UITP AT A GLANCE

WHO WE ARE
UITP (International Association of Public Transport) is the only worldwide network to bring together all public transport stakeholders and all sustainable transport modes.

WHAT WE DO
Every day we make a difference for our members and for the wider sustainable transport community.

ADVOCACY & OUTREACH

KNOWLEDGE

NETWORK & BUSINESS
PROMOTING RESEARCH AND INNOVATION

Research and Innovation are the drivers in developing public transport. They are the key factors in bringing added-value solutions - both to the sector and society as a whole. UITP strives to excel in this area, adopting a ‘think global, act local’ approach.

The association provide its members and the wider urban mobility community with cutting-edge solutions and a clear focus on sustainability and efficiency.

Additionally, UITP helps its members to assess the impact of innovation in their business.

With third party support, UITP plays a key role in improving quality of life around the world.

THE FOUR TOP OBJECTIVES OF THE UITP R&I STRATEGY INCLUDE:

1. Identifying regional priorities for R&I
2. Identifying and exploiting opportunities to fund innovative projects
3. Performing interregional transferability of innovative solutions
4. Supporting UITP members in accessing, coordinating and participating in third-party funded R&I activities
The ZeEUS project aims to extend the fully-electric solution to the core part of the urban bus network. It demonstrates the feasibility of several electric solutions for high capacity buses in live operational scenarios in ten cities across Europe. With around 60 series and pre-series vehicles taking part in the ZeEUS demonstrations, this provides a realistic evaluation of the true impact of the electric solution on operations. Aiming at facilitating the market uptake of electric buses, this analysis helps develop tools that support decision-makers in making the ‘if’, ‘how’ and ‘when’ decisions on introducing electric buses in the core part of the bus network.

EBSF_2 tests and evaluates more than 30 technological solutions for improving the efficiency of bus systems and their attractiveness to the users. Real-life demonstrations in 12 cities are addressing several areas for innovation: energy management and auxiliaries, green driver assistance, exterior and interior bus layout, IT standards, intelligent garage and predictive maintenance, as well as how buses interface with urban infrastructures. The technological innovations deal with a wide range of bus services as well as all current propulsion technologies. Their technological maturity will ensure a short step for commercialization once the project is completed. The use of simulators and prototypes is conceived as a preliminary step for the validation of the innovations in real operational conditions, or as a necessary task to prove the potential of more futuristic solutions currently implemented at early stage of development.
The Urban Mobility Innovation Index (UMii) is based on nine composite indicators, enabling comparisons and conversations between cities, rather than competitive ranking and scoring.

The goal is to provide insights into urban mobility and innovation in cities across the world, creating a guide for cities to foster innovation in their own urban mobility services and systems. Data collected from cities worldwide is analysed and compiled into a final report. Contributing cities are invited to participate in the Urban Mobility Innovation Forum, dedicated to exchange and learn ‘next and best’ practices.

The ASSURED project develops and tests high-power charging solutions for heavy- (HD) and medium-duty (MD) vehicles across nine cities in Europe.

The next generation fast-charging solutions, interoperable and scalable, will as a consequence improve the total cost of ownership (TCO) for urban buses and trucks as well as reduce their operational cost. With the view to fleet upscaling, the impact on grid stability and reliability is also investigated.
RESEARCH AND INNOVATION STRATEGIES FOR ALL TRANSPORT MODES IN EUROPE

SETRIS (Strengthening European Transport Research and Innovation Strategies) unites all major transport related European Technology Platforms (ETPs) into a single collaborative initiative for the first time. This delivers a cohesive, multimodal approach to innovation and research strategies.

SETRIS aims to identify commonalities and synergies between the strategic research of transport ETP’s and the innovation agendas (SRIAs) of the different domains. It updates them to help promote a comprehensive multimodal and integrated transport system framework. As a result, the project helps implement comprehensive, credible and realistic plans. In addition, it benchmarks past and current EU research initiatives.

www.newrail.org/setris  
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EU-funded project

OPTIMISATION OF ENERGY USE

OPEUS aims to develop a simulation methodology and an accompanying modelling tool that will optimise energy consumption of rail systems, with a particular focus on in-vehicle innovation.

The OPEUS concept centres on the need to understand and measure the energy used by each relevant component in the rail system, in particular the train. This includes energy losses within the traction chain, the technologies used to reduce these losses and optimise energy consumption.

