start:** 2002 **Finish:** 2005
Outline of case:	In many urban areas, past roadway designs are incompatible with current social and economic conditions and land use and development issues. The Chattanooga Riverfront Parkway project addresses this incompatibility issue by converting the Riverfront Parkway from a four-lane, limited-access expressway to an urban surface street. This project demonstrates how roadway functions can change over time and how project design needs to adapt to such changes. For decades, Riverfront Parkway in Chattanooga, TN, provided easy travel through the city. The limited-access highway responded to needs of the city as it was in the 1960s and 1970s. However, Chattanooga changed significantly by 2000. Truck traffic has declined in contrast to previous forecasts, properties redeveloped for commercial uses, and increasing changes in population replaced the industrial setting of the city. The shift in the city's economic geography emphasised the need to reconsider the road's accessibility and mobility from downtown to the riverfront. The new design focuses on improving pedestrian and local vehicle access to riverfront destinations. Design objectives included better accommodations for a broader range of users, supporting urban development along the riverfront and increasing roadway capacity (number of travel lanes) to accommodate expected traffic volumes.
Outcome/Effects:	The completed Riverfront Parkway has improved downtown access, allowing more direct commuting patterns and renewing economic viability. Reduction of the roadway footprint created space for a pedestrian path and providing access to public entertainment-oriented spaces by the riverfront.
Web link:	http://www.fhwa.dot.gov/livability/case_studies/guidebook/livabilitygb10.pdf

Key Words:	☐ Border Crossing	☒ Infrastructure	☐ Rural
	☒ Congestion	☐ Intercity	☐ Standards/Uniformisation
	☐ Energy/Fuel	☐ Intermodal	☐ Supply Chain
	☐ Environment	☐ Interoperability	☐ Telecommunications
	☐ Freight	☒ Passenger	☐ Ticketing/Payment
	☐ Funding	☒ Planning	☒ Urban
	☐ Information Sharing	☐ Regulation/Law	☐ Other_____
Contact:	Name: Shana Baker Organisation: Federal Highway Administration Email: Shana.Baker@dot.gov		

Country:	**USA**
Activity Title:	**Denver FasTracks Project**
Mode(s):	☐ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Light or Heavy Goods Vehicle ☐ Maritime
Objective (s):	To alleviate congestion and serve the mobility needs of Denver, Colorado, and the surrounding eight-county area, whose population is expected to double within the next twenty years.
Timeframe:	**Start:** 2009 **Finish:** —
Outline of case:	The Denver FasTracks Program is a $6.5 billion dollar comprehensive transit expansion plan to build 122 miles of new commuter rail and light rail, 18 miles of bus rapid transit, 21 000 new parking spaces at light rail and bus stations, and enhance bus service for easy, convenient bus/rail connections across the eight-county district.
Outcome/Effects:	This is currently the largest transit infrastructure project in the US. When completed, it will provide a seamless, intermodal public transportation network throughout one of the country's fastest growing areas. It has also been partly funded with private capital, and is the only large-scale transit PPP in the US.
Web link:	www.rtd-fastracks.com
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☒ Congestion ☒ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☒ Environment ☒ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☒ Funding ☐ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
Contact:	Name: Phillip Washington, General Manager Organisation: Denver Regional Transit District Email: phil.washington@rtd-denver.com

Country:	**USA**
Activity Title:	**Woodrow Wilson Bridge**
Mode(s):	☒ Walking ☐ Light Rail ☒ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Light or Heavy Goods Vehicle ☒ Maritime
Objective (s):	To incorporate facilities for walking on major highways functionally designated for automobile and truck use.
Timeframe:	**Start:** 1999 **Finish:** 2009
Outline of case:	The Woodrow Wilson Bridge carries I-95 and I-495 (the Capital Beltway) over the Potomac River south of Washington, DC. It is one example of how multimodal project planning can be incorporated into large-scale highway facilities. An increased demand for walking and biking, combined with limited Potomac River crossings, underscored an opportunity to pursue improvements in reconstruction of the bridge. Heavy traffic congestion and major delays were daily issues on the Woodrow Wilson Bridge. Initially designed to carry 75 000 vehicles per day, the bridge experienced traffic volumes of up to 195 000 per day by 2004. The high traffic volumes accelerated bridge deterioration and increased safety concerns. The redesign and reconstruction of the bridge (the only Potomac crossing south of downtown Washington, DC) included carrying capacity for expanded transit and non-motorized travel. Objectives of the reconstruction included providing adequate capacity for travel demand, facilitating intermodal travel (transit, HOV lanes, walking, biking, and maritime access), improving road safety, and protecting the surrounding environment.
Outcome/Effects:	The newly constructed bridge reopened with bicycle and pedestrian paths on the northern side of the bridge. The trail design also included bridge crossings over vehicle lanes at each end for safe pedestrian and bicyclist crossings.
Web link:	http://www.fhwa.dot.gov/livability/case_studies/guidebook/livabilitygb10.pdf
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☒ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other____
Contact:	Name: Shana Baker Organisation: Federal Highway Administration Email: Shana. Baker@dot.gov

CASE STUDIES ON SEAMLESS TRANSPORT: FROM INTERNATIONAL ORGANISATIONS

Context

The 2012 Summit, entitled "*Seamless Transport: Making Connections*", will focus on connectivity. More seamless linkages between transport systems, networks, users and infrastructure can improve the efficiency, sustainability, accessibility, safety and security of transport, with important benefits for mobility and trade.

New technologies are rapidly changing the way we move people and goods. The powerful vision of connecting people and markets, infrastructures and ideas to create seamless transport networks for communities and around the globe and will drive the development of new and improved forms of mobility that will shape the 21st Century.

Connectivity can be considered in all aspects of transport:

- Connecting systems – Implementing advanced technologies and new practices to make seamless linkages between modes, and improve information sharing among operators and users.

- Connecting people – Improving urban and inter-urban mobility, making transport more accessible, optimising active transport, implementing electronic ticketing and information-sharing, and increasing the flow through passenger terminals.

- Connecting markets – Smoothing end-to-end journeys, integrating supply chains, improving border crossings and harmonising standards.

- Connecting sectors – Better integrating transport with energy, finance, urban planning, tourism and other areas.

- Connecting ideas – Integrating new technologies and thinking into transport, including the wireless revolution, social networking, Intelligent Transport Systems, and new approaches to financing and management.

Case Study Collection

In preparation of the 2012 Summit, the International Transport Forum sought submissions of good practice in relation to seamless transport for incorporation into a compendium.

This section of the compendium is organised in alphabetical order of submitting organisations. The International Transport Forum thanks all who have contributed to this collection of case studies.

AGE PLATFORM EUROPE

Organisation:	**AGE Platform Europe**
Activity Title:	**Establishment of an end-user platform on public transport issues at EU level**
Country(ies):	European Union
Mode(s):	☒ Walking ☒ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	• Involve real users in the European debates around public transport • Design solutions for ensuring all citizens freedom of movement
Timeframe:	**Start:** November 2008 **Finish:** November 2011
Outline of case:	The End User Platform (EUP) established within the Mediate project is deemed as an essential tool for guaranteeing the involvement of real users in the European debates around public transport and transport accessibility and security. Involving a platform representing the real users of public transport in Europe moves towards the design and implementation of more efficient and user-friendly solutions for ensuring the freedom of movement for all citizens. The End User Platform (EUP) is primarily made up of representatives of European, national and local associations dealing with disabilities and reduced mobility problems. The EUP members were selected on the basis of a number of factors including their experience in this area, commitment and interest in the objectives and activities of Mediate, as well as the broadest geographic coverage. Coordinated by AGE Platform, the EUP ensures that the point of view and needs of users were taken into account in the project activities and outcomes. Its involvement was required both during the discussion to define a common set of indicators for assessing accessibility in public transport and the discussion of the Good Practice Guide. Currently AGE works together with the European Disability Forum to ensure long-term viability of the EUP since such a permanent forum would be useful to ensure involvement of end users in European debates around public transport.

	In terms of seamlessness of transport, the point of view of end users/passengers is very important to be listened to and taken into account since there are the one using public transport and experiencing the whole journey. Indeed for end-users, seamless transport should include the whole journey from departure (incl. home) to arrival, and encompass the information system, access to platforms, stations, etc.
	The engagement and results of the EUP within the Mediate Project could be presented to highlight the benefits of end users involvement as well as to better understand the perspective of end users regarding seamless public transport.
Web link:	http://www.age-platform.eu/en/all-projects/654-mediate?start=2 http://www.mediate-project.eu/index.php?id=19
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other: Accessibility
Contact:	Name: Ilenia Gheno Organisation: AGE Platform Europe Email: ilenia.gheno@age-platform.eu

Organisation:	**AGE Platform Europe**
Activity Title:	**Mediate – Tools for accessible public transport**
Country(ies):	European project with cities throughout Europe involved
Mode(s):	☒ Walking ☒ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	Establish a common European methodology for measuring accessibility to transport.
Timeframe:	**Start:** 2008 **Finish**: 2010
Outline of case:	Mediate represents a framework for improving the accessibility of urban public transport, based on the needs of all passengers including vulnerable groups. Basic ideas are systematic frameworks for consulting users in a step by step improvement throughout the planning cycle of information gathering, planning, implementing, monitoring and evaluation, based on the ideas of Total Quality Management. This approach has lead to the development of the following tools: • The Mediate assessment tool supporting stakeholders to assess strengths and weaknesses of the transport system and to define appropriate actions. • A set of common European indicators for measuring accessibility of urban public transport and allowing for a common understanding of the situation between different stakeholders, on local level as well as on European level. • The Mediate Good Practice Guide exchanging information by presenting examples of implemented measures throughout Europe on a range of themes. • The Aptie website presenting information, examples and events on accessible public transport (one-stop shop with search engine). • The European End User Platform representing people with disabilities, older people and relevant groups facing barriers when using public transport. This provides a significant potential for consultation and active participation in innovation and monitoring of public transport.
Web link:	www.mediate-project.eu www.aptie.eu

