LAND USE AND TRANSPORT
Related Emerald Books

*Integrated Land-use and Transportation Models*
Martin Lee-Gosselin and Sean Doherty

*Urban Transport and the Environment: An International Perspective*
World Conference on Transport Research Society (Lyon, France) and the Institute for Transport Policy Studies (Tokyo, Japan)

Eichi Taniguchi and R. G. Thompson

*Handbook of Transport Strategy, Policy & Institutions* (Handbooks in Transport 6)
Kenneth J. Button and David A. Hensher

*Handbook of Transport Geography and Spatial Systems* (Handbooks in Transport 5)
David A. Hensher, Kenneth J. Button, Kingsley E. Haynes, and Peter Stopher
LAND USE AND TRANSPORT

European Research Towards Integrated Policies

Edited by

STEPHEN MARSHALL
Bartlett School of Planning,
University College London,
London, UK

DAVID BANISTER
Transport Studies Unit,
Oxford University Centre for the Environment,
Oxford, UK

United Kingdom – North America – Japan –
India – Malaysia – China
### Contributors

<table>
<thead>
<tr>
<th>Name</th>
<th>Institution and Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>DAVID BANISTER</td>
<td>Transport Studies Unit, Oxford University Centre for the Environment, Oxford, OX1 3QY</td>
</tr>
<tr>
<td>DAVID BLACKLEDGE</td>
<td>Transport and Travel Research Ltd (TTR), Minster House, Minster Pool Walk, Lichfield, Staffordshire, WS13 6QT, UK</td>
</tr>
<tr>
<td>HUGUES DUCHÂTEAU</td>
<td>STRATEC s.a. Avenue A. Lacomblé, 69–71 B-1030 Brussels, Belgium</td>
</tr>
<tr>
<td>JUDITH DE GROOT</td>
<td>University of Groningen, Experimental and Work Psychology, Grote Kruisstraat 2/1, 9712 TS Groningen, The Netherlands</td>
</tr>
<tr>
<td>SONJA FORWARD</td>
<td>Swedish Road and Transport Research Institute, 581 95 Linköping, Sweden</td>
</tr>
<tr>
<td>PHILINE GAFFRON</td>
<td>Hamburg University of Technology, AB 1-10 Transportation and Logistics, Schwarzenbergstr. 95, 21071 Hamburg, Germany</td>
</tr>
<tr>
<td>SYLVIE GAYDA</td>
<td>STRATEC s.a. Avenue Adolphe Lacomblé, 69–71 B-1030 Brussels, Belgium</td>
</tr>
<tr>
<td>ANN JOPSON</td>
<td>Institute for Transport Studies, University of Leeds, Leeds, LS2 9JT</td>
</tr>
<tr>
<td>CLEMENS KAUFMANN</td>
<td>FACTUM OHG, Danhäusergasse 6/4, A-1040 Wien, Austria</td>
</tr>
<tr>
<td>SANDER KOOIJMAN</td>
<td>BUITEN Consultancy, Economy &amp; Environment, Achter St. Pieter 160, 3512 HT Utrecht, The Netherlands</td>
</tr>
<tr>
<td>KARI LAUTSO</td>
<td>WSP LT Consultants, Heikkiläntie 7, 00210 Helsinki, Finland</td>
</tr>
<tr>
<td>STEPHEN MARSHALL</td>
<td>Bartlett School of Planning, University College London, Wates House, 22 Gordon Street, London WC1H 0QB, UK</td>
</tr>
<tr>
<td>LUCIA MARTINCIGH</td>
<td>DiPSA-Dipartimento di Progettazione e Studio dell’Architettura, Facoltà di Architettura - Università degli Studi Roma Tre, Piazza della Repubblica, 10 - 00185 Roma, Italy</td>
</tr>
<tr>
<td>BRYAN MATTHEWS</td>
<td>Institute for Transport Studies, University of Leeds, 38 University Road, Leeds LS2 9JT, UK</td>
</tr>
<tr>
<td>ANTHONY D MAY</td>
<td>Institute for Transport Studies, University of Leeds, Leeds LS2 9JT, UK</td>
</tr>
<tr>
<td>ERIC MONAMI</td>
<td>STRATEC s.a. Avenue A. Lacomblé, 69–71 box 8 B-1030 Brussels, Belgium</td>
</tr>
<tr>
<td>EMANUELE NEGRENTI</td>
<td>ENEA – ENE – TEC, C. R. CASACCIA, Via Anguillarese 301, S. Maria di Galeria - 00060, Rome, Italy</td>
</tr>
<tr>
<td>KARI RAUHALA</td>
<td>Asematie 14 B 9, FIN-02700 Kauniainen, Finland</td>
</tr>
<tr>
<td>RALF RISSER</td>
<td>FACTUM OHG, Danhäusergasse 6/4, A-1040 Wien, Austria</td>
</tr>
<tr>
<td>KAREL SCHMEIDLER</td>
<td>Head of Social and Human Aspects of Transport Section, Transport Research Centre – CDV, Vinohrady 10, Brno CZ – 639 00, Czech Republic</td>
</tr>
<tr>
<td>UWE SCHUBERT</td>
<td>Institute for Regional Development and Environment, Department for Social Sciences, Vienna University of Economics and Business Administration, Nordbergstrasse 15, B/4 A-1090, Vienna</td>
</tr>
</tbody>
</table>
Contributors

