

Young Researchers Seminar 2009

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International Benchmark Mainports

Landside accessibility

Jessica Hop

Ministry of Transport, Public Works and Water Management

The Netherlands



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Objectives

1. Determine accessibility quality
2. Investigate perception of mainport users
3. Formulate policy measures

Selected mainports

Seaports

- Rotterdam (NL) →
- Antwerp (BE)
- Felixstowe (UK)
- Hamburg (GE)
- Le Havre (FR)
- New York (USA)
- Singapore (SGP)



Selected mainports

Airports

- Schiphol (NL) →
- Charles de Gaulle (FR)
- Frankfurt (GE)
- Heathrow (UK)
- John F. Kennedy (USA)
- Changi (SGP)



Mainport accessibility quality

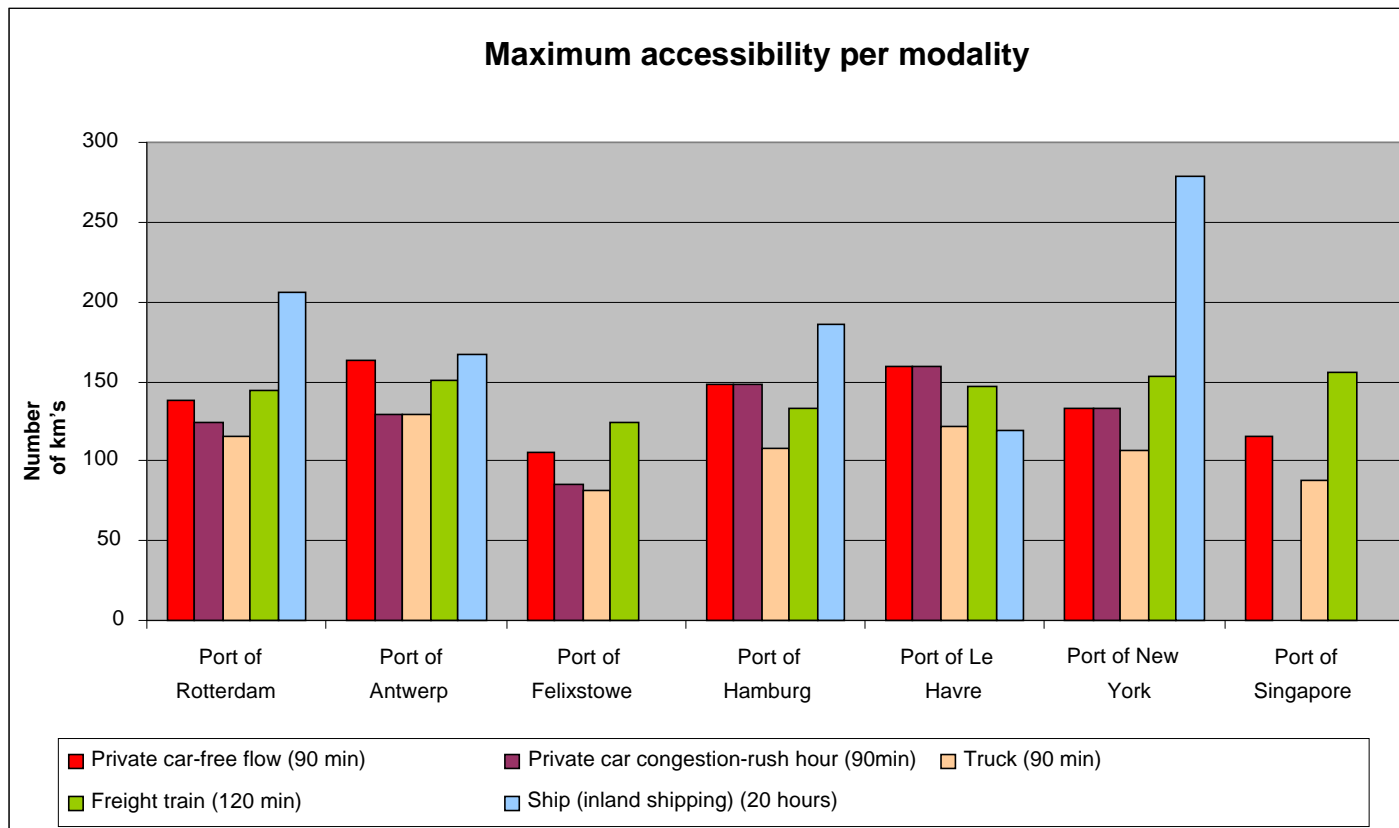
Accessibility = the number of different places of activities that can be accessed within a determined period of time from the original location

