Institute of Transport and Logistics Studies

Research and innovation in infrastructure, transport, logistics and supply chain management

The Institute of Transport and Logistics Studies (ITLS) at the University of Sydney Business School is a leading international research centre in the crucially linked areas of infrastructure, transport, logistics and supply chain management.

Established in 1991, our goal is simple: to contribute to the design, management, and optimisation of infrastructure, transport, logistics and supply chain initiatives around the world. Efficient and effective transport, logistics, and supply chains are important for the entire economy and for the well-being of the community. As such, our research contributes to building a stronger and healthier society in Australia and globally. We are recognised by the federal government as an Australian Key Centre of Transport Management and hold the premier research rating of ‘well above world standard’ (Excellence in Research for Australia (5)).

ITLS undertakes fundamental and applied research across all modes of transport and all parts of the supply chain. In passenger transport we consider all modes, from active modes, including bicycles, to travelling by air. In freight transport and logistics, we conduct research regarding ships, trains, and city logistics with truck movements. Considering such transport and logistics problems in an integrated fashion is crucial in optimising the entire supply chain. An increasingly relevant research topic is critical and reliable infrastructure with linkages to impacts on supply chains.

Research and consultancy services

ITLS provides high quality research and consultancy services to government, operators and private investors in the transport and logistics industries. We deliver independent analysis and advice that informs infrastructure and transport project appraisal and policy decision making. Our research facilitates the decision-making of stakeholders in land, sea and air value chains including operators, regulators, service providers and communities affected by these activities. Our leadership in integrated supply chain research enables the development of efficient, sustainable and resilient value chains for any industry sector.

We offer a series of user-friendly standard agreements which facilitate government and industry access to ITLS’ broad range of expertise, as outlined overleaf. These simply and clearly set out processes, products, deadlines and costs in a risk managed and reliable fashion for our clients. The agreements incorporate the University of Sydney’s preferred terms and conditions, and are designed to expedite the process of negotiating agreements with our commercial partners.
Our expertise

Transport and infrastructure management

We investigate how transport policies / investments in infrastructure and public transport services influence travel behaviour and traffic, and how changes are valued by communities. All types of infrastructure and all modes of transport are considered in passenger and freight contexts. We operate a unique travel choice simulation laboratory with five connected driving simulators. The laboratory is utilised for diverse research from route choice studies that include road pricing and travel time reliability, to responses to traffic management and travel information.

Key capabilities:
- Appraisal and wider economic impacts
- Discrete choice methods and analysis
- Infrastructure management and mega-projects
- Stated and revealed preference surveys
- Transport policy and institutional reform
- Transport planning and traffic management

Aviation management

Our research in aviation aims to facilitate the decision-making process and improve the profitability of the various stakeholders in the aviation value chain. While most of our research areas focus around corporate and government organisations, we also study consumer needs, best practices and innovations in business, leisure, regional and freight air transport.

Key capabilities:
- Airline and airport management
- Air cargo, logistics, supply chain management
- Benchmarking, productivity and cost analysis
- Forecasting, regulation and competition strategy
- Economic impacts of aviation
- Strategic alliances and merger analysis

Ports and maritime logistics

Our research in ports and maritime logistics includes areas such as maritime network vulnerability, interdependency with respect to communication and fuel supply networks, failure dynamics, resilience and robust intervention strategies in the face of weather, industrial or other disruptions. We have a particular focus on berth allocation and the location of intermodal terminals in relation to the port and road and rail networks.

Key capabilities:
- Container terminal automation and efficiency
- Contractual relationships in LNG supply chains
- Empty container repositioning
- Stability of alliances in container shipping
- Vulnerability of global oil supply chains

Supply chain management

Our innovative supply chain research is delivered through integrated expertise in management science, operations management, industrial engineering and international business. We are a partner in the Australian government’s Centre for Food and Beverage Supply Chain Optimisation.

Key capabilities:
- Green supply chains
- Last mile delivery
- Procurement and strategic sourcing
- Production planning and control
- Supply chain risk management
- Warehousing and distribution

For more information

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