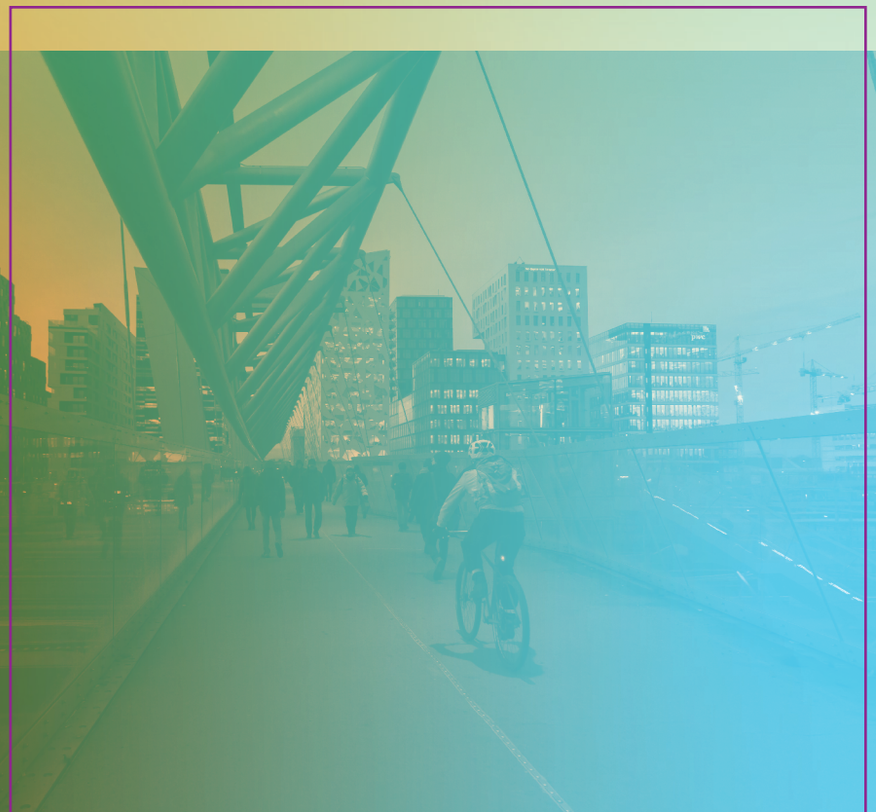
Who are we?

The Institute of Transport Economics



The Institute of Transport Economics (TOI) is a national institution for transport research and development.

The main objectives of the Institute are to carry out applied research on transport related issues and to promote the application of research results by advising the authorities, the transport industry and the public at large.

The Institute is an independent, non-profit research foundation, and holds no interests in any commercial, manufacturing or supplying organizations.

Special emphasis is placed on the practical application of research results, and most of the studies and projects carried out here are commissioned. Nationally, the majority of clients are central government bodies and local authorities. Some commissions come from the private sector. The Institute also participate in international research partnerships within the transport sector.