Methodology: accessibility contours

1. Optimum point: *maximum distance from the mainport until the edge of the accessibility contour*
2. Accessibility surface: *the surface that can be reached within a specific time duration*

Accessibility seaports

Maximum accessibility



Accessibility seaports

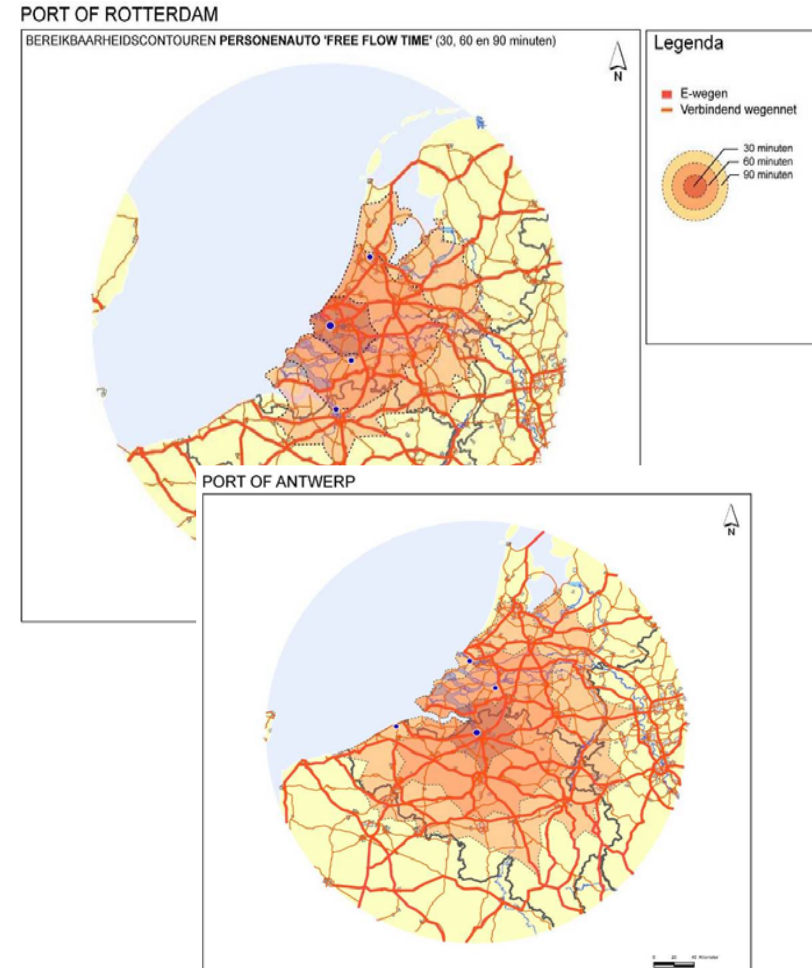
Accessibility contours

Best Practice: *Port of Antwerp*

Very good road accessibility
and strong rail accessibility

as a result of respectively:

