Preface

The importance of freight transport for our society is beyond dispute, but transport volumes are ever growing and the problems to accommodate freight flows in an efficient and sustainable way become increasingly alarming. Traffic congestion is rapidly growing and the quality of freight transport is not able to keep pace with the rising ambitions: shippers want higher reliability, lower prices, faster deliveries, more flexibility and higher service levels. In addition the side-effects of freight transport, such as the environmental deterioration, inefficient use of energy, space restrictions and traffic accidents, become more and more acknowledged as serious problems. In light of these problems there is a great challenge to achieve a breakthrough in the improvement of the performance of freight transport systems.

Learning from experiences in the field of passenger transport, intermodal transport offers interesting opportunities to improve the performance of a transport system.

This volume gives an overview of the current operations, design, modelling tools, policy and other issues related to intermodal freight transport.

The book is a collection of contributions of researchers from the research program Freight Transport Automation and Multimodality (FTAM), carried out at Delft University of Technology, together with experts in this field from many different countries. Delft University of Technology has also financially supported this research programme and this book project.

THE AUDIENCE FOR THE BOOK

The book is written from a multidisciplinary perspective, because of the complexity and diversity of relevant issues. Such an approach has the great advantage of presenting a more or less integral view on the theme of multimodal freight transport, which in our opinion really helps to understand the opportunities and threats related to multimodal freight transport. A disadvantage could be that it leads to a set of contributions dealing with rather diverse topics, that could limit the value of the book to a reader having a very specific background or interest. However, since we have attempted to avoid contributions going into very much technical detail and

using extensive mathematical formulations, we believe the book is readable for a broad audience. The book is intended to be read by people in the academic world, but it could also appeal to policymakers as well as practitioners in the transport industry, who are involved in the operations, design, modelling, implementation and policies for intermodal freight transport.

COMPANION VOLUME

The idea for this book project was born from the completion of a five-year research programme on Freight Transport Automation and Multimodality (FTAM) at Delft University of Technology. The goal of this research programme was to provide knowledge and tools to design and develop technologies and organizational structures for an integrated, highly automated transport system for inland intermodal transport at different geographical levels. In addition to these scientific ambitions the programme of course also intended to contribute to improving the quality of freight transport, reducing its negative external effects and, finally, increasing its scope.

The richness of both themes and our wish to present a coherent book structure and to avoid fragmentation led us to decide to produce two volumes: this volume dealing with intermodal freight transport, and a companion volume focusing on freight transport automation. Both intermodal transport and transport automation will become increasingly important solutions to cope with ever-increasing transport volumes in an efficient and sustainable way. Although both themes are treated separately it is obvious that they are also strongly related, for example with regard to developments in automated transport at intermodal terminals. The relationship between the books is expressed by the same general structure and comparable titles of both volumes.

For the composition of both volumes a selected number of researchers from the FTAM research programme together with experts in these fields from many different countries have been invited to contribute. The chapters have been reviewed thoroughly by external experts.

Although it is impossible to cover all aspects of freight transport automation and intermodal transport in full breadth, we think that the collections in both volumes give a useful overview of the latest developments and tools regarding design and evaluation of innovations in these fields, as well as a fruitful discussion on the implementation issues. The different chapters of the books can themselves be viewed as an introduction to the specific topics. The recommendations for further readings may be a useful guide for readers to go beyond the scope of these volumes. Finally, we hope

that both books will contribute to the further scientific, societal and political debates on freight transport innovations.

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In addition, we wish to thank the participating authors for their contribution to this book, and the referees for their excellent reviews. Finally, we also highly appreciated the help of Kate Pearce and Alexandra O'Connell of Edward Elgar Publishing in guiding us through the various stages of the production process of the book.

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