

ITF Research Programme of Work 2018-2019

The research programme of the International Transport Forum (ITF) aims to improve capacity for transport policy decision-making through collaborative research. Activities involve ITF Member country governments at every level as well as the research and policy-making community in academia and the private sector.

At the core of the work is international information exchange of data, statistics, engineering experience, and economic policy analysis. A number of methods are employed, including working groups of experts from national administrations that address policy issues of current priority, and roundtable meetings for intensive discussion between leading experts on critical areas of research with clear policy relevance.

The research outputs provide ITF Member countries with high quality, policy-relevant research on issues pertinent to regional, national and international agendas. The work covers all modes and aspects of transport and its contribution to society and sustainable economic growth. Work takes a global perspective and currently aims in particular to involve the newer ITF Member countries. The research work also underpins the Annual Summit of the ITF.

The research programme is established by the ITF's Transport Research Committee (TRC). The TRC periodically reviews priorities and establishes two-year programmes of work based on project proposals submitted by TRC members. The reviews specifically set priorities for the establishment of new working groups, as these require provision of in-kind resources by Ministries and research agencies. The reviews also decide on the topics of the four ITF Roundtables currently held each year.

The ITF's research activities currently focus on the following strategic areas:

- Investment
- Projections and appraisal
- Better regulation
- Safety and security
- Environmental costs and sustainability
- Globalisation, trade and the spatial effects of transport.

The programme of work for 2018-2019 is summarised in the two accompanying figures. The second figure and the project outlines that follow provide details of the working groups and roundtable meetings that are included in the programme. A mid-term check point will review the continuing pertinence of roundtables tentatively scheduled for 2020, particularly those on cost-benefit assessment methodologies.

Programme of Work Activities

ITF Summits	Working Groups	Roundtables		Regular activities	Projects from 2016-2017 PoW in completion
Pre-Summit Research Day 2018	Strategic Infrastructure Planning	Cycling Safety	Assessment of the Benefits and Costs of Access and Mobility	ITF Outlook	Working Group on Private Investment in Transport Infrastructure
2018 Summit Sessions	Drones Standards and Acceptability	Zero Value of Time	Smart Cities & the Inclusiveness of Passenger Transport	Statistics	Working Group on Big Data and Open Data
Pre-Summit Research Day 2019	Travel Transitions and New Mobility Behaviour	Efficiency and Resilience in Multi-modal Supply Chains	Zero Growth in Urban Car Traffic	IRTAD Road Safety Data and Analysis Group	Working Group on Public Transport Concessions
2019 Summit Sessions		Regulation of App-based Ride and Bike Share Services	Attracting Investment to Reduce Transport-related Exclusion	ITRD Research Database	Working Group on Extending the Life of Road Assets
		Connectivity for Small Populations and Remote Communities	Actual Returns on Infrastructure Investment at a Network Level	GFEI, ITEA, TRB, EAC, WCTRS, KOTI, etc.	Roundtable on Social Impacts of Road Pricing
		Structural Change in Maritime Shipping and International Freight Flows	New Common Guidelines for Transport Project Appraisal		Workshop Smart Use of Roads

Working Groups and Roundtables

Investment

Appraisal

Regulation,
Competition

Safety,
Security

Sustainability

Globalisation

Innovation

WG Strategic Infrastructure Planning

RT Attracting Investment to the
Reduction of Transport-related
Exclusion

WG Drones
Standards and
Acceptability

RT Cycling
Safety

RT Zero Growth
in Urban Car
Traffic

RT Balancing
Efficiency &
Resilience in
the
Management
of Multi-modal
Supply Chains

WG Travel
Transitions and
New Mobility
Behaviour

RT Connectivity for Small Populations
and Remote Communities

RT Zero Value of
Time

RT Assessment of
the Benefits and
Costs of Access
and Mobility

RT Actual Returns
on Infrastructure
Investment at a
Network Level

RT New Common
Guidelines for
Transport Project
Appraisals

RT The Impact
of Structural
Change in
Maritime
Shipping on
International
Trade Flows

RT Regulation
of App-based
Ride and Bike
Share Services

RT Smart Cities
& the
Inclusiveness of
Passenger
Transport

Multimodal
Air
Maritime
Urban & cycling
Innovative transport

Working Groups

Travel Transitions and New Mobility Behaviour

New mobility services are developing rapidly, enabled by mobile communications, automated technologies and innovative business models. Consumer behaviour is also rapidly changing, and services based on the sharing economy are gaining popularity. These markets and the potential economic effects of such services are currently not thoroughly understood.