CARLO SESSA
Institute of Studies for the Integration of Systems, Via Flaminia 21, 00196 Rome, Italy

FRANZ SKALA
Institute for Regional Development and Environment, Vienna University of Economics and Business Administration, Nordbergstrasse 15, B/4 A–1090, Vienna

LINDA STEG
University of Groningen, Department of Psychology, Grote Kruisstraat 2/1, 9712 TS Groningen, The Netherlands

ÅSE SVENSSON
Department of Technology and Society, Lund University, Box 118, SE-22100 LUND, Sweden

LUCA URBANI
IBV – Willi Hasler Ag, Olgastrasse 4, CH-8001 Zurich, Switzerland

PASCAL J.W. VAN DEN NOORT
Velo Mondial, Kleine-Gartmanplantsoen 20, 1017 RR Amsterdam, The Netherlands

TINA WAGNER
Hamburg University of Technology, AB 1-10 Transportation and Logistics, Schwarzenbergstr. 95, 21071 Hamburg, Germany

MICHAEL WEGENER
Spiekermann & Wegener, Urban and Regional Research (S&W), Lindemannstrasse 10, 44137 Dortmund, Germany
Biographies

David Banister is Professor of Transport Studies at the Oxford University Centre for the Environment. Until recently he was Professor of Transport Planning at University College London. He has also been Research Fellow at the Warren Centre in the University of Sydney (2001–2002) on the Sustainable Transport for a Sustainable City project and was Visiting VSB Professor at the Tinbergen Institute in Amsterdam (1994–1997). He will be a visiting Professor at the University of Bodenkultur in Vienna in 2007. He is a Trustee of the Civic Trust and Chair of their Policy Committee (2005–2009). Prof. Banister has authored and edited 18 books that summarise his own research and some of the international projects that he has been involved with. He has also authored (or co-authored) more than 100 papers in international refereed journals, together with a similar number of other papers in journals or as contributions to books.

David Blackledge is Corporate Director of Transport & Travel Research Ltd, UK. He is a transport economist with more than 30 years experience in public transport planning and economics. He has worked with many local authorities in UK, providing advice and managing projects involving strategic planning, concessionary fares, alternative fuels, advanced vehicle technologies, personal security, and passenger information. He has directed a number of projects for the UK Department for Transport including research into information systems, Accessible Coaches and Kneeling Buses. He has also directed a number of collaborative research and demonstration projects involving cities across Europe, including CATCH (transport and environment), EDICT (evaluation and demonstration of Personal Rapid Transit) and PLUME (land-use and transport planning).

Hugues Duchâteau is Chief Executive Officer of STRATEC, Brussels. He graduated in Civil Engineering from the Faculté Polytechnique de Mons and has almost 30 years of experience in leading transportation planning, travel behaviour studies, land use and regional planning, and environmental assessment of projects in Belgium as well as abroad. He started his career in the Department of Public Economy Studies at the Société d’Economie et de Mathématique Appliquée (SOBEMAP), which he left in 1984 to found STRATEC.

