



# SUSTAINABLE TRANSPORT

## ABOUT ISF

The Institute for Sustainable Futures (ISF) is a research and consulting organisation at the University of Technology, Sydney. We work with industry, government and the community to help create sustainable futures through research, consultancy and training.

Our excellent and fast growing reputation across Australia and internationally is for innovative, solution-focused interdisciplinary consultancy projects. The key to our approach is integration and alignment across strategic, tactical and operational activities.

We work in a number of different research areas using a variety of approaches. This capability statement outlines our expertise in the field of sustainable transport. Capability statements for the other areas we work in are available from our website.

## OUR SUSTAINABLE TRANSPORT WORK

Transport systems are vital to sustaining economic and social interaction. The type of access they provide sets operating costs for businesses and residential precincts, shapes the size of markets and labour catchments, determines the degree of opportunity for the young, the elderly and people with special needs, can transform local neighbourhood amenity and impacts on environmental integrity.

On all these fronts, the transport systems we build today will have an indelible effect on the sustainability prospects of our cities and regions over the longer-term.

Where conventional transport strategies and consultancies focus on mobility — increasing movement — ISF's work recognises improvements to accessibility as the key goal of sustainable transport systems.

Our accessibility-based approach seeks to enhance exchange opportunities. This can be achieved through greater active and public transport network development, land-use changes, greater use of internet-based communications and changes to workplace practices and management procedures.

The competitive advantage of access-based solutions includes lower energy use that translates into reduced operating costs, lower greenhouse gas emissions and fewer environmental impacts.



## WHAT WE OFFER

The Institute offers research and analysis services on the economic, social and environmental costs and benefits of transport systems, and provides advice on the development and implementation of sustainable transport solutions.

Our commitment to interdisciplinary research enables us to engage with the operational aspects of transport as well as social and governance factors that affect communities and our clients.

ISF's academic commitment to teaching and learning, in addition to research consultancy, puts it in a unique position to pass on skills to clients, thereby assisting with capacity building in the growing field of sustainability.

## AREAS OF WORK

### Urban and Regional Transport Futures

- > spatial planning for sustainable communities
- > sustainable transport transition strategies
- > alternative transport technologies
- > carbon emission and oil vulnerability assessment
- > workplace travel plans (WTPs)
- > active transport planning strategies

### Post-Implementation Analysis of Transport Projects

- > triple bottom line impact assessment
- > before and after network analysis
- > relative accessibility across modes

### Governance and Community Engagement Processes

- > Citizen Juries
- > enquiry by design
- > alliancing frameworks for project delivery

## RECENT SUCCESSES

The Institute has undertaken projects for government departments and agencies, as well as transport-related businesses. Highlights are listed here. Details of other projects can be found on our website.

### **Active Transport for Childcare Centres – Southern Sydney Regional Organisation of Councils**

This report examines the current highly car-dependent travel behaviour of parents taking their children to and from childcare centres. It identifies barriers to using active transport — walking and cycling — and was used to develop interventions to increase active transport rates in the Southern Sydney region.

### **Greener Transport Guide – NSW Department of Environment and Climate Change and UBD**

This 16 page guide informs UBD readers on ways to reduce the environmental impact and cost of their travel needs. It provides concise information on climate change and peak oil and contains practical advice on travel alternatives, fleet management plans and road freight.

### **Induced Traffic Growth Study on Sydney's M4 and M5 motorways – NSW Government**

This analysis compares the before and after conditions arising from additions to Sydney's M4 and M5 motorways. It quantifies and distinguishes traffic reassignment from mode-shifting and induced road vehicle trips .

### **Moving On: Public Transport Blueprint for Sydney – Rail, Tram and Bus Union (NSW)**

A literature review, desktop research and interviews with transport experts that generated a ten-point plan for a sustainable transport future for Sydney. The plan was used to press for better public transport policy outcomes .

