



# INTERMODAL FREIGHT TRANSPORT

**DAVID LOWE**

# Contents

Front cover captions	ix
Dedication	x
Disclaimer	xi
List of illustrations	xiii
The Author	xv
Foreword	xvii
Acknowledgements	xix
Preface	xxi
<b>1 What Is Intermodal Freight Transport?</b>	<b>1</b>
1.1 The background to intermodalism	3
1.2 The impact of the Channel Tunnel	4
1.3 Freight transport growth	4
1.4 Definitions	6
1.5 Why intermodalism now?	11
1.6 The potential market for intermodal transport	12
1.7 The future for intermodal freighting	13
<b>2 UK and EU Policies for Intermodal Transport</b>	<b>15</b>
2.1 UK Government policy	15
2.2 Intermodal policy in the EU	20
2.3 Chronology of reports and legislation	33
<b>3 Intermodal Developments in the UK</b>	<b>36</b>
3.1 Euro-trade and the Channel Tunnel	37
3.2 The rail scene	37
3.3 Tall and long boxes: the new container revolution	42
3.4 Government grant aid	42
3.5 Commercial developments	43
3.6 Combined transport vehicles	49
3.7 Working time and fuel prices	51

<b>4</b>	<b>Intermodal Transport in Europe</b>	<b>52</b>
4.1	Euro-enlargement	52
4.2	IRU/UIC position statement on combined transport	53
4.3	Research and further action	56
4.4	The EU's Intermodality Task Force	56
4.5	Rail interoperability	57
4.6	Inland waterways	58
4.7	Current activities: an overview	58
4.8	Financial support	60
4.9	Operational developments	60
4.10	The way forward	60
<b>5</b>	<b>Intermodalism in North America and World Markets</b>	<b>62</b>
5.1	North America	62
5.2	Canada	67
5.3	The Baltic States	67
5.4	Asia	68
5.5	The Middle East	68
5.6	Australia	69
<b>6</b>	<b>The Road Haulage Role in Intermodalism</b>	<b>71</b>
6.1	Lorry sizes and weights for intermodal operations	72
6.2	Operator licensing, community authorizations, and professional competence	73
6.3	Exhaust emissions, noise limits, and energy consumption	73
6.4	Limits on driver working times	74
6.5	Safety law for carrying containers and working in docks	76
6.6	Safety in docks	77
6.7	Lorry Road User Charging: LRUC	77
6.8	Road traffic accidents	78
6.9	Road haulage operations	78
<b>7</b>	<b>Rail-Freight Operations</b>	<b>80</b>
7.1	Britain's privatized railway	80
7.2	Rail operations in Europe	81
7.3	European Railway Agency	83
7.4	The Euro-wide railway: Railion	84
7.5	UK rail-freight strategy	85
7.6	Rail freight in decline	85
7.7	The loading-gauge issue	85
7.8	Piggyback operation	86
7.9	Rolling highways	87
7.10	The Central Railway project	88
7.11	Channel Tunnel Rail Link	89
7.12	Eurotunnel	89
7.13	Freight aggregators and integrators	90
7.14	Locomotive power	91
<b>8</b>	<b>Inland Waterway, Short-Sea, and Coastal Shipping</b>	<b>92</b>
8.1	Waterway statistics	93
8.2	Inland waterways	93

8.3	UK inland waterways	95
8.4	Inland waterways in Europe	100
8.5	Short-sea and coastal shipping	103
8.6	Container shipping	109
<b>9</b>	<b>Environmental and Economic Issues</b>	<b>110</b>
9.1	An environmental solution	110
9.2	Freight by road, rail, or waterway?	110
9.3	The EC's view	112
9.4	The environmental impact of transport	113
9.5	'Something must be done'	115
9.6	Vehicle exhaust emissions	116
9.7	Environment reports	119
9.8	The economic issue	121
<b>10</b>	<b>Grant Aid and Government Support</b>	<b>122</b>
10.1	UK Government grants	122
10.2	EC grants	129
<b>11</b>	<b>Intermodal Networks and Freight Interchanges</b>	<b>133</b>
11.1	The TEN-Ts	134
11.2	Trans-European Rail Freight Freeways	138
11.3	Motorways of the Sea	139
11.4	Infrastructure developments in retrospect	140
11.5	Freight interchanges (terminals)	142
11.6	The EC's 2004 list of 30 TEN-T projects	147
<b>12</b>	<b>Intermodal Road and Rail Vehicles and Maritime Vessels</b>	<b>150</b>
12.1	Road vehicles	150
12.2	Bimodal semi-trailer systems	155
12.3	Rail wagons	157
12.4	Maritime vessels	161
<b>13</b>	<b>Intermodal Loading Units, Transfer Equipment and Satellite Communications</b>	<b>166</b>
13.1	Swap bodies	166
13.2	Freight containers	169
13.3	Lifting equipment	171
13.4	Other handling equipment	177
13.5	Satellite tracking of vehicles and loading units	177
<b>14</b>	<b>Carrier Liability in Intermodal Transport</b>	<b>180</b>
14.1	International agreements	181
14.2	Liability in domestic road and rail operations	181
14.3	International carriage of goods by road: CMR	182
14.4	International carriage of goods by rail: CIM	187
14.5	Compensation for loss	189
14.6	Liability rules for multimodal transport	190
14.7	GIT insurance protection	191

<b>15</b>	<b>Intermodal Documentation and Authorizations</b>	<b>193</b>
15.1	CMR consignment notes for international haulage journeys	194
15.2	Consignment notes for own-account carriage by road	196
15.3	CIM consignment notes for international rail journeys	197
15.4	Combined/multimodal transport documents	199
15.5	Legal requirements for international road haulage journeys	200
15.6	Community authorization	200
15.7	Road haulage cabotage	203
15.8	Bilateral road haulage permits	205
15.9	Eco-points for transit of Austria	206
15.10	Permit checks	208
15.11	Own-account transport operations	208
15.12	Other documents	208
<b>16</b>	<b>Customs Procedures</b>	<b>210</b>
16.1	Community Transit	210
16.2	Transport International Routier (TIR)	214
16.3	ATA Carnets	216
16.4	Carnets de Passage	216
<b>17</b>	<b>International Carriage of Dangerous Goods</b>	<b>218</b>
17.1	Dangerous goods legislation	218
17.2	The international carriage of dangerous goods by rail: RID	235
17.3	The carriage of dangerous goods through the Channel Tunnel (IGC)	237
<b>18</b>	<b>Safety in Transport</b>	<b>240</b>
18.1	Safety in road freighting	241
18.2	Rail safety	245
18.3	Freight container safety regulations	246
18.4	International standards for swap bodies	247
18.5	Maritime safety	248
18.6	Duty of care	249
	<b>Glossary of terms</b>	<b>250</b>
	<b>Bibliography</b>	<b>258</b>
	<b>Index</b>	<b>263</b>