Judith de Groot is a PhD candidate in Department of Psychology at the University of Groningen, the Netherlands. Her main fields of expertise are social, traffic and environmental psychology. She has conducted several studies on car use, and more generally, sustainable transportation. Her dissertation focuses on the relationship between values, attitudes and prosocial and proenvironmental behaviour. Judith de Groot is interested in applied as well as fundamental research.

Sonja Forward is a Director of Research at The Swedish National Road and Transport Research Institute. She is Deputy Chairperson at the Swedish pedestrian association and a member of TRB’s Pedestrian committee. Her main research interest includes the use
Biographies

of psychological models to predict modal choice and traffic violations but also how to modify deviant behaviours.

Philine Gaffron is working as a senior researcher at the Transportation and Logistics Group of the Hamburg University of Technology, Germany. She has moved from a degree in ecology via a postgraduate qualification as a landscape designer to a dissertation in transport planning. She has gathered research experience in national and international projects on implementation issues in (integrated) urban transport planning, interdependencies and evaluation of transport and space as well as infrastructure financing. She is also involved in teaching engineering and town planning students and is a member of the German association for regional and town planning (SRL). Homepage: http://www.vsl.tu-harburg.de/vsl_2/1arbeitsbereich/i_mitarbeiterx?welche_id=4&liste=0.

Sylvie Gayda is Senior Project Manager in the consultancy company STRATEC based in Brussels, specialised in transport planning and urban/regional development. She has more than 15 years experience in the field of trip demand modelling and demand management policies. She has developed a thorough expertise in two fields: first, stated preference surveys and discrete choice models; secondly, land-use/transport modelling and planning. In relation with stated preference, she led among others several studies on traffic forecasts for new High Speed Lines in France, the mode choice modelling for the future Seine North Europe canal and the demand forecast study for the future Charles de Gaulle Express (dedicated rail service between the CDG airport and Paris – Gare de l’Est). On the other hand, she took part in many European research projects, among other projects in relation with land-use/transport (ESTEEM, TRACE, PROPOLIS, SCATTER). In particular, she was coordinator of the SCATTER project.

Dr Ann Jopson is a Research Fellow at the Institute for Transport Studies, University of Leeds. Her research interests are in travel behaviour psychology, transport marketing, planning and policy (including land-use transport interactions), with emphasis on attitudinal and behavioural measures, and social aspects of transport. Specifically, her expertise are in the role of social psychology in enhancing our understanding of human reactions to land-use and transport policies, and appraisal of qualitative policy objectives, with regard to improving effectiveness of sustainability measures. She has worked on European and UK research projects for the European Commission, UK Department for Transport and research councils.

Clemens Kaufmann studied Sociology at the University of Vienna. From 1998 to 1999, he was a freelancer at FACTUM, and since 1999, he is an employee of FACTUM. He is involved in several national and international projects (e.g. communication strategies for increased motorcyclist safety, alternative public transport in Austria, Assess implementation in the frame of Cities of Tomorrow, implementation work in Vienna, etc.), specialist on qualitative survey techniques like in-depth interviews, behaviour observation (Wiener Fahrrprobe) and workshops. He is secretary of the International Co-operation on Theories and Concepts in Traffic Safety.
Biographies

Sander Kooijman, after his study of Spatial Planning at Nijmegen University, joined Buck Consultants International (BCI), a Dutch consultancy in the fields of economy, freight transport and regional development in 1989. In 1994, Sander took the position of Senior Consultant Economics, Spatial Planning, Transport and Infrastructure at BCI. He conducted and co-ordinated numerous studies in the field of freight transport, both at a national and international level. From 2004 to 2005, Sander acted as chairman of the ELITE-network, a professional network of renowned European consultancies in the fields of logistics, infrastructure and transport. At the end of 2005, Sander became partner and (co) managing director in BUITEN Consultancy for Economy & Environment, Utrecht, The Netherlands, where he is responsible for project management and co-ordination, product development and general management tasks.