Key Words:	☐ Border Crossing	☐ Infrastructure	☐ Rural
	☐ Congestion	☐ Intercity	☐ Standards/Uniformisation
	☐ Energy/Fuel	☐ Intermodal	☐ Supply Chain
	☐ Environment	☐ Interoperability	☐ Telecommunications
	☐ Freight	☒ Passenger	☐ Ticketing/Payment
	☐ Funding	☐ Planning	☐ Urban
	☐ Information Sharing	☐ Regulation/Law	☐ Other: Accessibility
Contact:	Name: Liv Øvstedal Organisation: SINTEF Technology and Society Email: Liv.Ovstedal@sintef.no		

Organisation:	**AGE Platform Europe (Partner), Rupprecht Consult (Coordinator)**
Activity Title:	**Aeneas Project** **(Attaining Energy Efficient Mobility in an Ageing Society)**
Country(ies):	Poland, Denmark, Germany, Austria, Belgium and Spain.
Mode(s):	☒ Walking ☐ Light Rail ☒ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective(s):	• Raise awareness about the challenge of energy-efficient urban mobility in an ageing society among stakeholders in European cities; • Enable key actors to address these issues by applying successful, non-technological concepts; • Raise awareness on energy-efficient travel options (walking, public transport, cycling, car sharing and public bicycles) and promote them as alternatives to the private car; • Train older people on how to use sustainable transport according to their needs and expectations; • Improve the attractiveness and safety of energy-efficient modes by small-scale, innovative interventions.
Timeframe:	**Start:** 01.08.2008 **Finish:** 31.05.2011
Outline of case:	Enabling and encouraging older people to use energy-efficient mobility in five European cities through concrete measures in the areas of mobility management, training, awareness raising and communication. The project worked for the connectivity of people, with a focus on older people (the target of the project) and of sectors and systems, as it brought together a wide range of stakeholders at various level (European, national, regional and local) around the issues of urban planning and inter-urban mobility, energy-efficiency and sustainability, mobility for leisure and tourism, plus the improvement of dialogue and information sharing among operators, public authorities and users.
Web link:	http://www.aeneas-project.eu/?page=about
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____

Contact:	Name: Ilenia Gheno
	Organisation: AGE Platform Europe
	Email: ilenia.gheno@age-platform.eu

CENIT – CENTER FOR INNOVATION IN TRANSPORT

Organisation:	**CENIT –- Center for Innovation in Transport**
Activity Title:	**New Bus Network for Barcelona City**
Country(ies):	Spain
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective(s):	The objective is to design and implement a new bus network for the city of Barcelona, with total travel time and accessibility equivalent to private car, that is, an urban transit system that can deliver a level of service comparable to that of the automobile.
Timeframe:	**Start:** 2005 | **Finish:** ongoing
Outline of case:	A transit network that will provide good service between every pair of points in the city throughout the day, and be easily used tool by public has the intention to encourage auto users to leave their cars home when their daily plans include complex trip chains with impromptu and non-routine links. To achieve the standards, transit systems must uniformly cover the service region in space and time with well-spaced transit stop and frequent reliable service. The new network RETBUS is a new transportation system designed to offer a differentiated service based on operational measures, management of traffic and new technologies this new network was conceived as a performance not intrusive infrastructure and respectful in their integration with the urban planning of the city. Its exploitation in addition to the service of metro, tram and urban bus networks will become a real alternative to private vehicles and a move towards sustainable mobility.
Web link:	http://www.cenit.es/esp/novetats/n068_esp

Key Words:	☐ Border Crossing ☐ Congestion ☐ Energy/Fuel ☒ Environment ☐ Freight ☐ Funding ☐ Information Sharing	☐ Infrastructure ☐ Intercity ☒ Intermodal ☐ Interoperability ☒ Passenger ☒ Planning ☐ Regulation/Law	☐ Rural ☐ Standards/Uniformisation ☐ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☒ Urban ☐ Other_____
Contact:	Name: Miquel A. Estrada Organisation: CENIT Email: miquel.estrada@upc.edu		

COMMUNITY OF EUROPEAN RAILWAY & INFRASTRUCTURE COMPANIES

Organisation:	**Community of European Railway and Infrastructure Companies (CER) AISBL**
Activity Title:	**E.RailFreight**
Country(ies):	Europe, 20 rail freight companies
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	Consignment note, paperless transport
Timeframe:	**Start:** 2008 **Finish:** rollout ongoing
Outline of case:	The e-Rail Freight project covers the electronic exchange of the data contained in the consignment note as well as a coaching of the transformation of rail undertaking internal processes. Functional and Technical specifications - message structure, message flow, data catalogue - have been provided by the project team derived from legal specifications delivered by the CIT in Bern. RAILDATA, a special group of UIC, has developed the interface software for ORFEUS based on the technical specifications. The RAILDATA application ORFEUS is a well-functioning platform for the exchange of electronic consignment note data. In 2008, 20 RUs signed a Letter of Intent (LoI) committing themselves to implement e-Rail Freight. The international rollout is ongoing. DB Schenker Rail, SNCF and RCA lead the implementation effort. The realisation of e-RailFreight will reduce costs and better the quality of business processes. The potential for reducing costs can only be touched if railways stop the "old" manual paper flow. This requires the redesign of internal processes including a successful mental change for all involved in the process today. The more rail undertakings start exchanging consignment note data electronically, the easier savings and quality improvements will be achievable. The team also looks into fulfilling the pre-conditions for introducing the Electronic Consignment Note to Dangerous Goods and Exceptional Shipments. E-RailFreight also supports the joint CIM-SMGS consignment notes for shipments to and from Russia, the Ukraine, White Russia, Kazakhstan, Mongolia and China to an electronic data exchange.

Web link:	www.cit-rail.org, www.raildata.coop, www.uic.org
Key Words:	☒ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☒ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☒ Interoperability ☒ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☒ Information Sharing ☐ Regulation/Law ☐ Other_____
Contact:	Name: Rainer Wilke Organisation: DB AG Email: Rainer.Wilke@deutschebahn.com	Mr. Bernard SCHMITT International Union of Railways (UIC) schmitt@uic.org

DEUTSCHE BAHN MOBILITY LOGISTICS AG

Organisation:	**Deutsche Bahn Mobility Logistics AG**
Activity Title:	**Alternative Routes Service (ARS)**
Country(ies):	Germany
Mode(s):	☐ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	Provide actual information on disruptions or connection breakdowns on their intended trips, providing delay-reducing alternative routes and ratings for all routes based on forecasts and operational decisions from the dispatching units.
Timeframe:	**Start:** June 2011 **Finish:** unlimited ongoing
Outline of case:	As an extension of the existing internet portals (especially for mobile devices) for Deutsche Bahn's timetable information system a new routing procedure was incorporated which uses real-time data about any Deutsche Bahn trains on delays, diversions and cancellations. This may be used from the customers to compute helpful connections regarding the current traffic situation in the Use Case "Take me home with the next possible connection" and also in the Use Case "Show me alternatives to my disrupted trip". Additionally the customer gets extra information on the reliability of the offered alternatives as well as of its originally intended trip; this is based on a rating of every train-to-train connection in the trip and is communicated in a five step scale ("connection is guaranteed", "connection is likely usable", "no reliable information available", "connection is likely unusable", "connection is broken"). Up to now it is a pull service. Further steps will provide service access via applications, connection ratings for intermodal trips, more sophisticated ratings especially for connections which are farther in distance and an individualized push service for disruption information.
Web link:	Official usage of the service on m.bahn.de (mobile service) and bahn.de

Key Words:	☐ Border Crossing	☐ Infrastructure	☐ Rural
	☐ Congestion	☒ Intercity	☐ Standards/Uniformisation
	☐ Energy/Fuel	☒ Intermodal	☐ Supply Chain
	☐ Environment	☐ Interoperability	☐ Telecommunications
	☐ Freight	☒ Passenger	☐ Ticketing/Payment
	☐ Funding	☐ Planning	☐ Urban
	☒ Information Sharing	☐ Regulation/Law	☐ Other____
Contact:	Name: Dr. Christoph Blendinger Organisation: DB Mobility Logistics AG, PCR Email: christoph.blendinger@deutschebahn.com		

Organisation:	**Deutsche Bahn Mobility Logistics AG**
Activity Title:	**Touch&Travel**
Country(ies):	Germany
Mode(s):	☐ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	Lower barriers to intermodal public transport usage by providing an economically viable comfortable CheckIn / CheckOut system based on mobile phones and light infrastructure
Timeframe:	**Start:** 2006 **Finish:** ongoing
Outline of case:	Touch&Travel is a new approach to electronic ticketing based on a new paradigm: Instead of implementing a heavy reader infrastructure for automatic fare collection, Touch&Travel uses the already existing mobile phone networks as backbone. The project started as a friendly user trial in 2008, using the contactless technology Near Field Communication (NFC). Before a trip, mobile phones equipped with NFC are held against so-called Touchpoints at the stops and stations which contain just a contactless smartcard. No power supply or data connection is needed for the Touchpoint. An ID stored in the smartcard is read out and then transferred to the backend system using the mobile network. A CheckIn record is stored on the phone and can be read out contactlessly during ticket inspection. After the trip the customer does the same as before and the price of the trip is shown. Once a month all trips are billed. In the last of several trial phases the approach was expanded to iPhones and Android phones without NFC. These phones use as additional methods localisation, 2D barcode scanning or entering an ID for CheckIn/CheckOut. End of 2010 DB decided to offer Touch&Travel as a regular service to all customers and began to migrate the pilot system. DB has been supported by the three mobile network operators Vodafone, Telekom and O2 as well as additional technology partners. Momentarily, Touch&Travel is available in long distance rail nation-wide as well as in all means of public transport in Berlin and Potsdam. Further regional extensions are planned as well as the inclusion of other modes like rental bikes.
Web link:	www.touchandtravel.de http://www.wima.mc/dan/2011/CONF_PDF/TUESDAY/PM/GEMEINDER.pdf

Key Words:	☐ Border Crossing	☐ Infrastructure	☐ Rural
	☐ Congestion	☒ Intercity	☐ Standards/Uniformisation
	☐ Energy/Fuel	☒ Intermodal	☐ Supply Chain
	☐ Environment	☒ Interoperability	☐ Telecommunications
	☐ Freight	☒ Passenger	☒ Ticketing/Payment
	☐ Funding	☐ Planning	☒ Urban
	☐ Information Sharing	☐ Regulation/Law	☐ Other_____
Contact:	Name: Dr. Marcus Gemeinder Organisation: DB Mobility Logistics AG / Innovation projects (PPI) Email: marcus.gemeinder@deutschebahn.com		