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JOINT INITIATIVE FOR HYDROGEN VEHICLES ACROSS EUROPE

JIVE aims to ease the commercialisation of fuel cell buses by deploying 139 vehicles across 5 countries, which will double the number of FC buses operating currently in Europe.

JIVE uses coordinated procurement activities to unlock the economies of scale which are required to reduce the cost of the buses. The project also tests new hydrogen refuelling stations with the required capacity to serve fleets of 20 buses or bigger.

ELECTRIFICATION OF PUBLIC TRANSPORT IN CITIES

ELIPTIC develops new use concepts and business cases for optimising existing electric infrastructure and rolling stock, saving money and energy. The project strengthens the role of electric public transport, reducing fossil fuel consumption and improving air quality.

The project supports the uptake and exploitation of results by developing guidelines and tools for upgrading and regenerating electric public transport systems. ELIPTIC also advocates for an electric public transport sector, helping build political support across Europe.
The GoF4R project defines sustainable governance for the Interoperability Framework (IF). The IF subsequently creates the appropriate conditions for introducing seamless mobility services.

GoF4R fosters a wider acceptance of the ‘semantic web of transport’. The governance structure provides the basis for long-term stability and the controlled future evolution of the IF. GOF4R analyses factors that determine the market of mobility services shaped by the introduction of the IF technology. The subsequent objective is to design specific governance structures and processes that maximise the effect of market forces once the technology is adopted.

IT2Rail is the first step of the Shift2Rail 4th Innovation Programme, ‘IT Solutions for Attractive Railway Services’. This supports a new, complete seamless travel experience by providing access to a comprehensive multimodal travel offer including the highly valuable first and last miles.

IT2Rail proposes a comprehensive, door-to-door multimodal travel experience, integrating the diverse existing and future services for planning, one-stop-shop ticketing and real-time re-accommodation. This is based on the cooperative development of an open semantic web of transport, with full interoperability and without prerequisites for centralised standardisation. This means that the transport stakeholders who want to join the system will not be restricted to specific business models, thus ensuring the long-term attractiveness and economic self-sustainability of the transport (e-)services.
SMART MAINTENANCE AND THE RAIL TRAVELLER EXPERIENCE

SMaRTE endeavours to identify the primary influences that lead travellers to choose rail transport - or an alternative - for a specific journey. In order to understand these factors better, SMaRTE develops an experience map, hosts workshops for both travellers and rail stakeholder and undertakes a number of surveys. These new insights will propose new measures for improving the attractiveness of the rail sector.

In addition, SMaRTE defines a new methodology for implementing the latest condition-based maintenance system for railway systems. This approach helps to make maintenance better-tailored, more efficient and more cost-effective.

FUTURE SECURE AND ACCESSIBLE RAIL STATIONS

The FAIR Stations project aims to develop solutions for improving user flows both within the station and at the platform train interface (PTI). This puts customer satisfaction, security and safety at the centre of the station design, while paying particular attention to needs of passengers with reduced mobility (PRM).

The project is benchmarking state-of-the-art station designs. Future stations design will be based on three pillars of design: security and safety, congestion management and accessibility. Therefore the key design factors under consideration are security, safety, baggage handling, ticketing, accessibility, information and signage and environment. Key Performance Indicators (KPIs) are used to evaluate and validate the proposed design solutions.
The Coordination and Support Action SCORE combines the efforts of eight partners in investigating future development paths of the European transport manufacturing industries.

SCORE explores how progress in research and new technologies affects the global competitive position of the European transport manufacturing industry. The analyses focus on the four major segments of the transport manufacturing industry: automotive, aeronautical, shipbuilding and railrolling stock. It makes predictions for passenger and freight transport up to 2030 (and partly to 2050). These findings are summarised and visualised in a scoreboard, which presents the current and future competitive position of the European transport manufacturing industries compared to that of their global competitors.

BIOMOTIVE is paving the way for the production and subsequent market entry of bio-based automotive interior parts with an improved environmental profile and economically competitive.