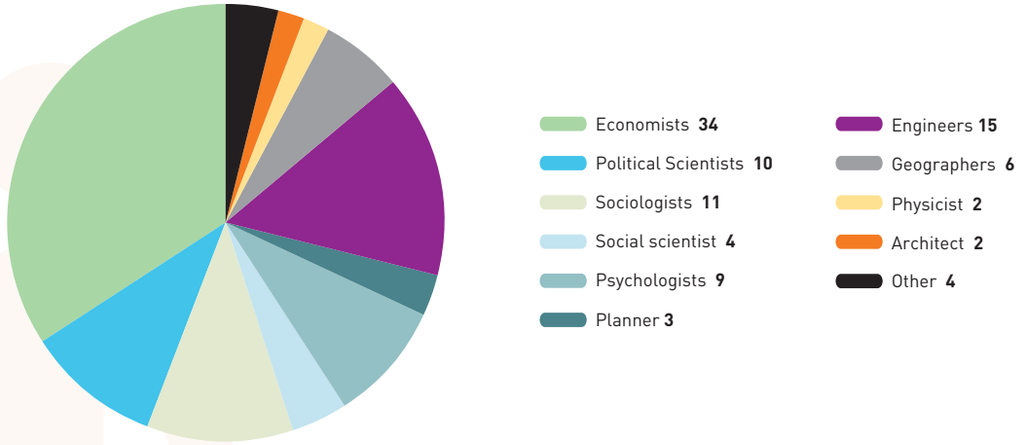
Staff and projects

TØI is a multidisciplinary research institute with approximately 110 employees, of which about 100 are researchers. In general, the Institute has over 200 active research projects in progress at any time, most of which are commission-based.

The research activity spans from current issues related to road, rail, sea and air transport, as well as urban mobility, environmental sustainability and road safety.

In recent years the Institute has been engaged in more than 70 research projects under EU´s Research Framework Programmes.

Research Staff



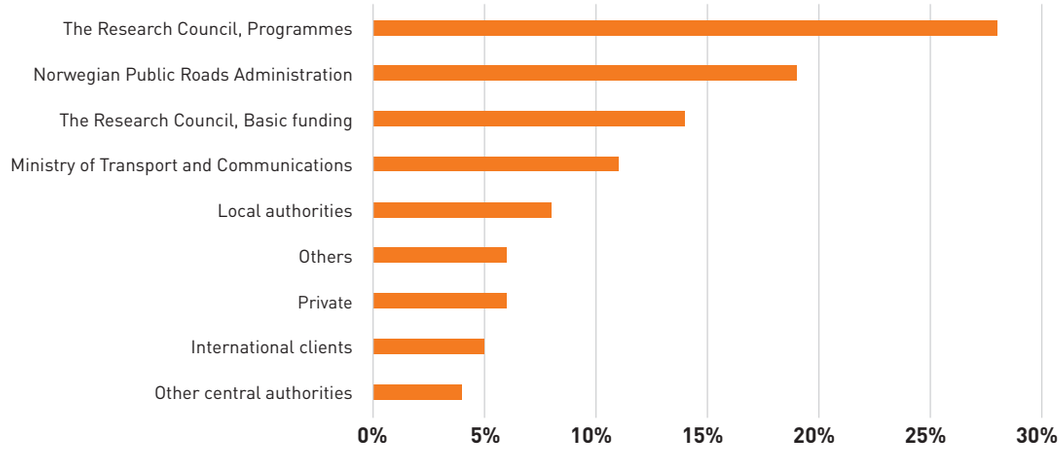
Core values

- *Independence:* Conclusions derive from the analysis, not from the vested interests of clients or stakeholders
- *Transparency:* Methods, assumptions and results are accounted for and made public
- *Teamwork:* Co-workers share their knowledge, competence and data, in order to efficiently use the Institute's material and human resources

Funding

The turnover in 2018 was approximately NOK 146 millions. About 40 per cent stems from the Research Council of Norway (basic funding and competitive projects). The Norwegian Public Roads Administration is the Institute's second major client. International clients represent 5 per cent of the funding.

Funding (projects in 2018, per cent)



Dissemination and communication

Over the last few years, researchers at the Institute have authored or co-authored about 60 articles per year in peer reviewed scientific journals or books. The Institute also issues about 60-80 research reports each year. Some are in English, and most of those published in Norwegian have brief English summaries, available www.toi.no. The Institute publishes the online magazine "Samferdsel".

The English language magazine "Nordic Road & Transport Research" at www.vti.se/nordic summarizes transport research results from the Nordic countries, and is published in cooperation between the major transport research institutes of the respective countries. It is distributed free of charge.

TØI management and staff are frequent contributors at national and international research conferences, and hold about 250 presentations yearly for research communities and the general public.

ECTRI

The Institute of Transport Economics is among the founding members of the European Conference of Transport Research Institutes (ECTRI). ECTRI aims to promote research contributing to a safe, efficient, and cost effective intermodal transport system in Europe.

