

The background of the cover is a photograph of a train's interior. A bicycle is mounted on a rack, and a person is visible in the background. The lighting is warm and the image has a slightly grainy, vintage feel.

INTEGRATED TRANSPORT

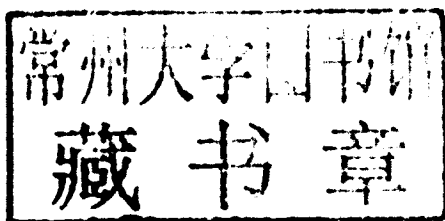
FROM POLICY TO PRACTICE

MOSHE GIVONI
AND DAVID BANISTER

Integrated Transport

From Policy to Practice

Moshe Givoni and David Banister



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Integrated Transport

Travel is an essential part of everyday life and today most journeys are multimodal. It is the total travel experience that counts and integrated transport must reduce the inconvenience of transfers between modes. Most research and many publications on transport policy advocate sustainable transport, but the priority given to integration has been negligible. Yet integration is one of the most important means to advance sustainable transport and sustainability more generally.

While integrated transport systems are seen to be an ideal, there is a failure to make the transition from policy to practice. The authors argue that the achievement of sustainable transport is still a dream, as an integrated transport policy is a prerequisite for a sustainable transport system. It is only when the two concepts of sustainability and integration operate in the same direction and in a positive way that real progress can be made.

In this book, transportation experts from across the world have addressed the questions about what is integration, why is it so important and why is it so hard to achieve? The book provides an in-depth analysis of these issues and it aims to provide a better understanding of the subject, about what should be strived for, about what is realistic to expect, and about how to move forward towards a more integrated provision of transport infrastructure, services and management.

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Preface

In September 2008 as part of the academic activities of the Network for European Communications and Transport Activities Research (NECTAR – <http://www.nectar-eu.org>) a meeting of Cluster 1 on 'Networks' was organized by the Transport Studies Unit, in the School of Geography and the Environment at the University of Oxford.

About 20 academic experts attended the two-day meeting which focused on debating the theme of Integrated Transport. The results of that meeting, together with some additional contributions, are brought together in this book on *Integrated Transport: From Policy to Practice*.

We would like to thank all who have participated in the Cluster meeting and are especially grateful to all the contributors to this book and for their help in bringing the material to publication. We would also like to thank Aura Reggiani for her work as the President of NECTAR.

NECTAR is a European-based scientific association established in 1992 which emerged from the European Science Foundation Network. Its primary objective is to foster research collaboration and exchange of information between experts in the field of transport, communication and mobility from all European countries and the rest of the world. It is a multidisciplinary social science network that brings together a wide variety of perspectives on transport and communication problems and their impacts on society in an international perspective.

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Chapter 1

The need for integration in transport policy and practice

Moshe Givoni and David Banister

1. Introduction

In almost every piece of research and publication on transport policy a combination of the words 'transport' and 'sustainability' can be found. Similarly, next to these words a combination of the words 'transport' and 'integration' will normally also be present. While the inclusion of the term 'sustainability' in the transport policy discourse can be traced back to about 20 years ago, following the publication of the *Brundtland Report* (WCED, 1987), 'integration' has a much longer history in transport planning. Since sustainability became the dominant paradigm in the transport policy and research discourse, priority given to integration has been almost silent. Integration, even if it is not explicitly recognized, is probably still one of the most important means to advance sustainable transport and sustainability more generally. The concepts of sustainability and integration need to be promoted as being complementary in transport policy and practice.

Although integration might be easier to define and agree upon than sustainability, there are many elements of integration that need to be pursued. There are also many barriers to overcome in achieving integration in practice. This book argues that it is very difficult to turn integrated transport policy to integrated transport practice, and that as a consequence, sustainable transport is still only an ideal. It is only when these two concepts operate in the same direction in a positive way that real progress can be made.

This book addresses the questions: what is integration, why is it so important, why is it so hard to achieve, and are we never likely to get to a truly integrated transport system or even just a truly integrated and coherent transport policy. It provides an in-depth analysis of these issues and it aims to provide a better understanding of the subject – what should be strived for, what is realistic to

expect, and how to move forward towards a more integrated provision of transport infrastructure, services and management.