BIOMOTIVE’s goal is to replace existing fossil-based, non-biodegradable counterparts with these new bio-based materials, leveraging innovative production techniques. Materials are validated for interior parts, including automotive door handles and seats with demonstrable improved properties, such as enhanced mechanical strength, higher flexibility and greater recyclability at end-of-life.
CLEANER AND BETTER TRANSPORT IN CITIES

The CIVITAS SATELLITE project supports and coordinates the endeavours of the current and upcoming CIVITAS 2020 projects, which promote better and cleaner transport in cities. By creating an effective ‘value chain’ for innovation in urban mobility, the CIVITAS SATELLITE partners contribute to achieving the goals set out in the EU’s transport White Paper.

SATELLITE facilitates cooperation between all stakeholders involved in the CIVITAS Innovation Action (IA) and Research and Innovation Action (RIA) projects. It recruits new stakeholders and provides information allowing cities to lower the barriers for implementing the solutions identified by the CIVITAS community.

UNLOCKING LARGE-SCALE ACCESS TO COMBINED MOBILITY THROUGH A EUROPEAN MAAS NETWORK

The main objective of IMOVE is to accelerate deployment and unlock the scalability of ‘Mobility as a Service’ (MaaS) schemes in Europe, ultimately paving the way for a ‘roaming’ service for MaaS users on a European level.

IMOVE investigates and validates advanced solutions for both improving the deployment and operation of MaaS and its underlying business models. IMOVE solutions are investigated and validated in four European Living Labs - Turin, Greater Manchester, Berlin, Göteborg - all of which are currently engaged in, or having plans for, MaaS development. Roaming services for MaaS users are also validated at European level.
FUTURE RESEARCH, ADVANCED DEVELOPMENT AND IMPLEMENTATION ACTIVITIES FOR ROAD TRANSPORT

FUTURE-RADAR supports the Technology Platform ERTRAC (European Road Transport Research Advisory Council) and the EGVI (European Green Vehicle Initiative) for creating and implementing the research and innovation strategies required for a sustainable and competitive European road transport system.

Linking representatives from all stakeholder groups, FUTURE-RADAR activities include project monitoring, strategic research agendas, international assessments and making recommendations for innovation deployment as well as twinning of international projects and comprehensive dissemination and awareness activities.

MY TRAVEL COMPANION

My-TRAC is devoted to researching and developing user-centric services to enhance the passenger multimodal door-to-door experience. This helps citizens develop greater confidence in, and adhesion to, multimodal transport services.

The principal objective of My-TRAC is to develop a novel transport services platform designed for public and private transport users and operators. This improves the passenger experience by developing and applying advanced behavioural transport analytics and artificial intelligence (AI) algorithms. It develops a smartphone application to connect information from public transport operators, MaaS providers and datasets related to the service and journey.
AUTOMATED DRIVING PROGRESSED
BY INTERNET OF THINGS

To realise the full potential offered by autonomous vehicles, the AUTOPilot project combines them with the concept of the Internet of Things (IoT). This enables connections between objects or ‘things’ at any time and in any place, using any service over any network.

Within this project, the European automotive industry is investing in connected and automated driving. Vehicles will become moving ‘objects’ in an IoT ecosystem, eventually participating in Big Data for Mobility. AUTOPilot brings IoT into the automotive world, transforming connected vehicles into highly and/or fully automated vehicle. The project is also developing new services, such as autonomous car sharing, automated parking or enhanced digital dynamic maps to allow fully autonomous driving. These are tested in five pilot sites in Europe and South Korea.

GALILEO TECHNOLOGY WITHIN THE
MOBILITY AS A SERVICE CONTEXT

The GALILEO 4 Mobility project aims to support the introduction of GALILEO technology within Mobility as a Service. It analyses the geolocation needs of the different stakeholders and demonstrates the benefits of GALILEO through pilots of shared mobility services in Cervelló, Barcelona, Thessaloniki, Paris Saclay and Milton Keynes.

Its objectives are to understand, define and validate the requirements for GNSS in Mobility as a Service sector and to identify the advantages that it may offer over existing solutions. In addition it develops the key elements needed to exploit the advantages of GALILEO within the MaaS sector, disseminates the project results and supports their exploitation once the project is completed.
COMPLETED PROJECTS

LEARN MORE ON
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UITP Research & Innovation department is part of InnovHub, a one-stop innovation hub gathering some of the most remarkable projects and brightest ideas to foster innovation in public transport. #FollowTheBulb