Kari Lautso is an urban and transport research and planning specialist with extensive experience of transport-related research and planning on international, national and local levels. At WSP LT-Consultants Ltd. he is Member of Board and Deputy CEO in charge of international operations of the company’s research activities. In addition to consulting, Mr. Lautso has been employed by Helsinki University of Technology as laboratory engineer, leader of postgraduate courses and associate professor (traffic and transport planning). He has worked on several national and international projects involving integrated land-use and transport planning research, including the EC projects SPARTACUS and PROPOLIS that he co-ordinated. Other EC projects include SCATTER, CITY FREIGHT and PLUME. In Finland, he has worked for Rail and Road Administrations and the Helsinki Metropolitan area Council in several strategic transport research and planning projects. Mr. Lautso has published about 70 conference papers in national and international conferences.

Stephen Marshall is Senior Lecturer at the Bartlett School of Planning, University College London, UK. Dr Marshall has 15 years’ experience in transport and planning fields. He has worked on several UK and international projects involving integrated land use and transport planning research, including the EC projects TRANSLAND, TRANSPLUS, ARTISTS and PLUME; and the UK project SOLUTIONS (Sustainability Of Land Use and Transport In Outer Neighbourhoods). He has several publications encompassing urban design, planning and transport fields, and has authored or contributed to seven books, including Encouraging Transport Alternatives and Streets and Patterns.

Lucia Martincigh is an architect, Associate Professor of Technology of Architecture at the University of Roma Tre, Rome, Italy. She is a lecturer at Doctorate and Post graduation national and international courses and also a National Delegate in various Actions of the EC Cost Program. Lucia Martincigh is responsible for Italian and European researches on sustainable mobility and urban upgrading and design, including PROMISING, PROMT and SIZE. She is also a scientific co-ordinator, chairperson and lecturer at several national and international conferences and exhibitions. Her works include articles in specialized magazines, essays and books at national and international level. She is also a co-ordinator of interdisciplinary groups in DiPSA for the elaboration Pilot Projects.

Bryan Matthews is a Senior Research Fellow at the Institute for Transport Studies at the University of Leeds, UK. He has 10 years research and consultancy experience focused
on transport economics. Much of his work has been on international research projects, including the EC projects PROSPECTS, ASTRAL and PLUME; and the international Knowledgebase on Sustainable Land-Use and Transport (KonSULT). He has several publications encompassing transport economics and planning, and served as contributor and co-editor (with Chris Nash) for volume 14 of the Research in Transport Economics series on “Measuring the Marginal Social Cost of Transport” (2005).

**Tony May** has over 35 years’ experience in transport planning and traffic engineering. His principal research interests at Leeds have focused on urban transport and sustainability. He has served as Director of ITS, Dean of the Faculty of Engineering and Pro Vice Chancellor for Research. He was elected to Fellowship of the Royal Academy of Engineering in 1995 and awarded the OBE for services to transport engineering in 2004. Between 1985 and 2001, he maintained a link between research and teaching at Leeds and practical experience in consultancy with MVA Ltd, of which he was a director.

**Eric Monami**, during his 15 years as researcher, consultant and ministerial advisor in transport and environment, he has contributed to or co-ordinated several projects for the European Commission, the American Transportation Research Board and a number of ministries and businesses in Belgium. His work has centred mainly on contracting mechanisms and service quality and environmental impacts assessments in both freight and passenger transports. Dr Monami has been an advisor to the Belgian Minister of Mobility and Transport, the Walloon Minister of Transport and the Brussels Minister for the Environment. He is the author of several articles on European railway reforms.

**Emanuele Negrenti** is Project Manager at ENEA, the Italian Agency for Energy, Environment and Innovative Technologies. Dr Negrenti has 14 experiences in transport impacts and planning fields. He has worked on several Italian and international projects involving transport planning, transport impacts, pollutant emissions modelling, evaluation of transport and transport telematic systems. The European experience is based on FP3 QUARTET and KITE Projects, THERMIE JUPITER Project, COST319 and COST 346 Actions, FP4 COMMUTE, ESTEEM, CAPITALS and CAPITALS PLUS Projects, FP5 ISHTAR (Co-ordinator), HEARTS, INTEGAIRE, ASTRAL and PLUME Projects. He has several international publications on transport impacts fields.