Organisation:	**Deutsche Bahn AG, DB Fuhrparkservice GmbH, Innovation Centre for Mobility and Societal Change (InnoZ) GmbH**
Activity Title:	**BeMobility** Berlin elektroMobil, Mobilitätskarte für Berlin
Country(ies):	Germany
Mode(s):	☐ Walking ☒ Light Rail ☒ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	The objective of the mobility card for Berlin is to promote multimodal transport behaviour by providing a joint ticket for (e-)car sharing, bike rental and public transport. It was intended for a testing period of three months to gauge user response. Additionally, it supplied viable alternatives for private car owners, providing flexible, attractive and environmentally friendly mobility. After evaluating the accompanying research, the long term implementation and transfer to other regions is intended.
Timeframe:	**Start:** June 2011 (start of test) **Finish:** September 2011 (end of test)
Outline of case:	The governmentally funded project BeMobility, Berlin elektroMobil, is realised by a group of partners lead by Deutsche Bahn. This project was conducted in cooperation with the local public transport association (VBB) in order to appeal to new target groups for multimodal solutions and to act as an alternative to owning a private vehicle. It intends to set the stage for introducing electric vehicles, parking and charging infrastructure in public areas, information and booking systems for smartphones, and a multimodal tariff, for instance implemented into a mobility card. This mobility card was offered for a testing period of three months in Berlin and is a ticket for public transport, including an RFID chip that allows access to electric cars and rental bikes for 78 € per month. The main features include a monthly prepaid balance of €50 for time charges of the car, 30 minutes free use of rental bikes with each application and the ticket for the greater Berlin area (Berlin ABC). Minor features include free parking in over 20 parking structures of Contipark with the electric vehicle, free parking and charging in the public charging infrastructure. The card was tested by 135 users. After expiration of the testing period and analysis of customer behaviour an optimised permanent offer in 2012 is planned.
Web link:	www.bemobility.de, www.innoz.de

Key Words:	☐ Border Crossing	☐ Infrastructure	☐ Rural
	☐ Congestion	☐ Intercity	☐ Standards/Uniformisation
	☐ Energy/Fuel	☒ Intermodal	☐ Supply Chain
	☒ Environment	☐ Interoperability	☒ Telecommunications
	☐ Freight	☒ Passenger	☒ Ticketing/Payment
	☐ Funding	☐ Planning	☒ Urban
	☒ Information Sharing	☐ Regulation/Law	☒ Other: multimodal
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Organisation:	**Deutsche Bahn Vertrieb GmbH**
Activity Title:	**bahn.de** Europe-wide travel information with a focus on rail connections
Country(ies):	Germany
Mode(s):	☒ Walking ☒ Light Rail ☒ Cycling ☒ Heavy Rail ☒ Private automobile ☒ Air ☒ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	Europe-wide timetables and intermodal route options. It helps travelers to find their most suitable connection.
Timeframe:	**Start:** 1996 **Finish:** ongoing
Outline of case:	The travel information from Deutsche Bahn provides Europe-wide timetables and intermodal route options. It helps travellers to find their most suitable connection. The customer has the option to enter the departure station and the destination station and search throughout Europe. For many countries, it is also possible to specify an address or point of interest. The customer has many configuration options, such as the adjustment of connection times, whether only the direct or quickest connections should be displayed, and the required mode of transport. Directly beside the information, the page displays whether the train is on time. Station maps showing the platforms, shops, parking spaces and taxi ranks. In the information Deutsche Bahn and all European railway companies, third-party railway companies, public transport, coaches and ferries are shown. In just one process, you can book door-to-door mobility (rental car, Car sharing) and hotels. With the train/plane/car comparison, transport by rail, plane and car are compared for travel planning, to offer the customer the best mode of transport for their journey. In addition to a train station, customers can enter the address. The main leg of the journey (train, plane) is then calculated along with the journey to the train station and airport or the journey by car. In addition to the price and travel time, this function also makes other calculations that are relevant, such as the total travelling time (incl. arrival at station, etc.), usable time and the environmental balance sheet. As well as providing information, you can also book tickets directly online.
Web link:	http://www.bahn.de http://www.rsmuc.de/db/eu-application/index.html

Key Words:	☒ Border Crossing	☐ Infrastructure	☒ Rural
	☒ Congestion	☒ Intercity	☐ Standards/Uniformisation
	☒ Energy/Fuel	☒ Intermodal	☐ Supply Chain
	☒ Environment	☐ Interoperability	☐ Telecommunications
	☐ Freight	☒ Passenger	☒ Ticketing/Payment
	☐ Funding	☒ Planning	☒ Urban
	☒ Information Sharing	☐ Regulation/Law	☐ Other
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EUROCITIES

Organisation:	**Eurocities**
Activity Title:	**Future Ticketing Project (FTP)**
Country(ies):	UK
Mode(s):	☐ Walking ☒ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	To further improve the Oyster system in London by accepting Contactless Payment Cards and updating the technology that underpins it; improving customer experience and reducing costs.
Timeframe:	**Start:** June 2007 **Finish**: 2015
Outline of case:	Transport for London have embarked on a multi-phase project to improve the Oyster system in London. The first 2 phases involve the acceptance of Contactless Payment Cards (CPC) on its network beginning during 2012. In order to achieve this, TfL has been developing its own back office to calculate an end-of-day fare to charge a customer using a CPC. It has also changed its approach to asset management to improve the reliability and availability of readers. Furthermore, it has influenced a change in Scheme (Visa, MasterCard and Amex) rules to enable CPCs to be used in the transit environment when the fare is not known at entry. TfL is also taking the opportunity to refine its customer service offering by pursuing a self service model to its customers.
Web link:	http://www.tfl.gov.uk/corporate/media/newscentre/archive/19216.aspx
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☒ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☒ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____

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EUROPEAN CONFERENCE OF TRANSPORT RESEARCH INSTITUTES

Organisation:	**European Conference of Transport Research Institutes (ECTRI)**
Activity Title:	**Renewability** Stoffstromanalyse: Nachhaltige Mobilität im Kontext erneuerbarer Energien bis 2030
Country(ies):	Germany
Mode(s):	☒ Walking ☐ Light Rail ☒ Cycling ☒ Heavy Rail ☒ Private automobile ☒ Air ☒ Bus ☒ Inland Waterways ☒ Freight Truck ☐ Maritime
Objective(s):	Prediction of the transport demand in passenger and freight transport up to 2030; estimation of greenhouse gas emissions in accordance to the future transport demand; stakeholder involvement for the definition of policies
Timeframe:	**Start:** 2010 \ **Finish:** 2012
Outline of case:	One central element of Renewbility is the involvement of a broad number of stakeholders that discuss and define policy scenarios for the German transport sector up to 2030. The project connects people and sectors as stakeholders representing different transport modes (e.g. Deutsche Bahn, VDA) as well as different sectors (e.g. BUND, VCD, Shell) are brought together. Their aim is the definition of an ambitious climate-oriented scenario to save greenhouse gases (GHG) and meet the German government's goal for GHG reduction. Within the project an extensive analysis and model-based assessment of policy measures is undertaken to predict the transport system performance against different assumptions. Results are discussed with the stakeholders against their feasibility.
Web link:	www.renewbility.de
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other____

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Organisation:	**European Conference of Transport Research Institutes (ECTRI)**
Activity Title:	**AMITRAN** Assessment Methodologies for ICT in multimodal transport from User Behaviour to CO2 reduction.
Country(ies):	Germany, Spain, Belgium, Netherlands, Romania
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Freight Truck ☐ Maritime
Objective(s):	Develop, validate and produce guidelines for a CO2 assessment methodology for all information and communication technology (ICT) measures including multimodal passenger and freight transport, taking into account the whole chain of effects from user behaviour to CO2 production (energy efficiency).
Timeframe:	**Start: November 2011** **Finish: April 2014**
Outline of case:	• Developing a CO2 assessment methodology for all ICT measures including multimodal passenger and freight transport, taking into account the whole chain of effects from user behaviour to CO2 production (energy efficiency). • Developing interfaces for models and simulation tools implementing this methodology starting from the road sector, but and integrating high level modelling from the other modes. • Validating the proposed methodology and its implementation with the simulation tools interfaces developed in this project and with the use of simulation tools, by using available data from other projects and/or studies. • Producing guidelines for future projects to use the proposed methodology. Our mobility system is under pressure. Our present infrastructure can barely be extended; fossil fuels are becoming increasingly scarce, while the environment is continually being polluted. The application of intelligent transport systems (ITS) is seen as promising tool to help to reduce the negative consequences of road transport. However, the kind of impact those ITS applications have on our mobility system is a question that constantly confronts stakeholders, from government to industry, all the way from system development to roll-out. In current European transport policies and research frameworks, emphasis is given on the importance of considering the environmental impacts of transport and measures which can help to reduce these impacts. AMITRAN analyses has currently developed ITS applications, e.g. information and routing services, traffic access systems etc. that can contribute to reducing transport impacts.

