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LAND USE AND TRANSPORT

European Research Towards Integrated Policies

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Emerald Group Publishing Limited
Howard House, Wagon Lane, Bingley BD16 1WA, UK

First edition 2007.

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British Library Cataloguing in Publication Data

A catalogue record for this book is available from the British Library

ISBN: 978-0-0805-4991-0

Printed and bound in Great Britain by
CPI Antony Rowe, Chippenham and Eastbourne



Awarded in recognition of
Emerald's production
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quality systems and processes
when preparing scholarly
journals for print



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The Projects and Initiatives Featured in This Book

LUTR Land Use and Transport Research (cluster of projects)
(<http://www.lutr.net/>)

PLUME PLanning and Urban Mobility in Europe (network)
(<http://www.lutr.net/>)

Individual Projects

ARTISTS Arterial Streets Towards Sustainability
(<http://www.tft.lth.se/Artists>)

ASI Assess Implementations in the frame of the Cities of Tomorrow Programme
(www.factum.at/asi)

CITYFREIGHT Inter- and Intra- CityFreight Distribution Networks
(<http://www.cityfreight.eu/>)

ECOCITY Urban Development Towards Appropriate Structures for Sustainable Transport
(<http://www.ecocityprojects.net>)

ISHTAR Integrated Software for Health, Transport Efficiency and Artistic Heritage Recovery
(<http://www.ishtar-fp5-eu.com/>)

PROMPT New Means to Promote Pedestrian Traffic in Cities
(<http://prompt.vtt.fi>)

PROPOLIS Planning and Research for Land Use and Transport for Increasing Urban Sustainability
(<http://www.ltcon.fi/propolis>)

PROSPECTS Procedures for Recommending Optimal Sustainable Planning of European City Transport Systems
(<http://www-ivv.tuwien.ac.at/projects/prospects.html>)

SCATTER Sprawling Cities and Transport: from Evaluation to Recommendations
(<http://scatter.stratec.be>)

SUTRA Sustainable Urban Transportation
(<http://www.ess.co.at/SUTRA>)

TRANSPLUS Transport Planning, Land Use and Sustainability
(<http://www.transplus.net/>)

VELOINFO The European Network for Cycling Expertise
(<http://www.velo.info/>)

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