**Kari Rauhala** is architect, lately Senior Research Scientist at VTT (Technical Research Centre of Finland) Building and Transport. Kari Rauhala worked at VTT from 1974 until his retirement in summer 2005. His specialities have been urban planning economics, urban energy consumption, climate and housing, urban quality, environmental impacts, urban shape and transport, pedestrian environment as well as design methods and principles. He has participated in several EC projects, the latest being PROMPT (New Means to Promote Pedestrian Traffic in Cities) and ECOCITY (Urban development towards Appropriate Structures for Sustainable Transport). He was the co-ordinator of the PROMPT project. He has written several publications and articles as well as papers on national and international conferences.

**Ralf Risser** is an Assistant Professor and Lecturer at the University of Vienna and at the Technical University of Vienna. He is visiting professor at the Institute of Technology
and Society, Technical University Lund, Sweden. He works in several EU Projects. Secretary International Co-operation on Theories and Concepts in Traffic safety; Chairing committee member of the NORBIT group (Nordic Organisation for Behaviour in Traffic). His work involves attitude and acceptance, marketing and motive research as a basis for social management. He is a specialist on qualitative survey techniques, behaviour observation (Developer of the Wiener Fahrprobe and derivatives), heuristic procedures like workshops etc., and group-dynamics-based creative and training measures.

Karel Schmeidler is Senior Researcher and Head of the S15 Department at CDV – Transport Research Centre and Associated Professor for Urban Design and Planning at the Faculty of Architecture, Technical University Brno, Czech Republic. Dr Schmeidler has 30 years’ experience in transport and planning fields. He has worked on several national and international research projects involving architecture, design, urban planning, integrated land-use and transport planning research, including the EC projects SIZE, ASI, ADVISORS, COST 616 CITIAIR, COST 349, COST 352 and COST 355 projects, Central European University Fellowships (Soros Foundation Projects) and HUMANIST Centre of Excellence and many important national CZ projects funded by the Czech Grant Agency and some Czech ministries and universities. He has dozens of publications encompassing architecture, urban design, urban sociology, planning and transport fields, and has authored or contributed to several books, including *Sociologie v architektonicke a urbanisticke teorbe* (Brno 1997 and reprinted 2001).

Uwe Schubert studied law and economics in Vienna and San Diego, California. Until 2006, he was chairman of the Institute of Economic Geography, Regional Development and the Environment at the Vienna University of Economics and Business Administration. He held the chair in Environmental Economics and Management. His main research fields are urban development and environmental economics and policy. Since 1975, he has been active in comparative development research. He served as co-ordinator of several national as well as European projects (e.g. ENVINNO, EASY-ECO, ECOCITY). Now he is Professor Emeritus.

Carlo Sessa was in charge of the co-ordination of the European research project TRANSPLUS – Transport Planning Land Use and Sustainability. He is president of ISIS – Institute of Studies for the Integration of Systems of Rome. Before joining ISIS in 1983, he has conducted research at NYU, where he worked with Nobel Prize winner Wassily Leontieff. He was project co-ordinator or partner in several EU research projects, including ACT-VILL and ESTEEM for DGXII, and recently the RAISE Citezens Conference on EU research for the City of Tomorrow and Cultural Heritage.

Franz Skala studied civil engineering at the Technical University Vienna (not completed); he is co-author of publications in the field of transport and environment – for example, Flexibility in Public Transportation (Flexible Öffentlicher Verkehr, VCOE Verkehrclub Oesterreich 1996), co-operated in projects (e.g. Study for a pilot project for integrated transport in rural areas for the region Waidhofen an der Thaya) and initiated the multi-disciplinary association “Institute of Ecological Urban Development”. For the
ECOCITY–project, he was employed at the Department of Environmental Economics and Management of the Vienna University of Economics and Business Administration.

**Linda Steg** is lecturer in Environmental Psychology at the University of Groningen. She conducted many studies within the field of Environmental and Traffic Psychology, and is particularly interested in studying individual and corporate behaviour related to sustainable development from a multidisciplinary perspective. Her research focuses on measuring, understanding and changing environmentally significant behaviour, like household energy use and car use. Steg is president-elect of Division 4 ‘Environmental Psychology’, and treasurer of Division 13 ‘Traffic Transportation Psychology’ of the international Association of Applied Psychology (IAAP). Furthermore, she coordinates the sustainability network of the International Association of People-Environment Studies (IAPS).