Web link:	—		
Key Words:	☐ Border Crossing ☒ Congestion ☒ Energy/Fuel ☒ Environment ☒ Freight ☐ Funding ☐ Information Sharing	☐ Infrastructure ☐ Intercity ☐ Intermodal ☐ Interoperability ☒ Passenger ☐ Planning ☐ Regulation/Law	☐ Rural ☐ Standards/Uniformisation ☒ Supply Chain ☒ Telecommunications ☐ Ticketing/Payment ☐ Urban ☒ Other: ICT
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Organisation:	**European Conference of Transport Research Institutes (ECTRI)**
Activity Title:	**COFRET** Carbon footprint of freight transport — calculation methodology
Country(ies):	Germany, Switzerland, The Netherlands, Norway, France, Lithuania, Poland, UK, Greece, Finland
Mode(s):	☐ Walking ☐ Cycling ☐ Private automobile ☐ Bus ☒ Freight Truck ☐ Light Rail ☒ Heavy Rail ☒ Air ☒ Inland Waterways ☒ Maritime
Objective(s):	To establish a complete GHG emission calculation methodology and framework in the context of complex supply chains based on available calculation tools for CO2 emissions; To cover all types of shipments, all types of transport relations (short-range to long range), both at company level and at the aggregated level of transport and logistics; To provide a methodology that is applicable for supply chains within the EU as well as in the global context.
Timeframe:	**Start:** June 2011 **Finish:** November 2013
Outline of case:	COFRET is a project funded within the frame of the European FP7 Programme to support the efforts of shippers, forwarders, rail operators, airlines and road carriers in reducing greenhouse gases (GHG) emissions through developing and testing a methodology and framework for the accurate calculation of GHG emissions in the context of complex supply chains. Project outputs should cover all types of shipments, all types of transport relations (short-range to long range), both at company level and at the aggregated level of transport and logistics; to provide a methodology that is applicable for supply chains within the EU as well as in the global context. A consortium of 14 European partners from 8 European countries, COFRET is supported, through the practical application of the project outputs, by key stakeholders from of the transport industry. A close co-operation between the research team and stakeholders will be an integral element of COFRET in order to maximise the future use of the project's outcomes.
Web link:	www.cofret-project.eu
Key Words:	☐ Border Crossing ☐ Congestion ☐ Energy/Fuel ☒ Environment ☒ Freight ☐ Funding ☐ Information Sharing ☐ Infrastructure ☐ Intercity ☒ Intermodal ☒ Interoperability ☐ Passenger ☐ Planning ☐ Regulation/Law ☐ Rural ☒ Standards/Uniformisation ☒ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☐ Urban ☐ Other_____

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Organisation:	**European Conference of Transport Research Institutes (ECTRI)**
Activity Title:	**Regional bundling of material flows to optimise transports**
Country(ies):	Romania (Region Timis)
Mode(s):	☐ Walking ☐ Cycling ☐ Private automobile ☐ Bus ☒ Freight Truck ☒ Light Rail ☒ Heavy Rail ☐ Air ☐ Inland Waterways ☐ Maritime
Objective(s):	Reduction of transport kilometers, reduction of emissions, and reduction of transport costs.
Timeframe:	**Start**: 01.03.2008 **Finish:** 30.09.2009
Outline of case:	The region Timis in Western Romania with its' twenty-five automotive suppliers that have transport flows mainly to Western Europe seemed most adequate for the empirical analysis and first tests of a cross-company logistic model. As in comparable economic regions, transports to and from Timis are mostly operated by direct truck traffic resulting from limited transport flows. Transport optimization is done individually on a company level and is not based on co-operations.
	After analysing the initial situation the results were successfully implemented in a simulation model, by concentrating and consolidating transport volumes in order to allow railroad operation on the main run. Subsequently, various scenarios for the usage of railway traffic were simulated. The findings of the simulation model in combination with information from the analysis at the start of the project are used to identify synergy effects.
	Using intelligent cross-company transport bundling combined with the usage of railway transport, emissions can be reduced at lower transport costs. In the newly designed scenarios, up to 60 per cent of the ton kilometers can be operated by train allowing a 40 per cent CO2 emission reduction. In other words seven out of ten truck tours through Austria can be avoided, by putting the loads on the railroad.
Web link:	—
Key Words:	☒ Border Crossing ☐ Congestion ☐ Energy/Fuel ☐ Environment ☒ Freight ☐ Funding ☒ Information Sharing ☐ Infrastructure ☐ Intercity ☒ Intermodal ☒ Interoperability ☐ Passenger ☒ Planning ☐ Regulation/Law ☐ Rural ☐ Standards/Uniformisation ☐ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☐ Urban ☐ Other_____
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Organisation:	**European Conference of Transport Research Institutes (ECTRI)**
Activity Title:	**eCoMove**
Country(ies):	European approach
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☒ Freight Truck ☐ Maritime
Objective (s):	Minimizing fuel consumption of private vehicles and commercial vehicles through the usage of information and communication technology (ICT).
Timeframe:	**Start:** 04/2010 **Finish:** 03/2013
Outline of case:	By applying the latest vehicle-to-infrastructure and vehicle-to-vehicle communication technologies, the project will create an integrated solution comprising eco-driving support and eco-traffic management to tackle the main sources of energy waste by passenger and goods vehicles. The eCoMove project will target three main causes of avoidable energy use by road transport to bring fuel wastage to a minimum: • inefficient route choice, • inefficient driving performance, • inefficient traffic management & control. eCoMove will develop core technologies and applications based on vehicle-to-vehicle and vehicle-to-infrastructure communication or so called "cooperative systems", where vehicle eco-relevant data can be shared real time with other vehicles and traffic controllers as a basis for fuel-efficient driving support and traffic management.
Web link:	http://www.ecomove-project.eu/
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☒ Standards/Uniformisation ☒ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☒ Interoperability ☒ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☒ Information Sharing ☐ Regulation/Law ☐ Other_____
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Organisation:	**European Conference of Transport Research Institutes (ECTRI)**
Activity Title:	**Seamless public transport door-to-door navigation**
Country(ies):	Germany, Italy
Mode(s):	☒ Walking ☒ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective(s):	Realisation of a public transport passenger navigation system.
Timeframe:	**Start:** 02/2009 **Finish:** 01/2012

Outline of case:	Imagine:
	
	    Being in a foreign city,
	    getting on the first tram or bus on your way; and
	    being guided to your destination through the public transport network – by your own mobile phone!
	
	Despite spontaneous detours, you won't get lost in the network. In case of delays, or construction works, you don't lose orientation.
	
	A mobile passenger navigation system realising this vision will be developed in the SMART-WAY project.

Web link:	http://www.smart-way.mobi
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☒ Urban ☒ Information Sharing ☐ Regulation/Law ☒ Other: Navigation
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Organisation:	**European Conference of Transport Research Institutes (ECTRI)**
Activity Title:	**Application and Benefit of Electrical Transportation in Industrial Infrastructure**
Country(ies):	Germany
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective(s):	Access the seamless use of electric vehicles in industrial transportation – research project
Timeframe:	**Start:** 2011-07-01 **Finish:** ongoing
Outline of case:	A number of electric vehicles is installed in a large-scale industrial area. The cars are used by service technicians and assembly operators. Each electric vehicle is equipped with a gps sensor based data acquisition units. The charging stations and the electric vehicles are wireless connected to an automatic control room, where the energy consumption and the movement data will be monitored and analyzed. The results of the research project will help to evaluate the benefits of electric mobility in comparison to other transportation methods, under consideration of energy costs as well as maintenance cost.
Web link:	—
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☒ Other: Electric Mobility
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Organisation:	**European Conference of Transport Research Institutes (ECTRI)**
Activity Title:	**PalletFlow**
Country(ies):	Germany, Austria
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☒ Freight Truck ☐ Maritime
Objective (s):	Modal shift of palletized goods from road to a multimodal rail-road transport system
Timeframe:	**Start:** September 2008 **Finish:** May 2011
Outline of case:	The adverse impact of traffic congestion and environmental pollution by freight traffic has become a major issue in past years. This not only leads to high public costs, but companies face increasing delay of transport. A possible solution is the shift of goods to more environmentally friendly means of transport that are less affected by traffic congestion. The proportion of high-value consumer and capital goods which are usually palletized and transported by truck is increasing. Because of that, the research project PalletFlow was started. PalletFlow wants to shift palletized goods from road to a multimodal rail-road transport system. Palletized goods can efficiently be handled with common forklifts. Therefore, additional handling capacities can be created with low investments to develop new, large areas for multi-modal transport. The equipment required to carry palletized goods efficiently is already available: curtainsider trucks and freight wagons with sliding doors permit a fast handling as they can be loaded and unloaded laterally. With pre-haul and last-mile delivery by truck and long-haul traffic by train, PalletFlow ensures the decoupling of short- and long-haul traffic. This allows for consideration of individual time frames for pickup and delivery and also for participation of customers who are not located near major railway sidings. By using shuttles on long-haul lanes, fixed and predictable time frames can be achieved. Because the long-haul by rail can be carried out more cost-efficiently than by road, additional handling costs break-even beyond a certain transport distance.
Web link:	http://www.palletflow.de/ (in German only)

Key Words:	☐ Border Crossing ☒ Congestion ☐ Energy/Fuel ☒ Environment ☒ Freight ☐ Funding ☐ Information Sharing	☐ Infrastructure ☐ Intercity ☒ Intermodal ☐ Interoperability ☐ Passenger ☐ Planning ☐ Regulation/Law	☐ Rural ☐ Standards/ Uniformisation ☒ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☐ Urban ☒ Other modal shift
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EUROCONTROL

Organisation:	**EUROCONTROL**
Activity Title:	**Information for the Single European Sky**
Country(ies):	Europe and world-wide
Mode(s):	☐ Walking ☐ Cycling ☐ Private automobile ☐ Bus ☐ Freight Truck — ☐ Light Rail ☐ Heavy Rail ☒ Air ☐ Inland Waterways ☐ Maritime
Objective (s):	Improve mobility by enabling the efficient and sharing information..
Timeframe:	**Start:** — **Finish:** ongoing
Outline of case:	Creating the seamless single sky for Europe requires that we eliminate the joins on a number of different levels: operations, equipment, finance, culture and not least information which is the focus of this case study: implementing system-wide information management (SWIM). To give an idea of the scale of the information problem, currently there are about 1 million active 'notices to airmen' (NOTAMs) that describe minor, local but safety-critical changes to procedures. Mostly they are still human processed, with all the inefficiencies, costs and risks that that entails. EUROCONTROL has been working with others in the industry on a three-phase solution: technical standards (relatively easy, but take years to agree); operational procedures; and finally technology, which is the most difficult because it involves all the change management issues of changing people's behaviour. Two examples illustrate what SWIM can mean in practice. Firstly, the Network Operations Portal allows air traffic management, airlines and airports direct access to the live situation on the European network; in two years since it went live it has become a vital tool for the smooth-running of the network, not just in the ash-cloud crisis when it was getting 18 million hits a day (TBD), but every day. Secondly, the passenger portal, a work in progress that aims to provide passengers and shippers with the live information they need; beyond this, clearly integrating and sharing information between transport modes is a pre-requisite for better-informed mobility.