This introductory chapter sets the background for the in-depth consideration of integrated transport. In Section 2 a short overview of the need for integration is provided, and this is followed in Section 3 by some of the definitions of integrated transport commonly used in the literature. Section 4 describes the structure and content of the book, and the last section provides some further thoughts before the individual chapters take over.

2. What to integrate and why?

Integration is normally required where a system is made up of several parts and the elements need to complement each other so that the whole system can work more efficiently. Integration in this respect can be considered as physical, operational or managerial. The same approach can be applied to the transport network where the physical network consists of many sub-networks and a large variety of users, operators and governing institutions. All these elements need to be integrated to provide an efficient transport system that serves the transport needs of society at minimal (environmental) cost. Whether this integration is possible and how it can be achieved is returned to later.

The transport system is often described as the blood system of society and especially that of the economy. This is indeed a good description, as virtually every economic activity and most social activities involve the transport of people and goods from one place to another in some form or another. Alongside transport's contribution to society, through its social and economic benefits, transport activities also entail a cost to society, mainly in the form of negative environmental impacts. The contribution of transport to climate change is probably the most important of these negative impacts, but other impacts such as air pollution are also substantial. Getting the 'right' mix of these components is a key element of sustainability. Without dwelling on the different definitions of sustainability, a transport system that can generate more or the same socio-economic benefits but at a lower (environmental) cost should be considered more sustainable.

As the transport system has grown and developed over time, and as new modes of transport have been introduced, specialization has taken place in which those involved with the supply, operation and management of the transport system have tended to focus on one or a limited sub-set of the transport system components. The current organization of the transport system became focused around a specific network (road, rail, air) and individual modes of transport. This specialization in turn and over time has become embedded in the institutions set in place to control and manage the transport system. From the supply aspect, the concept of the whole journey from the origin to the destination is often forgotten, as attention concentrates on the main section of the journey (for example the rail journey or the flight). So the need for multimodal travel to get from one place to another in most cases is often overlooked, and individual journeys are considered in a simple way as a single mode when many journeys involve more than one mode of travel.

This process of specialization (by mode) has taken place on the supply

side of the transport system, but of course not on the demand side (i.e. from users' perspectives). People and goods still need to get from one place to another and in what they perceive to be the 'best' possibility available to them. In other words, from the demand perspective the choice of mode (and therefore network) is made based on the overall journey, considering all the elements that are involved in travelling from the origin to the destination. In this assessment, the weakest part of the journey, or the most difficult one, is often outside the main mode used (e.g. getting to or from the rail station).

This mismatch between the priority of users to just 'get there' (they or their goods) and the priority of suppliers to meet this need, but only for a specific part of the journey and often only after a choice of mode and network has been made, means that sustainability objectives have been compromised. This specialization did not only take place within the transport system, but is generic to many sectors and other elements and systems which are part of the everyday socio-economic activity. For example, transport often plays a major role in determining the levels of demand for health and education services (at a particular location), but this important element in the overall decision is often ignored by the authorities in terms of where they choose to locate hospitals and schools.

The lack of a coherent approach to the supply and organization of the transport system results in two adverse effects which compromise the goals of sustainability as defined above. First, too much travel is being generated to achieve a certain level of socio-economic benefit or welfare, and this travel results in higher (environmental) costs. Second, the amount of transport or travel activities that is necessary to support the desired level of welfare, or desired level of activities that entail transport in some form, results in higher than necessary (environmental) costs. This outcome also results from the best use not being made of the available capacity on the transport system, as transport is not provided and consumed in the most efficient way. To make transport more sustainable, the amount of transport or travel needs to be reduced, and the level of transport activity that is still needed must be undertaken in the most efficient way.

One of the implications of the mismatch described above between the need to simply 'get there', and the focus of the supply on just one part of the transport system results in the car being seen as being more attractive than other modes of transport with respect to travel time and convenience. When wanting to travel people see just one transport network that offers different travel/transport possibilities to get from one place to another, and they will normally opt to use the least costly option (in terms of time, money, convenience and reliability). Where integration of transport sub-networks is absent on the supply side, it is not surprising that the private car is usually seen as being the more attractive choice, as it involves the use of only one of the transport sub-networks and it provides door-to-door transport. There are two downsides to this. First, in most cases the car is much less advantageous in terms of emissions of both greenhouse gases and air pollutants, a feature which at present is not part of the decision of mode and network choice. Second, car transport normally requires more capacity (for a certain level of demand), especially given that many car journeys are used to carry only one person. When the capacity