Read more at www.ectri.org

SAFER

TØI is also a member of The Vehicle and Traffic Safety Centre (SAFER) at Chalmers in Göteborg, Sweden. This is joint research unit where academy, industry and authorities cooperate in the design of future vehicle- and road safety systems.

Organisational and editorial work

The Institute is represented in several international transport organisations and expert committees. About 20 percent of the researchers are editors, co-editors or members of the editorial board of various international professional journals.

Management

Gunnar Lindberg

Managing Director CEO

Kjell Werner Johansen

Department of Economics

Silvia Olsen

Department of Mobility

Trine Dale

Department of Safety and Security

Jardar Andersen

Department of Technology

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Finance and Administration

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Communication

tøi

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- **INTELLIGENT TRANSPORT SYSTEMS**
- **TRANSPORT TECHNOLOGY AND ENVIRONMENT**
  Erik Figenbaum

FINANCE AND ADMINISTRATION
Gro Østlie

COMMUNICATION
Harald Aas

MAGAZINE: TRANSPORT AND COMMUNICATION
Flemming Dahl

Research areas

Economic Models

Chief research officer
Askill Harkjerr Halse

Economics is applied when studying a great variety of topics within the transport sector. The Economic Models research area focuses on how economic theory and methods can explain decisions we make and implications for economic policy in the transportation sector.

One key topic is identifying the factors that travelers and businesses take into account when choosing transport alternatives. Also measuring the economic benefits from improvements in the transport system, for example transport time savings and increased travel comfort.

We also study the financial burdens that comes from emissions and congestions as well as other costs that transport users impose on others and how these can be mitigated through pricing and fees.

Finally, other key topics are car ownership, productivity analysis and air travel.

Norway has a strong tradition for applying economic analysis to evaluate large public investment projects. TOI contributes to this by developing methods for analysis, actively conducting analyses, and assessing the quality of other studies.

In cooperation with Dovre Group AS, TOI established a framework agreement with the Ministry of Finance covering quality assurance studies of the choice of concept (KS1) in large government investments.

Transport Models

Chief research officer
Anne Madslien

Use of transport models is an important element in all transport planning and central in calculating the effects of various measures. The Transport model group covers theoretical and practical development of new and existing transport models for passenger and freight transport, and the use of the models in specific analyzes.

The group contributes to the improvement of the transport authorities' model system, consisting of The National Passenger Transport Model (NTM6), The Regional Passenger Model (RTM) and The National Freight Transport Model.

Industry and Freight

Chief research officer
Inger Beate Hovi

Norwegian businesses and industry are dependent on good infrastructure and efficient freight transport. The Industry and freight research area includes studies of commodity flows, future freight flows, wider economic impacts from infrastructure investments, logistics costs, competition between different modes of transport, environmental and climate impacts on implementation of new vehicle technology and localization of terminals and surrounding analysis. Other important topics include efficiency analysis of various elements in transport chains, international logistics and business models.

Our studies are useful for shippers, transport operators and authorities.

Quantitative analyses for the four transport agencies and the Ministry of Transport and communication connected to the work with the National Transport Plan is an important part of the team's work. Close cooperation with Statistics Norway gives us access to basic data from a substantial number of surveys.

Travel Behavior

Chief research officer
Susanne Nordbakke

The Travel behavior research focuses on social conditions for travel activity and mobility, developing theories and improving methods for collecting data on travel behavior.

All kinds of transport modes and travel purposes are covered, whether private or work and business related. We also study the interplay between transport and ICT (Information and Communication Technology), the social drivers for travel activity, and the perceptual aspects of work journeys and in everyday life.

Regional Development and Tourism

Chief research officer
Frants Gundersen

The Regional Development and Tourism research area includes studies of regional and urban development on local, regional, national and transnational levels as well as industry analysis on tourism and studies of tourism experiences.