### **Intersection Interactions: bicycle and pedestrian behaviour study (Roads and Traffic Authority & City of Sydney)**

This project analysed the behaviour of cyclists within the City of Sydney cycleway network to gain better insights into how cyclists use the dedicated cycling signalling technology. The Institute analysed video footage of cyclist stopping locations and reactions to unsuccessful triggering of the green bike signal and

found a lack of knowledge on how to use the dedicated infrastructure.

### **Easy Travel Strategies (Translink)**

Contracted by TransLink to develop a framework for the prioritisation of diverse projects in the transport sector, the Institute developed a model based on an Integrated Resource Planning (IRP) methodology and used this to compare diverse types of projects to determine the most cost-effective method of increasing patronage on the TransLink network. The Institute also developed and trialed a methodology for evaluating the patronage generating impacts of public transport marketing programs.

### **Scenario planning and backcasting about future transport in Australia (National Transport Commission)**

The National Transport Commission engaged the Institute to analyse the key emerging issues for the Australian transport sector and how these can best be addressed to generate positive change in the long term. The Institute analysed key variables which informed a stakeholder workshop to develop a vision for how Australian cities and their transport systems should operate. This vision was the basis of backcasting to map possible pathways to this future vision, and quantitative modeling was used to understand the impact of individual variables on the progress to this.

### **Canada Bay transport planning scoping study (City of Canada Bay Council)**

The Institute developed a Travel and Access Guide for new residents of the urban renewal site at Rhodes West, providing information and guidance on the use of sustainable travel modes on the peninsula. It also undertook a preliminary travel plan that assessed current travel on the peninsula and an analysis of existing governance frameworks.

### **Bus driver / cyclist interaction study**

Sponsored by a City of Sydney Environmental Grant the Institute conducted surveys aiming to develop recommendations for cyclists and bus drivers to interact more confidently and safely with each other. Importantly, the respective surveys asked for examples of exemplary cyclist and bus driver behaviour as a basis for an appreciative communication and education strategy.



## OUR SUSTAINABLE TRANSPORT TEAM



### **Stuart White**

As Director of the Institute with over twenty years experience in sustainability research, Professor White's work focuses on achieving sustainability outcomes at least cost for a range of government, industry and community clients across Australia and internationally. He has led several projects that present a vision for Sydney's transport future and has developed options for a decision-making model for transport.

### **Michelle Zeibots**

Dr Michelle Zeibots is a transport planner and Research Principal at ISF with more than 15 years experience in the strategic development of urban passenger transport systems. Her work draws together operational, behavioral and administrative aspects of urban transport networks. Her most recent projects include a post-implementation assessment of the Roe 7 highway for Main Roads Western Australia and Stirling City Centre Redevelopment for the WA Department for Planning and Infrastructure.

### **Associate Professor Garry Glazebrook**

Assoc. Prof is an expert on Sydney's urban transport, sustainable urban transport systems and urban development, with nearly 35 years' experience in consulting, in government policy positions and academia. He has published widely in the fields of transport and planning, most recently a 30 year public transport plan for Sydney. He was a member of the Herald Public Inquiry into Public Transport for Sydney.



### **Chris Riedy**

Dr Chris Riedy is a Research Director at ISF with extensive experience as a researcher, consultant and author on sustainability policy. Chris' work is concerned with energy policy, climate change response and the social and cultural dimensions of sustainability. He has written and presented on diverse issues, including sustainability science, energy and transport futures, public participation, social justice and the ethics of climate change response. He is a regular commentator on energy and greenhouse policy and the President of the Climate Action Network Australia.

### **Kerryn Wilmot**

Kerryn Wilmot is a Research Principal in Cities and Buildings. An architect with 30 years experience in industry, she has specialised in sustainable buildings leading to work in sustainable built environments more generally. An advocate for public transport, she understands the significant part that transport plays in creating liveable cities.