Web link:	—
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☒ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☒ Interoperability ☐ Telecommunications ☒ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☒ Information Sharing ☐ Regulation/Law ☒ Other : Safety
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Organisation:	**EUROCONTROL**
Activity Title:	**Challenges of Growth in Aviation**
Country(ies):	Europe-wide
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☒ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	Support more robust, long-term transport planning by providing better information on the internal and external challenges of growth.
Timeframe:	**Start:** 2001 **Finish:** continues
Outline of case:	Aviation, like other modes requires long-term planning. In its 'Challenges of Growth' series of studies over the last 10 years, EUROCONTROL has shown how robust planning even for a single mode requires a seamless perspective on the future. Three examples: • Mitigating aviation's environmental impact is of course a key driver to be considered when forecasting future demand. However, we must also consider the converse, climate change's impact on demand and on aviation infrastructure, as changes to summer and winter temperatures have long-term effects on demand patterns and some 30 European airports are at risk from predicted rises in sea levels. • The best transport mode to meet a given need changes with time. Domestic air transport in many North-West European states has been in decline for years, as road and rail increasingly provide better alternatives. After EU expansion in 2004, air transport grew rapidly as the only mode that could reconfigure its network 'instantly' to provide the mobility that was required; but that, again, is not a permanent state of affairs, and high-speed rail and better road links will increasingly satisfy the demand. • Airports are the bottlenecks in the long-term: demand will remain concentrated in more, but still relatively few airports. As they find it ever harder to expand capacity, the outlook is for around 20 airports operating near capacity for much of their day; an unstable system, highly vulnerable to delays, is in the making.
Web link:	—
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☒ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other

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Organisation:	EUROCONTROL
Activity Title:	Performance in Air Traffic Management
Country(ies):	Europe-wide

Mode(s):	☐ Walking	☐ Light Rail
	☐ Cycling	☐ Heavy Rail
	☐ Private automobile	☒ Air
	☐ Bus	☐ Inland Waterways
	☐ Freight Truck	☐ Maritime

Objective(s):	Introduce a performance approach in the planning of air traffic management, as well as performance regulation to ensure the achievement of set performance targets.

Timeframe:	Start: 1998	Finish: continues

| Outline of case: | The performance of Air Transport and more particularly Air Traffic Management (ATM) results from the intricate decisions made on the flight trajectories by a large number of actors (aircraft operators, airport operators, air navigation service providers), and at European scale for international flights. Insufficient performance translates into delays, extra distances flown and fuel consumption. The level of performance in ATM can be used as a management tool to express requirements, set targets and define priorities and plans. Furthermore, it can be measured to detect shortcomings and propose corrective actions.

Europe has adopted a performance oriented approach in ATM since 1998, which is now regulated within the EU's Single European Sky legislation.

A Performance Review Body, for which EUROCONTROL is the designated instrument, is in charge of proposing targets and undertaking the reporting and review.

The targets apply at the scale of the European network and individual States which must publish performance plans describing how they intend to meet the targets through improved procedures, enhanced systems or other organisational measures. Safety, delays, impact on flight efficiency and environment, and air navigation service costs are currently the subject of the targets.

This results in better focus, accountability and service delivery, benefiting the airspace users and the entire society. |
|---|---|

Web link:	http://www.eurocontrol.int/prc/public/subsite_homepage/homepage.html

Key Words:	☐ Border Crossing	☒ Infrastructure	☐ Rural
	☒ Congestion	☐ Intercity	☐ Standards/Uniformisation
	☐ Energy/Fuel	☐ Intermodal	☐ Supply Chain
	☒ Environment	☐ Interoperability	☐ Telecommunications
	☐ Freight	☒ Passenger	☐ Ticketing/Payment
	☐ Funding	☒ Planning	☐ Urban
	☐ Information Sharing	☒ Regulation/Law	☐ Other

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Organisation:	**EUROCONTROL**
Activity Title:	**Total Airport Management**
Country(ies):	Covers 44 member countries of European Civil Aviation Conference (ECAC) Europe Focus
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☒ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	Improve efficiency by better use of available resources in situations with reduced capacity.
Timeframe:	**Start:** 2005 · **Finish:** ongoing
Outline of case:	In order to improve airport efficiency, in particular during periods with reduced capacity, an Airport Operations Centre (APOC), hosting agents from airport management, air traffic control, airlines and the European Network Manager, has been established. The APOC is provided with information about current operations as well as plans for the coming hours. This information is provided to all agents. In addition, each agent has access to propriety data from his proper organisation. In case of capacity shortfall, or if there is a wish to further optimise operations, e.g. to obtain further environmental gains for a period of time, decisions are taken based on agreed Key Performance Indicators and Targets, following rules that assure equity and fairness. The APOC can be implemented in an airport as a physical location or as a virtual room, where agents participate to the decision making from their home base. Implementation of an APOC will lead to better use of available airline, airport and airspace resources, fewer flight delays, in particular during bad weather conditions, like snow storms or fog, and to reduced passenger delays.
Web link:	http://www.eurocontrol.int/eec/public/standard_page/EEC_News_2006_3_TAM.html
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☒ Planning ☐ Urban ☒ Information Sharing ☐ Regulation/Law ☐ Other
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Organisation:	**EUROCONTROL**
Activity Title:	**Airport Collaborative Decision Making (CDM)**
Country(ies):	Covers 44 member countries of European Civil Aviation Conference (ECAC)

Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☒ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	By the implementation of advanced technology and improved procedures, improve air transport efficiency in particular in airports.
Timeframe:	**Start:** 2000 **Finish:** ongoing
Outline of case:	Airport collaborative decision making (CDM) is about partners [airport operators, aircraft operators/ground handlers, air traffic control (ATC) and the European Network Manager] working together more efficiently and transparently in the way they work and share data. The Airport CDM project aims to improve the overall efficiency of operations at an airport, with a particular focus on the aircraft turn-round and pre-departure sequencing process. One of the main outputs of the CDM process will be more accurate take-off times which can be used to improve en-route and sector planning of the European Air Traffic Management (ATM) Network. This is being achieved through implementation of a full set of Departure Planning Information messages sent to the European Network manager. Ten major airports have, or are about to implement, CDM. Considerable reductions in taxi-out times have been recorded, as well as improved predictability improvements that, potentially, can increase the capacity of the en-route network by up to 10%. An Airport-CDM Community Specification has been adopted. For the passenger, CDM leads not only to fewer delays, but will in particular lead to improved predictability and more accurate information about flights, especially during periods of bad weather or winter conditions, As an example, in Munich airport, where CDM is fully implemented, information about start and end of boarding is now provided to passengers with a very high degree of accuracy.
Web link:	http://www.euro-cdm.org/

Key Words:			
	☐ Border Crossing	☐ Infrastructure	☐ Rural
	☒ Congestion	☐ Intercity	☒ Standards/Uniformisation
	☒ Energy/Fuel	☐ Intermodal	☐ Supply Chain
	☒ Environment	☒ Interoperability	☐ Telecommunications
	☐ Freight	☒ Passenger	☐ Ticketing/Payment
	☐ Funding	☒ Planning	☐ Urban
	☒ Information Sharing	☐ Regulation/Law	☐ Other

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FEDERAL HIGHWAY RESEARCH INSTITUTE

Organisation:	**Federal Highway Research Institute**
Activity Title:	**RETISS Real Time Security Management System for Road Infrastructures**
Country(ies):	Germany, Israel
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Freight Truck ☐ Maritime
Objective (s):	Developing a real time security system to improve the security level of critical road infrastructures such as tunnels and bridges.
Timeframe:	Start: 03/2010 — Finish: 02/2013
Outline of case:	The project RETISS aims to develop a Real Time Security Management System that supports operators in tunnel control centres in their work to identify possible dangers to road users and initiate preventive and mitigating measures. In order to improve the protection of critical road infrastructures the system is developed and tested in the context of a cooperative research project with partners from Israel and Germany involved. A demonstrator (test system) is already installed at the Rennsteig Tunnel in Thuringia, which is the longest road tunnel in Germany. RETISS will provide real-time information on the current security situation of critical infrastructures to the persons responsible for the operation. This includes, for example, information about possibly dangerous vehicles with technical problems (e.g. overheated brakes). The innovative detection systems for overheated vehicles (a system using infrared and optical cameras) are tested in a German road tunnel for the first time. In order to assess the overall security situation of bridges and tunnels, the sensor data of various detection systems is then fused into a single system that evaluates and prioritises the recorded sensor data to determine the actual security status of a critical object and to present effective preventive and reactive measures and strategies for counteracting critical situations for road users.
Web link:	www.retiss.de

Key Words:	☐ Border Crossing	☒ Infrastructure	☐ Rural
	☐ Congestion	☐ Intercity	☐ Standards/Uniformisation
	☐ Energy/Fuel	☐ Intermodal	☐ Supply Chain
	☐ Environment	☐ Interoperability	☐ Telecommunications
	☐ Freight	☐ Passenger	☐ Ticketing/Payment
	☐ Funding	☐ Planning	☐ Urban
	☒ Information Sharing	☐ Regulation/Law	☒ Other: Security/Reliability
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Organisation:	**Federal High Research Institute**
Activity Title:	**SeRoN Security of Road Transport Networks**
Country(ies):	Germany, Austria, Switzerland, Belgium, Denmark, Great Britain
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Freight Truck ☐ Maritime
Objective (s):	Developing a methodology to investigate critical road transport networks and to evaluate protective measures against man-made hazards.
Timeframe:	**Start:** 11/2009 **Finish:** 10/2012
Outline of case:	The project SeRoN (Security of Road Transport Networks) investigates the impacts of possible man-made attacks on the transport network, in particular the resulting regional and supra-regional impacts on transport links and their economic impacts. For this, SeRoN develops a methodology which is based on an interdisciplinary interaction of expertise and innovative simulation methods. The developed methodology allows identifying critical road infrastructure objects (like bridges and tunnels) with regard to their importance to the transport network and their respective vulnerability and to choose and evaluate possible protection measures regarding their impact on the security status by taking into account their overall cost-effectiveness. The recommendations formulated in SeRoN will include macro-economic, institutional and organisational as well as technical items and will support public and private infrastructure owners and operators in developing short to long-term strategies to improve the security of transport structures and provide guidance for investing in countermeasures and risk mitigation strategies. The methodology developed by SeRoN is shown to be exemplary at two Trans European Highway links (TEN-T roads), including a detailed analysis of 2 bridges and 2 tunnels. The developed methodology might also be transferred to transport networks used by other traffic modes (e.g. railway links), and possibly to natural disasters.
Web link:	www.seron-project.eu
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☒ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☒ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☒ Information Sharing ☐ Regulation/Law ☒ Other: Security