**Åse Svensson** is Senior Lecturer at the Department of Technology and Society, Lund University, Sweden. Dr Svensson’s main background is in the area of traffic safety research, validation of the Swedish Traffic Conflicts Technique and further development of the concept towards general severity rating of interactive behaviour. She was coordinator of EC project ARTISTS and is now project leader of a doctoral student project with the aim of adapting and developing ARTISTS concepts to Swedish conditions. She is also heading a doctoral student project in the area of developing and utilising cognitive vision for studies and analysis of road user behaviour.

**Luca Urbani** is expert in the field of transport planning, transport infrastructures and traffic safety, now by IBV – Ingenieurbüro für Verkehrplanung – Zurich. Luca Urbani has almost 10 years of research experience in the field of traffic safety with particular regard to behavioural patterns and vulnerable road users. He has worked in several Italian and international research projects, including the EC founded PROMISING – Promoting of Measures for vulnerable road users (1997), PROMPT – New means to PROMote Pedestrian Traffic in cities (2003) and ASI – Assessing Implementation (2005) as external senior researcher within the Department of Design and Study of Architecture, Faculty of Architecture, University Roma Tre. On these and other topics. Dr Urbani has several publications presented at international conferences.

**Pascal J.W. van den Noort** is Executive Director of Master Plan BV and of Velo Mondial and Velo.Info. He has vast experience in founding (inter)national and global organizations, projects, conferences and events. He was the founder and Executive Director of the Dutch Aids Foundation and of the Global Network of People Living with HIV/AIDS (GNP+). For Master Plan BV, he is involved in the setting up of research projects that promote sustainable urban development and specializes in making information for sustainability better available. For Velo Mondial and Velo.Info, he initiates, promotes and organizes innovative developments with passion.

**Tina Wagner** is working as a researcher at the Transportation and Logistics Group of the Hamburg University of Technology, Germany. Tina Wager is a younger transport planner with experiences in research and consulting on the European, national and regional level. Her research focus is on integrated planning. She has worked on several
projects involving sustainable land use and transportation (e.g. ECOCITY), integration of transport infrastructure into urban environments, air traffic and commercial and goods traffic.

**Michael Wegener** was until 2003, Director of the Institute of Spatial Planning and Professor at the Faculty of Spatial Planning of the University of Dortmund, Germany. Since 2003, he is a partner in Spiekermann & Wegener, Urban and Regional Research in Dortmund. His main research fields are planning theory, urban and regional development, European urban systems and trans-European networks. His specialisation is urban and regional modelling, in particular of the land-use transport interface in cities and regions and of the regional impacts of European large transport infrastructure projects.
The Projects and Initiatives Featured in This Book

<table>
<thead>
<tr>
<th>Cluster</th>
<th>Description</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>LUTR</td>
<td>Land Use and Transport Research (cluster of projects)</td>
<td>(<a href="http://www.lutr.net/">http://www.lutr.net/</a>)</td>
</tr>
<tr>
<td>PLUME</td>
<td>PLanning and Urban Mobility in Europe (network)</td>
<td>(<a href="http://www.lutr.net/">http://www.lutr.net/</a>)</td>
</tr>
</tbody>
</table>