- Geographical position
- High connectivity towards various directions



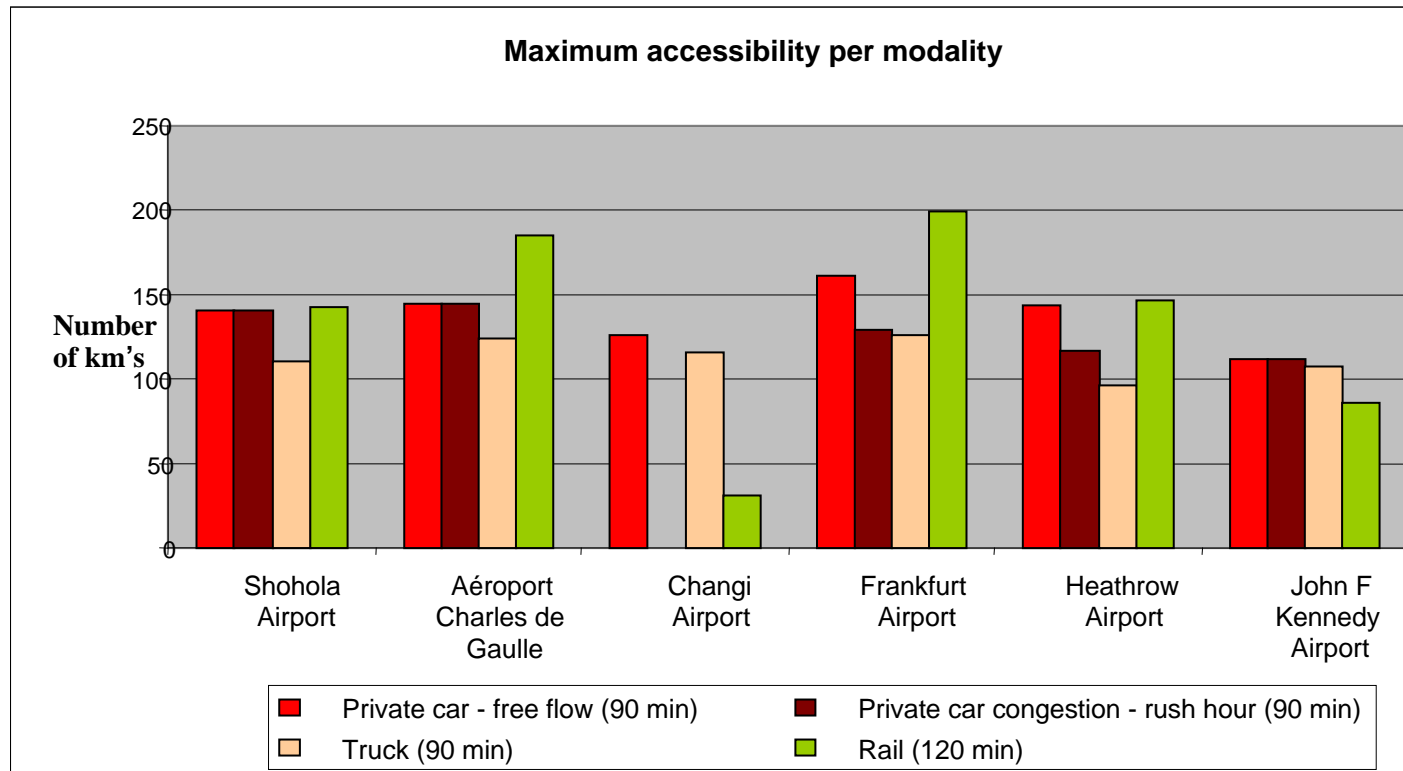
International benchmark mainports – Landside accessibility