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Organisation:	**Federal Highway Research Institute**
Activity Title:	**Security Risk Management Processes for Road Infrastructure**
Country(ies):	Germany, Austria, Slovenia
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☒ Freight Truck ☐ Maritime
Objective(s):	Stimulating the development of methodologies, security standards and the exchange of know-how for the protection of Critical Infrastructure on European Transport Networks.
Timeframe:	**Start:** 08/2011 **Finish:** 07/2013
Outline of case:	The project strives to develop processes for owners and operators of European Road Infrastructure to enable them to identify critical infrastructure based on common aspects, to assess these infrastructures in a structured and traceable way and to determine effective protection measures for prevention and mitigation. This is done by utilising a holistic approach, making use of the results of several national and European research projects and combining the findings into a comprehensive manual. In the course of this project, two trans-national road infrastructures will be used to apply the findings and evaluate the methodology. In a mid- to long-term perspective, the project contributes to a coordinated strategy for prevention, preparedness and consequence management of terrorism and other security related risks for critical road infrastructure in Europe. The main deliverable of the project will be a manual for "Security Risk Management for Road Infrastructure". The project is funded under the CIPS Action Grand framework of the EU.
Web link:	www.secman-project.eu (not accessible yet)
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☒ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☒ Other: Security
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FÉDÉRATION INTERNATIONALE DE L'AUTOMOBILE

Organisation:	**Fédération Internationale de l'Automobile**
Activity Title:	**Advanced Multi-Platform Traffic Information Service**
Country(ies):	Italy
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	Implement Innovative Traffic Information Service as a means for better integration of transport modes and services
Timeframe:	**Start:** 2010 **Finish:** ongoing
Outline of case:	The growing complexity of mobility patterns around the larger urban areas gives rise to specific mobility information requirements, including real-time traffic, multi-modality and safety, for locations based and customised around the single user. The recent technology developments match such requirements. Luceverde Lazio is an innovative real-time traffic information (RTTI) service created by Regione Lazio's Regional Transport Department and the Automobil Club d'Italia (ACI), with the support of Italian Road Police Departments, metropolitan and local police forces, motorways service managers and local transportation providers. It provides information on traffic and transportation. A state-of-the-art control room with dedicated operators who process incoming data from TV cameras placed on strategic nodes and intersections, along with information reported in real time by police forces, local administrations and public transportation services. The system generates audio and video newscasts for local radio and TV broadcasts. Each newscast includes updates on traffic and road conditions, events, accidents, security alerts, strikes and other relevant mobility information. The system generates customised alerts based on individual preferences chosen by the single registered users (bus lines, motorway link, provincial road, etc.). The service is available on the web, radio, TV and mobile devices.

Web link:	http://regionelazio.luceverde.it		
Key Words:	☐ Border Crossing ☒ Congestion ☐ Energy/Fuel ☐ Environment ☐ Freight ☐ Funding ☐ Information Sharing	☐ Infrastructure ☐ Intercity ☒ Intermodal ☐ Interoperability ☒ Passenger ☐ Planning ☐ Regulation/Law	☐ Rural ☐ Standards/Uniformisation ☐ Supply Chain ☒ Telecommunications ☐ Ticketing/Payment ☒ Urban ☐ Other
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Organisation:	**Fédération Internationale de l'Automobile**
Activity Title:	**Public information and research**
Country(ies):	Canada
Mode(s):	☐ Walking ☒ Light Rail ☒ Cycling ☒ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective(s):	Integrating transport modes
Timeframe:	**Start:** 2010 **Finish:** ongoing
Outline of case:	The Canadian Automobile Association (CAA) is a prime mover in the Canadian debate on integrating bicycles and motor vehicles. CAA hosted the first national policy conference on the topic, "Changing Lanes – Improving the bicycle-car relationship on Canada's roads", in spring 2011, bringing together nearly 100 urban planners, public policy professionals and bicycling advocates to seek practical infrastructure and safety solutions. CAA created a special website area (caa.ca/changinglanes) to house conference videos and other materials, and commissioned online training modules for both bicycle riders and vehicle drivers (caa.ca/bikesafety) so novices and experienced riders/drivers alike can refresh their skills and knowledge of the rules of the road. CAA is also developing an online tool and mobile app called Driving Costs that will incorporate the cost of urban transit. An existing tool allows users to see at a glance the yearly running cost of any two new vehicles, as well as a comparison of the greenhouse gases each vehicle would emit in a year. The new tool will preserve that functionality but add a comparison to the annual cost of taking public transit in a given jurisdiction, allowing consumers to make an easy comparison between these modes, and to encourage them to think about transit as an option. CAA is also funding academic research into Intelligent Transportation Systems to integrate it into infrastructure planning, improve traffic flows and safety.
Web link:	caa.ca/changinglanes & caa.ca/bikesafety
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☒ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other : -

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Organisation:	**Fédération Internationale de l'Automobile**
Activity Title:	**RACC Infotransit Traffic Information Services**
Country(ies):	Spain
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective(s):	Improving urban mobility by implementing traffic information services to reduce urban congestion
Timeframe:	**Start:** 2009 **Finish:** ongoing
Outline of case:	The RACC is the leading traffic information provider in Spain. The project has implemented advanced traffic information technologies, starting from radio reports on the current traffic conditions to a technological environment capable of integrating heterogeneous sources of data (both public and private), standardizing and disseminating traffic information to users by means of different communications channels (web, mobile devices, RDS-TMC, etc.). The RACC Infotransit server processes and standardizes (in TMC format) different sources of traffic information. It operates on the basis of a modular and scalable system, with a clear goal to integrate several sources of data which are very heterogeneous and scattered. Current services for users include a web access platform (www.raccinfotransit.es) and a mobile access platform (traffic information delivered to RACC's VMO customers via GPRS/SMS). In order to develop the service towards traffic prediction and dynamic routing the RACC will acquire further data sources through agreements with public and private operators around Spain. The objective is to launch real-time and predictive traffic flow data at the end of 2011.
Web link:	www.raccinfotransit.es
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☒ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
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INTERNATIONAL CHAMBER OF SHIPPING (ICS)

Organisation:	**International Chamber of Shipping (ICS)**
Activity Title:	**IMO Safety and Pollution Framework**
Country(ies):	—
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☒ Maritime
Objective(s):	Achieve global uniformity through safety and pollution regulations
Timeframe:	**Start:** 1959 **Finish:** ongoing
Outline of case:	The International Maritime Organization (IMO) has developed a comprehensive framework of safety and pollution regulations governing ships trading internationally so that the same rules apply at all stages of a ship's voyage, preventing market distortions and administrative inefficiencies. This regulatory framework, which allows trade between ports in different nations to be conducted seamlessly, includes the International Convention on Safety of Life at Sea (SOLAS), the International Convention for the Prevention of Pollution from Ships (MARPOL) and the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW). All of these Conventions are widely implemented and enforced on a global basis throughout virtually the entire merchant fleet by a combination of flag state inspection and port state control. The MARPOL Convention now includes mandatory technical regulations for the reduction of shipping's CO_2 emissions, the first international agreement on CO_2 reduction measures to be adopted for an entire international sector on a global basis. Other IMO Codes, mandated by these and other IMO Conventions, address uniform global standards relating to such detailed matters as management procedures, ship security, search and rescue, international collision regulations, safe load lines, the carriage of dangerous goods, and liability in the event of accidents - to mention but a few. This framework of regulations as provided by IMO has greatly contributed to the development of the efficient global maritime transport that operates today, with about 90% of global trade being carried by sea.

Web link:	www.imo.org/ourwork
Key Words:	☐ Border Crossing ☐ Congestion ☐ Energy/Fuel ☒ Environment ☐ Freight ☐ Funding ☐ Information Sharing ☐ Infrastructure ☐ Intercity ☐ Intermodal ☐ Interoperability ☐ Passenger ☐ Planning ☐ Regulation/Law ☐ Rural ☒ Standards/ Uniformisation ☐ Supply Chain ☐ Telecommunications ☐ Ticketing/Payment ☐ Urban ☒ Other: Safety
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Organisation:	**International Chamber of Shipping (ICS)**
Activity Title:	**International Convention for Safe Containers**
Country(ies):	International
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☒ Maritime
Objective(s):	Achieve global uniformity through safety and pollution regulations
Timeframe:	**Start:** — **Finish:** ongoing
Outline of case:	The purpose of the International Maritime Organization's Convention for Safe Containers is to maintain a high level of safety, to protect human life during the transport and handling of containers, by providing acceptable test procedures and related strength requirements. The Convention is also intended to facilitate the international transportation of containers through the application of uniform international safety regulations that are equally applicable to all modes of surface transport, thus effectively connecting road, rail and maritime transport. The annexes to the Convention provide: a regulatory framework by which government administrations may approve containers as conforming to the maintenance and examination criteria set out by the convention; and structural safety requirements and tests for containers as well as procedures in operational contexts such as lifting, stacking and transverse racking.
Web link:	www.imo.org/ourwork
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☒ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☒ Other: Safety
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Organisation:	**International Chamber of Shipping (ICS)**
Activity Title:	**Rotterdam Rules**
Country(ies):	US/EU Member States etc
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☒ Maritime
Objective(s):	Streamline rules related to Cargo Liability
Timeframe:	**Start:** 2009 | **Finish**: ongoing
Outline of case:	The Rotterdam Rules replaced a number of existing cargo liability regimes, such as the Hamburg and Hague/Visby Rules, with one streamlined Convention and are a prime example of connectivity in action. The signing of the United Nations Convention on the Carriage of Goods Wholly or Partly by Sea (the Rotterdam Rules), concluded several years of intensive international negotiations in New York and Vienna, in which ICS participated throughout. The Convention reflects modern 'door to door' services involving other transport modes in addition to the sea leg, and 'just in time delivery practices'. The early ratification and widespread implementation of the Rotterdam Rules will not only increase legal certainty and global uniformity with regards to the carriage of goods by sea but with new provisions will facilitate the development of e-commerce, dramatically increasing the efficiency of global trade. Finally, the implementation of the Rotterdam Rules as an International Convention will avoid the proliferation of regional cargo liability regimes which in a global transport system in need of global rules, can be a serious impediment to efficiency and streamlined connectivity.
Web link:	www.ics-shipping.org
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☒ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other
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INTERNATIONAL CIVIL AVIATION ORGANISATION (ICAO)