**Individual Projects**

<table>
<thead>
<tr>
<th>Name</th>
<th>Description</th>
<th>Website</th>
</tr>
</thead>
<tbody>
<tr>
<td>ARTISTS</td>
<td>Arterial Streets Towards Sustainability</td>
<td>(<a href="http://www.tft.lth.se/Artists">http://www.tft.lth.se/Artists</a>)</td>
</tr>
<tr>
<td>ASI</td>
<td>Assess Implementations in the frame of the Cities of Tomorrow Programme</td>
<td>(<a href="http://www.factum.at/asi">www.factum.at/asi</a>)</td>
</tr>
<tr>
<td>CITYFREIGHT</td>
<td>Inter- and Intra- CityFreight Distribution Networks</td>
<td>(<a href="http://www.cityfreight.eu/">http://www.cityfreight.eu/</a>)</td>
</tr>
<tr>
<td>ECOCITY</td>
<td>Urban Development Towards Appropriate Structures for Sustainable Transport</td>
<td>(<a href="http://www.ecocityprojects.net">http://www.ecocityprojects.net</a>)</td>
</tr>
<tr>
<td>ISHTAR</td>
<td>Integrated Software for Health, Transport Efficiency and Artistic Heritage</td>
<td>(<a href="http://www.ishtar-fp5-eu.com/">http://www.ishtar-fp5-eu.com/</a>)</td>
</tr>
<tr>
<td>PROMPT</td>
<td>New Means to Promote Pedestrian Traffic in Cities</td>
<td>(<a href="http://prompt.vtt.fi">http://prompt.vtt.fi</a>)</td>
</tr>
<tr>
<td>PROPOLIS</td>
<td>Planning and Research for Land Use and Transport for Increasing Urban</td>
<td>(<a href="http://www.ltcon.fi/propolis">http://www.ltcon.fi/propolis</a>)</td>
</tr>
<tr>
<td>PROSPECTS</td>
<td>Procedures for Recommending Optimal Sustainable Planning of European City</td>
<td>(<a href="http://www-ivv.tuwien.ac.at/projects/prospects.html">http://www-ivv.tuwien.ac.at/projects/prospects.html</a>)</td>
</tr>
<tr>
<td>SCATTER</td>
<td>Sprawling Cities and Transport: from Evaluation to Recommendations</td>
<td>(<a href="http://scatter.stratec.be">http://scatter.stratec.be</a>)</td>
</tr>
<tr>
<td>SUTRA</td>
<td>Sustainable Urban Transportation</td>
<td>(<a href="http://www.ess.co.at/SUTRA">http://www.ess.co.at/SUTRA</a>)</td>
</tr>
<tr>
<td>TRANSPLUS</td>
<td>Transport Planning, Land Use and Sustainability</td>
<td>(<a href="http://www.transplus.net/">http://www.transplus.net/</a>)</td>
</tr>
<tr>
<td>VELOINFO</td>
<td>The European Network for Cycling Expertise</td>
<td>(<a href="http://www.velo.info/">http://www.velo.info/</a>)</td>
</tr>
</tbody>
</table>
Chapter 1

INTRODUCTION

Stephen Marshall and David Banister

The distribution of different land uses in different locations stimulates the demand for transport, and the supply of transport enables the distribution of different land uses in different locations. In this simple statement are bound up the logic of transport geography, accessibility, land management and property markets, an implied division of labour and associated economic geography; and hence the professional concerns of various kinds of urban and spatial planner, transport planner and highway engineer, public transport and logistics operator, employer, retailer and developer; and ultimately the travel and location decisions made by every citizen.

Despite the inherent logical complementarity of land use and transport – the interconnectedness of their causes and effects – each has tended to be pursued within different spheres of professional attention: in particular, land use planning and transport planning. These disciplines have not always been as well integrated as they might be. From the point of view of knowledge, there is not always a clear understanding of land use and transport relationships and the complex effects of policies on outcomes. From the point of view of action, there is not necessarily a clear consensus of how best to link the different kinds of land use and transport policy instruments, institutions and infrastructures; how to link incentives to ‘more sustainable’ outcomes with disincentives to ‘less sustainable’ ones; or what are the potential benefits of the different combinations of possible measures.

The challenge of how to link land use and transport policy has existed for many years, but has remained unsolved, in part due to the inter-professional divide between land use planning and transport planning and in part due to inadequate channels of communication between researchers, planning officials and policy-makers. This can result in frustrated causes: state-of-the-art projects based on out-of-date research, novel research addressing old problems, new data feeding old models and generally ‘left hands’ not knowing what ‘right hands’ are doing.

It is against this backdrop that there has been a recognition of the need to undertake research that fills gaps and forges new links between land use planning and transport
planning, while also disentangling and hence clarifying the complex web of issues that is currently known to bind different aspects of land use and transport planning. This book offers a collection of results from a recent programme of research into integrated land use and transport issues to contribute to this fundamental and ongoing debate. The intention is to be able to contribute to better understanding and ultimately to better land use and transport integration.

The book draws from the Land Use and Transport Research (LUTR) cluster of the European Union (EU) ‘Cities of Tomorrow’ programme. In total, there are 12 individual projects in the LUTR programme, in addition a 13th initiative – a network known as PLUME (Planning and Urban Mobility in Europe) which has served to synthesise results across different research themes and to engage with end-user cities, in order to inform the policy-making process (for more details, see Box page in Prelims; Table 2.3, Chapter 2).