The working group will examine how mobility is changing for the young, the old, and for people living in urban environments. It will assess how mobility is influenced by social, economic and technological change. The group will analyse travel behaviour at the level of the household, exploring how dependence, support and shared resources can affect individuals' mobility. This should provide valuable insights into future trends in mobility and support development of appraisal and evaluation tools, including modelling of transport policies. Suitable indicators for monitor the impact of new mobility patterns will be explored and data sources identified. The work should provide valuable insights into formulating transport policies.

Strategic Infrastructure Planning and Accounting for Uncertainty in Relation to New Mobility Services, Automation and Decarbonisation

This working group will investigate what makes long-term strategic infrastructure planning so challenging, and how devising strategic plans can benefit transport policy in the ITF member countries. Successful economies need high quality infrastructure, which has long been understood as an essential enabler of sustained economic prosperity. However, in most countries, a coherent long-term strategy for national infrastructure planning is missing. Most often, infrastructure is planned at the sectoral level by responsible departments over a short-term horizon, and is informed on the basis of project-by-project cost-benefit analysis (CBA). Many of these projects are dictated by reaction to identified urgent needs or short-term political interests, rather than by long-term comprehensive strategies. As such, these assessments do not necessarily factor in cross-sector interdependencies and resilience, and miss opportunities for pursuing systemic resilience, multi-use assets, joint and passive provision.

Although some OECD countries have recently initiated work to develop more comprehensive strategies – for example by setting up specific institutions to deliver these strategies – efforts are at an early stage and there is no established approach or methodology that brings together the insights available from economics, engineering, regulatory policy, and other fields to develop an understanding of how infrastructure networks develop at a systemic level, and what options there might be on supply and demand management sides. There is also a question of how the existing methodologies, in particular cost-benefit analysis, can be complemented in order to create a useful basis for project selection.

A particular focus for the Working Group will be the issues of resilience and coping with increasing uncertainty in the transport sector in the face of new mobility services and automation. Against the background of transport policy agenda focused on automation and decarbonisation, the Working Group will investigate the need for resilience measures to be included in the planning system for infrastructure and services, and will discuss how they can be included in CBA.

Drone Standards and Acceptability

The working group will explore the existing concept designs for drones, their safe introduction into international airspace, their impacts on transport and international trade. Recent years have seen massive developments in drone technology, and drones have a potential to become a reliable technology for civil, commercial and leisure use. This poses both opportunities and risks for ITF Member countries. Although surveys have forecasted likely public support for the use of drones, their widespread introduction might need to be accompanied by some regulation to address privacy, safety and security concerns. Further work is needed to quantify these issues and explore how they are being managed by ITF Member countries. A collaborative approach is needed to avoid damage, especially from a negative public reaction to commercial drone use and a lack of trust in regulation, to the international market for drone technology. Government regulation of drones is either too restrictive (hampering the development of new designs), or lagging (causing reluctances among end-users). It is therefore important that governments are acquainted with the developments taking place in the international context of the industry. The working group will look at the use of drones to support other modes of transport through surveillance, inspection and remote sensing. It will consider the use of larger drones for both freight and passenger transport.