Organisation:	**International Civil Aviation Organisation (ICAO)**
Activity Title:	**ICAO States' Action Plans on CO2 Emissions Reduction Activities**
Country(ies):	ICAO Member states (190 states)
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☒ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective(s):	Showcase specific voluntary measures to improve efficiency, and thereby contribute to global environmental aspirational goals
Timeframe:	**Start:** October 2010 **Finish:** ongoing
Outline of case:	A global agreement reached by the 37th Session of the ICAO Assembly in October 2010 established a new benchmark for ICAO's objective relative on aviation and climate change. It provides a roadmap for action through 2050 for the 190 Member States of the Organisation and invites them to voluntarily submit their national action plans to reduce CO2 emission from international civil aviation to ICAO by June 2012.
Web link:	—
Key Words:	☐ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☒ Information Sharing ☐ Regulation/Law ☐ Other_____
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INTERNATIONAL ROAD FEDERATION

Organisation:	**International Road Federation**
Activity Title:	**A14 Urban motorway Paris**
Country(ies):	France
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☒ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Freight Truck ☐ Maritime
Objective (s):	The A14 motorway is located in the West of Paris, France, linking the business district of La Défense to the western suburbs. It was built to relieve the heavily congested A13 freeway and provide commuters with (tolled) alternative and dedicated services, such as an Express bus service.
Timeframe:	**Start:** 1991 **Finish:** opened in 1996
Outline of case:	This motorway was designed as a high-quality project, taking into account numerous specific constraints such as the urban surrounding and infrastructure integration as well as commuters' expectations. The A14 was integrated into its environment in an exemplary manner, and 50% of the total project budget was set aside for the aspects of protection and "insertion". The motorway is fully lit, and the pavement is constructed using draining asphalt, a material that enhances safety, as well as providing a smooth and quiet ride. All run-off water is collected in a separate sealed system and processed before being discharged. In order to minimize the visual impact, the A14 motorway runs below ground level for 13.4 km, which represents 86% of its total length, and crosses the river Seine by means of two viaducts. The two bridges carrying the road over the Seine are acoustically screened. The open-air stretches are bounded by walls or earth banks planted with noise reducing shrubs, etc. Nearly one million new plants were needed for the 47 hectares of new landscape areas around the motorway. The A14 motorway provides services dedicated to commuters to meet customers' demands which are specific for an urban infrastructure: • Free access is given to drivers carpooling (3+), thus encouraging vehicle sharing • Discounts for frequent users using transponders (subscriptions are

	proposed to commuters and businesses)
	• A bus service (Express A14) with 3 lines linking the western suburbs (Mantes La Jolie, Les Mureaux, Verneuil et Orgeval) and the business centre of La Defense. Currently, 15% of people on the A14 are using the Express A14 bus service (2009 figures). The Express A14 is the first Bus Rapid Transit (BRT) service in the Paris area.
Web link:	http://www.sanefgroupe.com/Activites/Concessionnaire/Concessionnaire-d-infrastructures-de-transport
Key Words:	☐ Border Crossing ☒ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☒ Environment ☐ Interoperability ☐ Telecommunications ☐ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☒ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
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INTERNATIONAL ROAD TRANSPORT UNION (IRU)

Organisation:	**International Road Transport Union (IRU)**
Activity Title:	**Taxi – Anytime, Anywhere**
Country(ies):	European-wide
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☐ Freight Truck ☐ Maritime
Objective (s):	Promote the use of taxis as an integral part of the public transport chain, and create a pool of best policy and industry practices
Timeframe:	**Start:** 2011 **Finish:** ongoing
Outline of case:	"Taxi - Anytime, Anywhere" is a join industry effort to promote the use of taxis as the most flexible and convenient part of the public transport chain. The objectives of this collective action are: • Through joint actions and promotion of the commonly agreed taxi slogan and values, to improve the taxi industry's image, market and legislative environment and, as a result, to substantially increase the use of the services of taxis and hire cars with drivers, including as part of the public transport chain; • To build an international platform and to exchange best industry and legal/administrative practices implemented at national/local/company level among taxi professionals worldwide.
Web link:	http://www.iru.org/en_taxi
Key Words:	☐ Border Crossing ☐ Infrastructure ☒ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☒ Environment ☒ Interoperability ☐ Telecommunications ☐ Freight ☒ Passenger ☒ Ticketing/Payment ☐ Funding ☐ Planning ☒ Urban ☐ Information Sharing ☒ Regulation/Law ☐ Other_____
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Organisation:	International Road Transport Union (IRU)
Activity Title:	TRANSPark
Country(ies):	Armenia, Azerbaijan, Austria, Belarus, Belgium, Bulgaria, Bosnia and Herzegovina, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Georgia, Germany, Greece, Hungary, Iran (Islamic Republic of), Italy, Ireland, Kazakhstan, Latvia, Lithuania, Luxemburg, Macedonia (FYROM), Malta, Moldova, Montenegro, Netherlands, Poland, Portugal, Romania, Russia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, Turkey, Ukraine, United Kingdom
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☒ Bus ☐ Inland Waterways ☒ Freight Truck ☐ Maritime
Objective(s):	To support route planning by transport operators through access to a significant database of long series of information regularly updated and provide for the necessary security and comfort of transport operators while en route.
Timeframe:	**Start:** — **Finish:** ongoing
Outline of case:	TRANSPark is a modern, interactive application on the IRU website that enables truck drivers, logistics planners, transport managers and others involved in road transport operations to search, locate, select and contact truck parking areas in over 40 countries — from Portugal to Kazakhstan. Accessible free of charge on the IRU and ITF websites, TRANSPark is also available in PDA format for easy use from the truck cabin. TRANSPark users can search for truck parking areas by country, around a location within a 100-km radius, or along their planned routes. All facilities available at the selected parking area are listed (security features, truck repair, vehicle wash, hotel, restaurant, etc.), and can be used as parking search criteria. Full contact details and location maps are also provided. TRANSPark is a one-stop shop for drivers, offering: • search functions to locate, select and contact some 3,000 truck parking areas; • a route planner; • fuel prices in 40 countries; • border waiting times; • flash information on traffic conditions and restrictions; • security guidelines and checklists; • weather conditions; • a currency converter; • legal advice and support. All available free of charge, also in a portable device-friendly format!

Web link:	http://www.iru.org/cms-filesystem-action?file=/helpdesk/transpark_uguide_en.pdf
Key Words:	☒ Border Crossing ☐ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☒ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☒ Planning ☐ Urban ☒ Information Sharing ☐ Regulation/Law ☒ Other: Parking
Contact:	Name: Jens Hügel Organisation: IRU Email: jens.huegel@iru.org

Organisation:	**International Road Transport Union (IRU)**
Activity Title:	**IRU TIR Electronic Pre-Declaration (TIR-EPD) and Real Time SafeTIR (RTS)**
Country(ies):	*TIR-EPD*: 15 countries: (Belgium, Bulgaria, Czech Republic, Estonia, Finland, France, Germany, Hungary, Latvia, Lithuania, Moldova, Poland, Romania, Slovakia, Slovenia). More countries will soon be available. *RTS*: 8 countries: (Bosnia and Herzegovina, Bulgaria, France, Kazakhstan, Moldova, Russia, Turkey, Ukraine) out of 54 SafeTIR reporting countries.
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☒ Freight Truck ☐ Maritime
Objective(s):	To create a standard uniform platform, which ensures the automatic exchange of TIR information between the IRU, TIR carnet holders, national Associations and Customs, applicable to both EU and non-EU countries.
Timeframe:	**Start:** RTS (27.04.2007) TIR EPD (01.01.2009) **Finish:** ongoing
Outline of case:	TIR-EPD is a modern technology-based solution for electronically connecting Business to Customs. TIR-EPD allows transporters — TIR holders — to submit free-of-charge electronic transit pre-declarations to customs in a simple and convenient manner. For customs, TIR-EPD guarantees that the pre-declaration was submitted by an authorised holder and that the TIR carnet is valid; so the customs can use this advance information with high confidence for pre-arrival risk analysis and customs operations at the border. The experience shows that with TIR-EPD border crossing is simpler, safer and faster. As of 01.01.2009 TIR-EPD are sent electronically to EU customs offices of departure/entry, including now safety and security data (mandatory since 01.01.2011), which give numerous advantages for customs and transporters. TIR-EPD is currently available in 16 languages and successfully operational in 14 EU countries and one non-EU country (5 more are becoming operational soon). RTS was developed by IRU to automate and facilitate routine Customs TIR operations by providing Customs with up-to-date information on TIR carnet status and validity thus allowing prompt detection of possible irregularities. Upon termination of the TIR operation, RTS sends automatically a confirmation message to the IRU without any effort from the Customs. Electronic reconciliation procedure is also possible.