The 12 LUTR projects comprise the work of dozens of partners, featuring dozens of cities across almost every European Commission (EC) country, taking place largely over a 6-year period (2000–2005). This book does not attempt to provide a comprehensive summary of findings from this programme, since these are already available elsewhere. Each project has its own web site and set of reports detailing the project research, methods and findings. Additionally, PLUME provides a series of ‘synthesis reports’ on specialised themes that cut across the subject matter of the individual LUTR projects (for more details, see Chapter 3).

Rather, the intention of this book is to provide an introduction to this body of research, in two principal ways. First, the book provides a general overview of the main issues and implications of the research, which draws primarily from the LUTR projects themselves and also integrates this with wider knowledge of land use and transport planning in the European context. Secondly, the book provides more detailed insights into specific issues drawn from individual projects. It is hoped that both of these approaches offer useful points of entry to the larger body of research from which they are drawn.

The remainder of this book is arranged in five parts: with Parts I and V dealing with the more general issues referred to above, and Parts II, III and IV focusing on specific LUTR projects.

Part I provides an introduction to the context of the topic of land use and transport, and the LUTR research programme (Chapter 2), together with a presentation of the main issues and findings from the research (Chapter 3).

Part II is broadly focused on policy perspectives. Chapter 4 discusses existing best practice for integrated policies (TRANSPLUS); Chapter 5 addresses the realisation of an urban vision for a sustainable settlement based on sustainable mobility and accessibility (ECOCITY); Chapter 6 addresses planning for promoting cycling (VELOINFO), while Chapter 7 presents a future vision of a sustainable settlement in 2030, looking back on what has been achieved (PLUME).
Part III then shifts to the assessment of policies. Chapters 8 and 9 present the results of modelling-based studies evaluating the results of testing different policy combinations, the former for urban areas in general (PROPOLIS), the latter focusing on urban sprawl and public transport (SCATTER). The second two chapters in this section then address some aspects that are sometimes under-represented in integrated land use transport research: Chapter 10 addresses the assessment of 'Quality of Life' issues (ASI), while Chapter 11 addresses the assessment of urban freight distribution initiatives (CITYFREIGHT).

We then move to look at some specific tools and methods that have been developed within the LUTR projects. Chapter 12 discusses approaches appropriate for the management of arterial streets (ARTISTS), while Chapter 13 discusses a particular approach to generating solutions to problems, dealing with pedestrians from a human perspective (PROMPT). Chapter 14 reports on an integrative software tool devised to support land use and transport planning (ISHTAR), while Chapter 15 reports on means of improving decision-making for sustainable urban transport, culminating in the development of guidebooks for decision-makers (PROSPECTS).

Finally, Part V provides some final reflections on the LUTR research programme: first, providing lessons for policy (Chapter 16) and finally providing suggestions for a future LUTR agenda (Chapter 17).

Part I provides a general introduction to the rest of the book, while Part V leads out from the book to address further policy and research spheres. The chapters in Parts II–IV may be read selectively and not necessarily in the order presented. Chapter 3 provides a convenient reference point relating all of the individual projects reported in the other chapters.

The LUTR projects, although having the common theme of integrating land use and transport planning issues, and although covering a breadth of issues across this common theme (Chapter 3), necessarily deal with different aspects with different emphases and levels of detail. As research projects are commissioned to address outstanding research gaps, these are in effect complementary to existing knowledge, and therefore are to some extent a selective collection of topics.

Accordingly, the book does not cover to any great extent the economic, fiscal, financial and land value levers available – that are associated with either the transport or land use issues in isolation – although many of these measures (particularly pricing) are embedded in the quantitative and qualitative approaches used in each of the chapters. Nor does the book address the technological futures covered by alternative fuels, new vehicle design and materials and the Information and Communications Technologies (ICT). All these can obviously contribute strongly to the City of Tomorrow; however, the main focus here is on policies integrating land use and transport planning.

Just as the LUTR projects themselves are selectively focused, the issues addressed in individual chapters in Parts II–IV are also in turn selective and are reflections on and complementary to the projects’ formal outputs. Of those chapters addressing a specific