Regional development studies focus on industry analyses and innovation, with emphasis on the role of city-regions in regional development. It includes analyses of accessibility and mobility focusing on regional integration and interaction, impacts of transport policy and investments in infrastructure, communication and transport systems, which are important for a competitive and sustainable regional and industrial development.

Tourism has been a key topic at the Institute since the end of the 1960s and it includes economic impact analyses, tourism development studies and trend investigations, nature-based tourism and green tourism.

Sustainable Urban Development and Mobility

Chief research officer
Aud Tennøy

The Sustainable Urban Development and Mobility group look into how cities and urban transport systems are developed, including the objectives of zero-growth in traffic in urban areas, more climate-friendly, attractive and livable cities and a more universally designed society.

The group`s research provide planners and decision-makers with data that are helpful in ensuring that their objectives are being met. We also investigate the consequences of urban development and expanding urban transport systems (road, public transport, bicycling, walking), and seek the best means to achieve set objectives.

Furthermore, we research planning- and decision-making processes, relevant institutions and organizations, and governmental policy instruments. We look at whether and to what extent planners apply research in the processes of urban development planning, decision-making, and goal-achievement.

Markets and Governance

Chief research officer
Nils Fearnley

Market mechanisms are increasingly applied to all parts of the passenger transport system, transport services, as well as infrastructure development and maintenance.

Significant structural changes are taking place, both in terms of political reforms and the creation of urban environmental agreements, as well as expansion of delegating responsibilities to regional/ county levels.

New technology impacts both markets, travel behavior and the need for regulation.

The research area Markets and Governance seeks to meet these new challenges, including state-of the-art knowledge, optimal design of reforms and regulations as well as studies on the effects of these changes.

Different objectives in passenger transport must be met with appropriate means. Knowledge on passengers' preferences and how they react to different characteristics of travel options is a key prerequisite for designing appropriate measures. This also applies to knowledge on how actors adapt to different competition regimes and conditions of competition.

Logistics and Innovation

Chief research officer
Sidsel Jensen

Freight transport and logistics account for 20-30 % of transport-related emissions from urban areas, and the efficiency of operations suffer from congestion and lack of space. There is a need for developing and replicating logistics solutions for increased efficiency and reduced emissions as well as to better plan and organize city logistics. The Logistics and Innovation group contributes to development and communication of research-based knowledge forming the basis for better planning of logistics and more efficient operations.

We also support development, testing and implementation of new technologies through research and demonstration projects, both related to industries and government, nationally and internationally.

Transport Technology and Environment

Chief research officer
Erik Figenbaum

The Transport Technology and Environment research area studies how low and zero emission technologies can be applied to the transport sector. In addition, the group analyzes how these technologies can be utilized in order to reduce energy consumption, greenhouse gas emissions, and other environmental impacts from the transport sector. The group investigate the characteristics of technology and how these characteristics are being used, and locate potential barriers and opportunities, as well as accelerating and limiting factors.

Furthermore, the group studies political incentives and decisions seeking to introduce new technologies, and how they are met by consumers and businesses. For example, electric cars and electrical operations of buses, heavy vehicles and ships, and hybrid cars and hydrogen solutions. The TTE research area analyzes other innovative transport-related technologies, such as autonomous cars, and their impact on the environment. Also, examination of air and noise pollution coming from light and heavy vehicles. This includes conducting surveys of health and environmental burdens from exhaust gases, and looking at how to reduce the negative results through improved cleaning technology.

Road Safety

Chief research officer
Alena Høye

Road Safety research covers road safety evaluations, meta-analysis, crash prediction models, driver behavior models, as well as evaluations of road safety policy including cost-benefit analysis of road safety measures.

An important activity is the continuous updating of the Handbook of Road Safety Measures, which describes effects of more than 140 road safety measures, mainly based on meta-analysis.

Road safety evaluations are being conducted for all kinds of measures.