Web link:	http://www.iru.org/en_iru_tir_epd
Key Words:	☒ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☒ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☒ Information Sharing ☐ Regulation/Law ☐ Other_____
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Organisation:	**International Road Transport Union (IRU)**
Activity Title:	**Smart Move**
Country(ies):	Global
Mode(s):	☐ Walking ☐ Cycling ☐ Private automobile ☒ Bus ☐ Freight Truck ☐ Light Rail ☐ Heavy Rail ☐ Air ☐ Inland Waterways ☐ Maritime
Objective(s):	Doubling the use of collective passenger transport by bus and coach
Timeframe:	**Start:** 2009 **Finish:** ongoing
Outline of case:	Smart Move (www.busandcoach.travel) is a global awareness campaign, initiated jointly by the IRU and Busworld, which advocates the doubling of bus and coach use worldwide as the safest, most environmentally-friendly, affordable, user-friendly and efficient means of collective passenger transport. Targeted actions focus primarily on opinion and decision makers at international European, national and local level, the academic world, transport, travel, environment etc. related NGOs, and the media (both specialized and general). Smart Move addresses also industry stakeholders, such as bus and coach operators and drivers, with industry-own initiatives and best practices leading to increasing the use of collective passenger transport by bus and coach, as well as to raise awareness and improve the quality of services, safety, and environmental-friendliness through training, checklists, and dedicated awareness raising campaigns. A brochure of best policy and industry practices was produced (2010) and a pool of policy and company best practices is made available on line (http://www.busandcoach.travel/en/best_practices/) to promote their in-take and use.
Web link:	www.busandcoach.travel
Key Words:	☐ Border Crossing ☒ Congestion ☒ Energy/Fuel ☒ Environment ☐ Freight ☐ Funding ☒ Information Sharing ☒ Infrastructure ☒ Intercity ☒ Intermodal ☒ Interoperability ☒ Passenger ☐ Planning ☒ Regulation/Law ☐ Rural ☐ Standards/Uniformisation ☐ Supply Chain ☐ Telecommunications ☒ Ticketing/Payment ☒ Urban ☐ Other_____
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Organisation:	**International Road Transport Union (IRU), Geneva**
Activity Title:	**New Eurasian Land Transport Initiative (NELTI): Phases 1 and 2**
Country(ies):	12 countries: Belarus, Ukraine, Russia, Kazakhstan, Uzbekistan, Kyrgyzstan, Tajikistan, Turkmenistan, Iran, Turkey, Georgia, Azerbaijan
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☐ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☒ Freight Truck ☐ Maritime
Objective(s):	To investigate regular road freight shipments between Europe, Central Asia and China, to monitor road transport operations in the region and analyse the results in order to assist the Central Asian and Caucasian countries to realise their full trade and road transport potential. To increase the volumes of road transport operations and services that the countries along the Silk Road could offer, while raising political and business awareness of the feasibility of and demand for such road transport operations. To provide effective impetus for regulatory reforms in the fields of transportation and Customs services in order to implement international Agreements and Conventions to facilitate trade and road haulage.
Timeframe:	**Start:** 2008 **Finish:** 2010
Outline of case:	Within the framework of the IRU NELTI Project, shipments have been undertaken by companies from 12 countries along three principal routes of the ancient Silk Road: Northern, Central and Southern. To tackle the physical and non-physical impediments to road transport along the revived Silk Road, streamlining border crossing procedures as well as promoting the development of ancillary road infrastructure (modern filling stations, motels, safe parking facilities, etc.). The project has been implemented due to close coordination between IRU Secretariat, IRU member associations in the transit countries, participant haulier-companies, and governmental agencies covering transport, customs and security policies, as well as local authorities and scientific community in Central Asia, Caucasus and Eastern Europe. The 2 phases of the project have resulted in the IRU-NEA analytical study NELTI-2 — Final Report presented at the 6th IRU Euro-Asian Conference in Tbilisi (Georgia) in June 2011. NELTI, Phase-3 is still on-going in the country-members of ECO - Economic Cooperation Organisation comprising Afghanistan, Pakistan, Iran, Turkey, Azerbaijan, Turkmenistan, Tajikistan, Kyrgyzstan, Kazakhstan, and Uzbekistan.

Web link:	http://www.iru.org/cms-filesystem-action/mix-publications/en_mhi.pdf www.iru-eupd.org
Key Words:	☒ Border Crossing ☒ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☒ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☒ Regulation/Law ☐ Other_____
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Organisation:	**International Road Transport Union (IRU)**
Activity Title:	**IRU Border Waiting Time Observatory (BWTO)**
Country(ies):	Belarus, Bulgaria, Estonia, Greece, Hungary, Iran (Islamic Republic of), Latvia, Lithuania, Macedonia (FYROM), Poland, Romania, Russia, Serbia, Slovakia, Turkey, Ukraine

Mode(s):	☐ Walking	☐ Light Rail
	☐ Cycling	☐ Heavy Rail
	☐ Private automobile	☐ Air
	☒ Bus	☐ Inland Waterways
	☒ Freight Truck	☐ Maritime

Objective(s):	To support route planning by transport operators through access to a significant database of long series of information and daily data.
	To help governments and national competent authorities in meeting their legal obligation of informing all parties concerned, including the fleet operators, of waiting times at borders thus avoiding border congestion and other economic and social implications.
	To draw the attention of the competent authorities to "hot spots" and the need for improvement, for example through encouraging customs and other border authorities to streamlining border control procedures.

Timeframe:	**Start:** —	**Finish:** ongoing

Outline of case:	The IRU has developed the IRU Border Waiting Times Observatory (BWTO), a state-of-the-art IRU web-based application which enables authorities to report on border waiting times, free of charge, anywhere in the world (www.iru.org/index/bwt-app).
	This is a simple, user-friendly web interface for daily data input. Data is entered directly into the database, while waiting times beyond 10 hours a day and any text message on reasons of long waiting times need personal approval by the System Administrator. Users can consult waiting times.
	The system contains two modules: one for truck and another for coach / bus waiting times. A mapping function belongs to the site where the observed border crossing points can be located.
	By applying various search functions, the border crossing point of interest can be accessed; the latest daily data, as well as any historical periods since the site became operational, can be investigated and presented either in the form of graphs or in a series of data.
	The Data show time information in hours and by direction of traffic (in-out). The time spent at a border contains the accumulated hours spent on both sides of a crossing point.

Web link:	http://www.iru.org/cms-filesystem-action?file=mix-publications/bwto_en.pdf
Key Words:	☒ Border Crossing ☐ Infrastructure ☐ Rural ☒ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☐ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☒ Information Sharing ☐ Regulation/Law ☐ Other_____
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TRANSPORT CORRIDOR BETWEEN EUROPE, CAUCASUS AND ASIA

Organisation:	**Transport Corridor between Europe, Caucasus and Asia (TRACECA)**
Activity Title:	**TRAX TRACECA Route Attractiveness *for Seamless Connection***
Country(ies):	TRACECA countries: Azerbaijan, Armenia, Bulgaria, Georgia, Kazakhstan, Kyrgyzstan, Moldova, Romania, Tajikistan, Turkey, Ukraine, Uzbekistan
Mode(s):	☐ Walking ☐ Light Rail ☐ Cycling ☒ Heavy Rail ☐ Private automobile ☐ Air ☐ Bus ☐ Inland Waterways ☒ Freight Truck ☒ Maritime
Objective(s):	To achieve seamless transport linkage across the black and Caspian sea by identifying traffic bottlenecks on hardware and software side and measuring improvements in providing enabling environment for traffic to flow without delay and at reasonable liability.
Timeframe:	**Start:** 2010 **Finish:** ongoing
Outline of case:	TRACECA developed as a transport corridor to create links for all TRACECA countries to international trade routes. Crossing the borders of 4-6 countries in central Asia and the Caucasus was a challenge for transport operators, particularly from western countries. During a decade of work, a multi-lateral-agreement was signed, a multi-modal agreement was ratified by many countries and several infrastructure projects were put in place, with the help of IFIs and countries' own resources. Yet TRACECA, having matured to international status, still experiences competition from alternative routes. A considerable share of traffic is diverted away from TRACECA commercial routes to alternatives that might be more expensive, but with a predictable frame of cost and time. To understand this competition and adequately respond, TRACECA developed a monitoring tool, TRAX (TRACECA Route Attractiveness Index). It benchmarks transport routes and highlights any major bottlenecks in the system. This case study highlights the success of benchmarking and on responding mechanisms to the challenge of seamless transport chains in international routes by:

	• Investments pipeline of missing links on the multimodal transport network, • Best practice analysis of corridor reliability and security benchmarking for freight forwarders liabilities. Thanks to these two parallel actions, the main bottlenecks have been identified and an action plan, including both hard (infrastructure projects) and soft (policies) measures, is in an advanced stage of design.
Web link:	www.traceca-org.org
Key Words:	☒ Border Crossing ☐ Infrastructure ☐ Rural ☐ Congestion ☐ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☐ Environment ☐ Interoperability ☐ Telecommunications ☒ Freight ☐ Passenger ☐ Ticketing/Payment ☐ Funding ☐ Planning ☐ Urban ☐ Information Sharing ☐ Regulation/Law ☐ Other_____
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VBB VERKEHRSVERBUND BERLIN-BRANDENBURG GMBH

Organisation:	**VBB Verkehrsverbund Berlin-Brandenburg GmbH**
Activity Title:	**EU-SPIRIT : European travel information network**
Country(ies):	Denmark, Germany, France, Luxembourg, Poland, Sweden
Mode(s):	☒ Walking ☐ Cycling ☐ Private automobile ☒ Bus ☐ Freight Truck ☒ Light Rail ☒ Heavy Rail ☒ Air ☐ Inland Waterways ☒ Maritime
Objective (s):	EU-Spirit is an intermodal travel information service offering itineraries between European cities and regions using various public transport modes. EU-Spirit is not an own travel planner but a network of already existing internet-based travel planning systems for regional, national and international connections. Short-distance and long-distance traffic can be handled. EU-Spirit as a continuous service is the result of a project in the 5th framework 1998 – 2001.
Timeframe:	**Start:** 1998 **Finish:** ongoing
Outline of case:	EU-Spirit connects existing travel information systems through open interfaces, harmonised meta data and central technical components which allow the generation of complete cross-border travel information from door to door. The information from every single system connected to the EU-Spirit network is available for all users. Customers can get information from the whole EU-Spirit network using their familiar travel information system in their mother tongue. The usage of the system is especially high where neighbouring regions are connected like the Oresund region. Information services based on EU-Spirit provide all information and functions each participating system provides. This can include: • Search for stops and addresses; • Presentation of stops and addresses in maps; • Presentation of an itinerary including all essential partial information; • Information on transportation and transfer modes including arrival and departure times at interchanges; • Realistic check-in and check-out time for transitions at airports and harbours; • Fare and ticketing information.

	The EU-Spirit information network aims at covering whole Europe and is open for every operator of national, regional and local internet-based travel planning system to participate.
Web link:	http://www.eu-spirit.com http://euspirit.vbb-fahrinfo.de
Key Words:	☒ Border Crossing ☐ Infrastructure ☒ Rural ☐ Congestion ☒ Intercity ☐ Standards/Uniformisation ☐ Energy/Fuel ☒ Intermodal ☐ Supply Chain ☐ Environment ☒ Interoperability ☒ Telecommunications ☐ Freight ☒ Passenger ☐ Ticketing/Payment ☐ Funding ☒ Planning ☒ Urban ☒ Information Sharing ☐ Regulation/Law ☐ Other_____
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