Roundtables

Cycling Safety

This roundtable will consider cycling safety in relation to the many positive benefits of increased cycling. This will include discussing the short term safety effects of crash avoidance versus the long term benefits of solutions that make cycling more attractive. Cycling attracts strong interest from stakeholders in the transport world as one of the most sustainable mobility solutions for short and medium-distance trips. Cycling takes up little space, is silent and clean, offers regular physical activity, is an affordable and rapid transport option, and requires relatively modest infrastructure investment. However, there is a growing concern among policymakers that getting people to cycle more carries a risk of more road traffic injuries and fatalities. In this context, it is important to identify and learn from international best practice in reducing the risk of serious and fatal casualties, and use the best evidence available to weigh decisions on promoting cycling. The roundtable will cover general perspectives concerning documentation and analyses of trends in cyclist crashes, risk and traffic volume. More specifically, the roundtable will discuss the importance of new technologies both in the form of infrastructure such as light segregation, and bicycle design such as e-bikes and bike share systems.

Zero Value of Time

This roundtable will discuss whether traditional thinking about how the value of travel time savings is determined and used continues to be valid. In this context, it will examine the corresponding modelling, appraisal and policy implications. In current transport appraisal practices, travel time is considered as wasted time, representing a disutility. Based on the view that unproductive travel time saved can be converted into productive use, business travel time savings is traditionally valued at labour costs. There are, however, increasing evidences that travellers often utilise the time spent travelling on various types

of activity. The scope and type of non-travel activities are likely to increase with modern technologies, including the use of self-driving vehicles in the future.

Zero Growth in Urban Car Traffic

This roundtable will examine strategies to address two of the main challenges to inclusive transport: reforming transport and land-use policy, and removing biases that favour automobile travel over more affordable modes. This will include: a) zoning codes (especially those with minimum parking requirements, which increase difficulties for developing affordable housing in infill developments); b) frameworks for evaluation and funding allocation (which are based on traffic indicators and thus systematically favour road expansion); c) public accounts (which treat public transport subsidies as explicit, while the current automobile subsidies are virtually invisible).

One strategy to reduce CO₂ emissions is to reduce urban car traffic. In the long run, and given a low carbon technological development, this is not as much a CO₂ emissions reduction strategy as an urban attractiveness strategy. Many urban areas consider policies on “car free cities”, as well as promote walking, cycling and public transport, where the latter may face severe cost challenges in the future. The Roundtable will examine the international experience in pursuing different plans and strategies, and will identify best practice in developing effective regulation.

Greener transport is often synonymous with improved technology and modal shift to achieve an increase in mobility. Alternatively, it could be based on a decrease in transport volumes, where not all transport demand might be fulfilled. Is it possible to decrease mobility volume without impairing economic activity? The Roundtable will explore different strategies: acting on localisation and urban shape; acting on the duration and number of trips; acting on optimisation of vehicles and infrastructure use; acting on behaviour instead of technology, using regulation tools; and acting with decision making tools.

Balancing Efficiency and Resilience in Management of Multi-modal Supply Chains

This roundtable will examine organisational best practice and technological innovation to improve the competitiveness and resilience of multi-modal supply chains. Supply chain efficiency and shippers’ ability to pay needs to be balanced with the sustainability requirements of society, the “social licence” to operate, and the firm’s own corporate social responsibility commitments. Innovation in technology and logistical improvements influence the efficiency and resilience of supply chains. Increasingly, the risks associated with climate change, natural disasters, cyber-crime and labour disputes need to be assessed, audited and mitigated. In order to mitigate risks, certain measures can be put in place ahead of time to accelerate recovery times. Collaboration between stakeholders is the key to recovery from disruption. Innovative ways to operate supply chains, through crowd-shipping, gain-sharing, logistics alliances and the sharing economy may also have the potential to make supply chains more resilient. The roundtable will explore the trade-off between supply chain resilience and efficiency, and investigated approaches to sustainability in supply chain management, innovation and technological development, collaboration and alliances and risk mitigation.

Innovative Business Models for Mobility: Regulation of App-based Ride and Bike Share Services

This Roundtable will to identify appropriate regulatory frameworks for app-based mobility services. The growing prevalence of smart phones provides access to an increasing number of mobility services exploiting real-time information that are tailored to user needs through customised apps. The ride-hailing, car-, bike- and scooter-sharing services have a great impact both on the traditional taxi market and on the informal transport market in less developed regions. App-based ride and bike sharing services also promise to complement existing public transport networks and, in some cases, are being provided by incumbent operators.