Crash prediction models are important especially in before/after studies and evaluations of road measures. Driver behavior models are essential, especially in evaluations of driver and vehicle related measures.

Evaluations of road safety policy are being conducted with the help of cost-benefit analyses, as well as risk calculations and scenarios for future trends in road safety.

Transport and Behavior

Chief research officer
Torkel Bjørnskau

The Behavior and Transport area covers behavior and safety related to city traffic as well as the interaction between pedestrians, cyclists, motorists and public transport. In addition, we focus on traditional behavioral issues in road safety research, like speed, errors and violations, distraction, and driver fatigue.

A special emphasis is placed on pedestrians and bicycles which are vulnerable in the traffic infrastructure.

Political goals emphasize that traffic growth in urban areas must be achieved through these means of transport. At the same time, pedestrians and cyclists are more at risk than motorists. Consequently: How do we get more people to walk and bicycle without increasing accidents?

Systems and Culture

Chief research officer
Ross Phillips

Our transport systems and transport organizations are becoming increasingly fragmented, integrated, international, and complex. Safety and security are increasingly viewed as properties emerging from interactions among the many social and technical components of transport systems.

Modern management of transport safety and security demands a system approach to help us understand these interactions.

The System and Culture group researches the models, measures and tools needed to understand and manage safety and security in today's complex transport systems.

Through the joint development of a system's people, culture, goals, procedures, infrastructure, and technology, we aim to learn how to improve the management of safety, health, security, productivity, and related outcomes – within and among organizations of all sizes and in all transport sectors.

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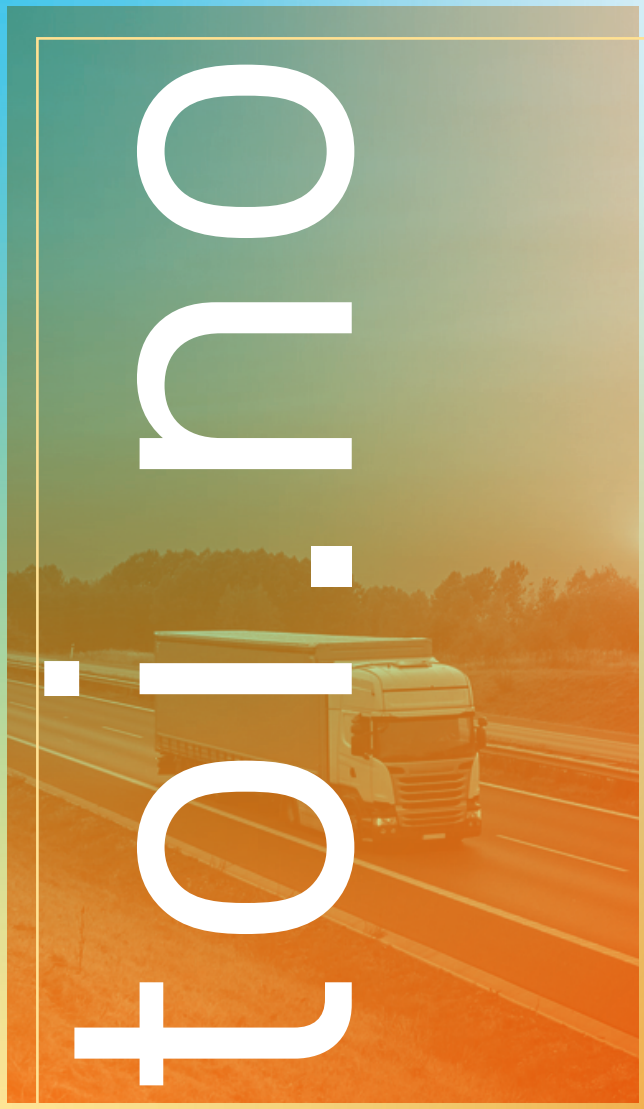

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For more information about research areas, research staff, contact information, new reports, and report summaries go to www.toi.no

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