### **Tim Brennan**

Tim Brennan is a research consultant on a range of transport and social research projects. His work has included analysis of cyclist behaviour, developing tools for public transport decision making, developing methodologies for assessing public transport marketing, travel planning for development precincts and stakeholder research into the long term future of passenger transport in Australia.



### **Dr Peter Rickwood**

Peter Rickwood has a strong background in quantitative modelling and simulation, scientific programming/computing, and software engineering. His modelling work at ISF includes urban systems and land-use/transport interaction, and he has worked on a variety of sustainable transport projects, ranging from Urban Transport Futures (for the National Transport Commission) to new methods for modelling pedestrian movements.

### **Dr Christiane Baumann**

Christiane Baumann is a Research Consultant in the ISF transport team and has worked on a range of transport consultancy projects including projects for improving cycling infrastructures and promoting cycling as a sustainable mode of transport. She has a background in the automotive industry in Germany and joined ISF as a doctoral researcher in 2009. Her research focusses on strategies to achieve a better integration of environmental, social and economic considerations in transport policy development.

### **Additional Expert Advisors**

**Prof John Whitelegg** – Internationally renowned transport engineer and workplace travel plan expert, he developed the world's first national standard for WTPs, commissioned by the British Standards Institute. Public Transport for Sydney.

**Chris Dunstan** – Research Principal specialising in removing regulatory and market barriers to the development of sustainable energy and encouraging the integration of electric vehicles into the electrical system.



## BENEFITS OF WORKING WITH ISF

### Track record:

We have been conducting project based research for Australian and international clients for a decade and have an excellent reputation for innovative solutions-focused work.

### Grounded in theory and best practice:

Our researchers are not only up to date with best practice and current thinking — they contribute to it. Their research is published regularly in academic journals as well as industry and scientific publications and the popular media.

### Practical & diverse experience:

Our researchers come from varied backgrounds, including: engineering architecture, management, economics, science, social sciences, international studies and political studies. Most have worked in both government and commercial environments, so we know how to deliver independent and feasible solutions to suit the needs of a diverse range of clients. We are small enough to offer our clients personalised service and large enough to offer a diversity of research skills.

### Collaborative approach:

We seek to create change towards a sustainable futures by building capacity in organisations and individuals, and in the community more broadly. This means that we actively aim to pass on our knowledge and skills to our clients through close collaboration.

## WAYS WE CAN HELP

### Consulting and research services:

We can provide the research you need to move towards sustainable futures. We provide consulting services under both negotiated and tendered contracts.

### Professional advice:

You may need assistance with preliminary work before embarking on a larger project or an external review of an existing program. Our professional advice is available either for an hourly rate or on a package basis.

### Partnerships:

Whilst we have many ongoing partnerships across a range of technical fields and can coordinate a specialist team to meet your requirements, our researchers are also available to join new or existing partnerships as needed.

### Guest speakers:

We are experienced in communicating complex issues in an accessible and engaging way. Our researchers are often invited to speak at conferences, forums, workshops and seminars. We are also frequently called upon by print, radio and television journalists for expert opinion.

### Professional skills development:

ISF's Sustainable Transport team is delivering a series of short (2 day) professional development courses in 2012 on transit network design; travel planning; and integrating transport and land use. In addition, it is providing opportunities for increasing collaboration between professionals in transport planning, urban design and related fields through a series of practitioner forums.

## PUBLICATIONS

We are committed to sharing the results of our work in the interests of a more sustainable future for all. Many of our reports, discussion papers, journal articles and conference papers can be downloaded from our website.

## CONTACT US

Institute for Sustainable Futures  
University of Technology, Sydney  
PO Box 123 Broadway NSW 2007  
T : +61 2 9514 4950  
F : +61 2 9514 4941  
E : [isf@uts.edu.au](mailto:isf@uts.edu.au)  
W : [www.isf.uts.edu.au](http://www.isf.uts.edu.au)