At the same time, taxis and public transport have historically been heavily regulated, and the rapidly evolving business models of new mobility services pose challenges for regulators. While these services have been welcomed and facilitated in some countries and cities, there have been clashes with regulators and with incumbent operators. The Roundtable will examine the rationale for economic regulation of these services in light of market imperfections in their delivery, and in public transport markets more generally. It will also look at existing regulatory barriers to deployment of shared ride services that might complement or substitute conventional public transport services with improvements in service for users and cost savings for public authorities.

Methods to Improve Assessment of the Benefits and Costs of Access and Mobility

This Roundtable will focus on understanding the role of accessibility in transport planning, modelling and appraisal. It builds on the 2016 ITF Roundtable on the “Economic benefits of improved accessibility to transport systems” and the 2017 ITF/EC Workshop on “Improving transport planning and investment through the use of accessibility indices”. The Roundtable will specifically explore the need for, and methodology for monetising accessibility benefits as well as the approaches to incorporate the wider social impacts of accessibility in transport appraisal.

A Framework for Better Understanding the Actual Returns on Transport Infrastructure Investment at a Network Level

This Roundtable will aim to develop a framework for better understanding the actual economic, social and environmental returns from transport infrastructure investment at a network level. Methods of estimating the expected returns on transport infrastructure investment have improved (e.g. to estimate various wider economic impacts), but further research will help to understand the actual returns from such investments. The Roundtable expands the work of the 2014 ITF Roundtable on “Ex-Post Assessment of Transport Investments and Policy Interventions”. It will map out the approaches and methods that could be used to make such assessments. It will also identify data requirements and methodological limitations. The Roundtable will also discuss whether such methods could be best applied at a project or programme level.

Attracting Investment to Reduce Transport-related Exclusion

This Roundtable will explore effective ways of attracting investment to advancing the inclusive transport agenda. Among the most promising strategies that merit further examination are: a) improving and complementing cost-benefit analysis (CBA) to ensure that social inclusion benefits are included in the assessment process; b) accurately calculating and adding co-benefits in other areas (for instance, environmental and financial benefits) in order to strengthen the case; and c) examining the strategies for shifting financial and institutional resources from silo-structured to multi-sectorial programmes and projects.

Assessing the Potential Impact of Smart Cities on the Inclusiveness of Passenger Transport

This Roundtable will assess how existing and future innovations might improve access to the transport network at a local level, and what regulatory framework might be required to achieve that. The findings will be of relevance to all cities that integrate the latest technological developments such as self-driving vehicles, connected vehicles, smart sensors, etc. to improve access to transportation for disadvantaged populations, including those who face financial or physical barriers to access.

New Common Guidelines for Transport Project Appraisal

This Roundtable will seek to update the common guidelines for cost-benefit analysis in the transport sector presented by the European Commission in 2006 under its HEATCO project. It will also aim to extend the geographic relevance of HEATCO guideline, which have influenced the practice of assessment in a number of European Union member states. The roundtable will specifically examine evaluation frameworks for transport projects across countries, with a particular focus on measurement techniques used to account for a full range of direct and indirect impacts.

The Impact of Structural Change in Maritime Shipping on International Freight Flows

This roundtable will identify an analytical framework that could be used by countries to evaluate national and regional impacts of Structural Change in Maritime Shipping on their transport systems. Significant investments in infrastructure, like the widening of the Panama and Suez Canals, and the availability of a northern trading route in the Arctic, are expected to profoundly affect international freight flows. Coupled with structural change in container shipping, there could be major changes in trade routes.

Connectivity for Small Populations and Remote Communities

This roundtable will examine how to adequately connect small, remote communities to the transport system. It will discuss the effects of transport service quality on the viability and long-term sustainability of remote communities. Transport services needed for economic development, social integration and delivery of health services will be examined in particular. The roundtable will also review the instruments available to policymakers to enhance access to economic centres for these communities.