Jessica Hop



Accessibility airports

Maximum accessibility



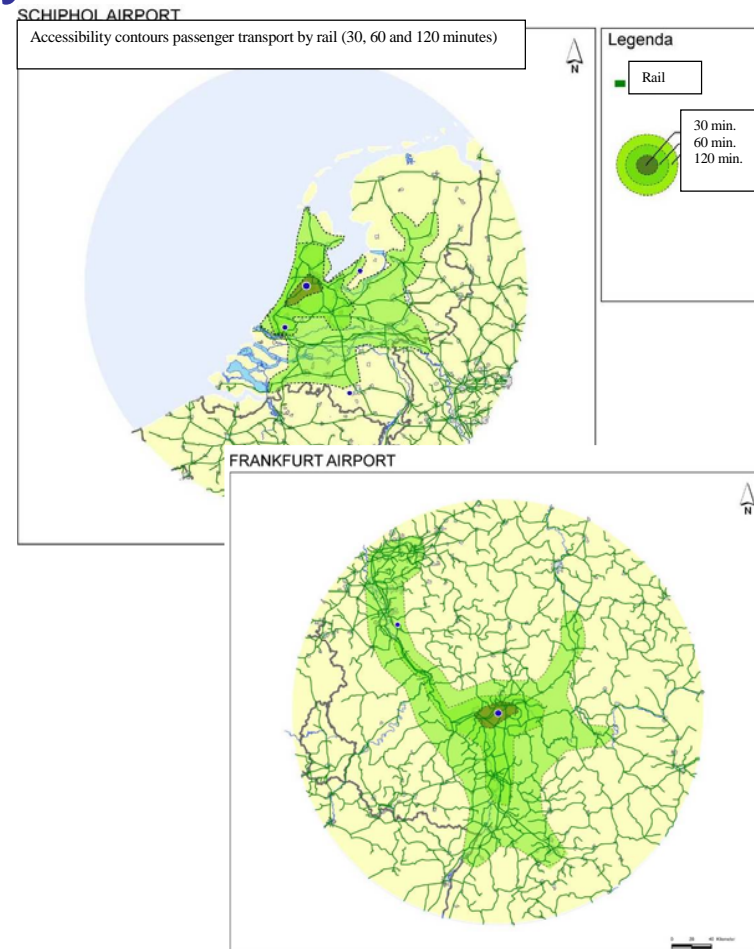
Accessibility airports

Accessibility contours

Best practice: *Frankfurt Airport*

Very good road and rail accessibility due to respectively:

- Geographical position
- Well-developed high speed lines (HSL)



Policy measures

Improvements of accessibility

- Port of Rotterdam
- International seaports

- Schiphol Airport
- International airports

Perception mainport user groups

Schiphol Airport vs other airports

Road accessibility	Travel time	Trend	Reliability	Trend	Capacity	Trend	Flexibility	Trend	Cost	Trend
Schiphol	4,3	-	4,6	-	3,9	=	2,9	=	4,3	-
CDG	5,5	=	8,0	=	7,0		2,0			
Frankfurt	7,0	=	7,3	=	7,0	+	5,0	=	6,0	=
Heathrow	4,0	-	5,0	-/=	4,0		2,0			

Score ranking 1 – 10 (1 = poor score ; 10 = excellent score)

- Schiphol's landside/road accessibility shows insufficient scores for all modalities

Perception mainport user groups

Port of Rotterdam vs Antwerp

	Travel time	trend	Reliability	trend	Capacity	trend	Flexibility	trend	Cost	trend
Antwerp										
*Road	4,5	-	4,5	-/=	5,0	-/=	5,5	=	5,5	-/=
*Water	7,0	-	7,0	-	7,0	+	8,0	-	8,0	-
Rotterdam										
*Road	4,7	-	4,3	-	3,4	-/=	4,6	=	4,6	-
*Water	7,0	-	6,5	-	7,0	+	8,0	-	8,0	-

Score ranking 1 – 10 (1 = poor score ; 10 = excellent score)

- Both countries are confronted with insufficient valuations on road accessibility
- Antwerp scores even slightly higher on water accessibility

Conclusions

Schiphol Airport

- Good performance on rail accessibility as a result of great density of the network and relatively high frequencies of services
- Road accessibility critical due to congestion, relatively low speed limits and geographical position, and needs to be improved substantially

Conclusions

Port of Rotterdam

1. Excellent water accessibility due to widespread waterway network
2. Good rail network owing to the network density and frequencies of services (only minor differences between the mainports)
3. Quality road network could be improved, primarily as of the level of congestion

The end

« Thank you for your attention! »

Questions??

