

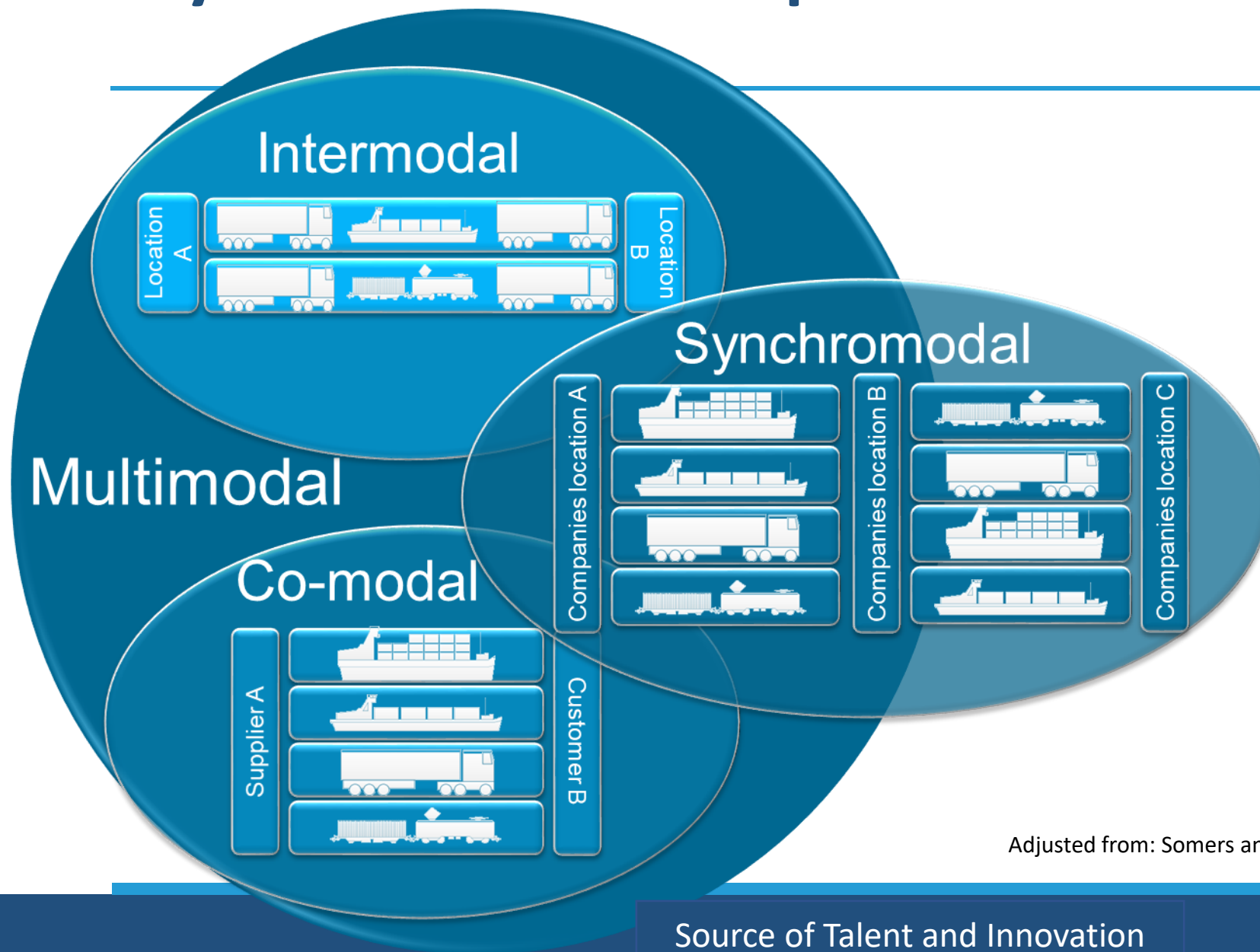
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THE CURRENT STATE OF SYNCHROMODALITY: AN APPLICATION OF A SYNCHROMODAL MATURITY MODEL ON CASE STUDIES IN THE NETHERLANDS AND BELGIUM

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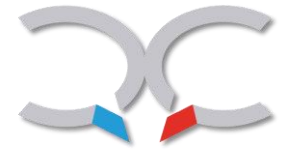
Synchromodal transport



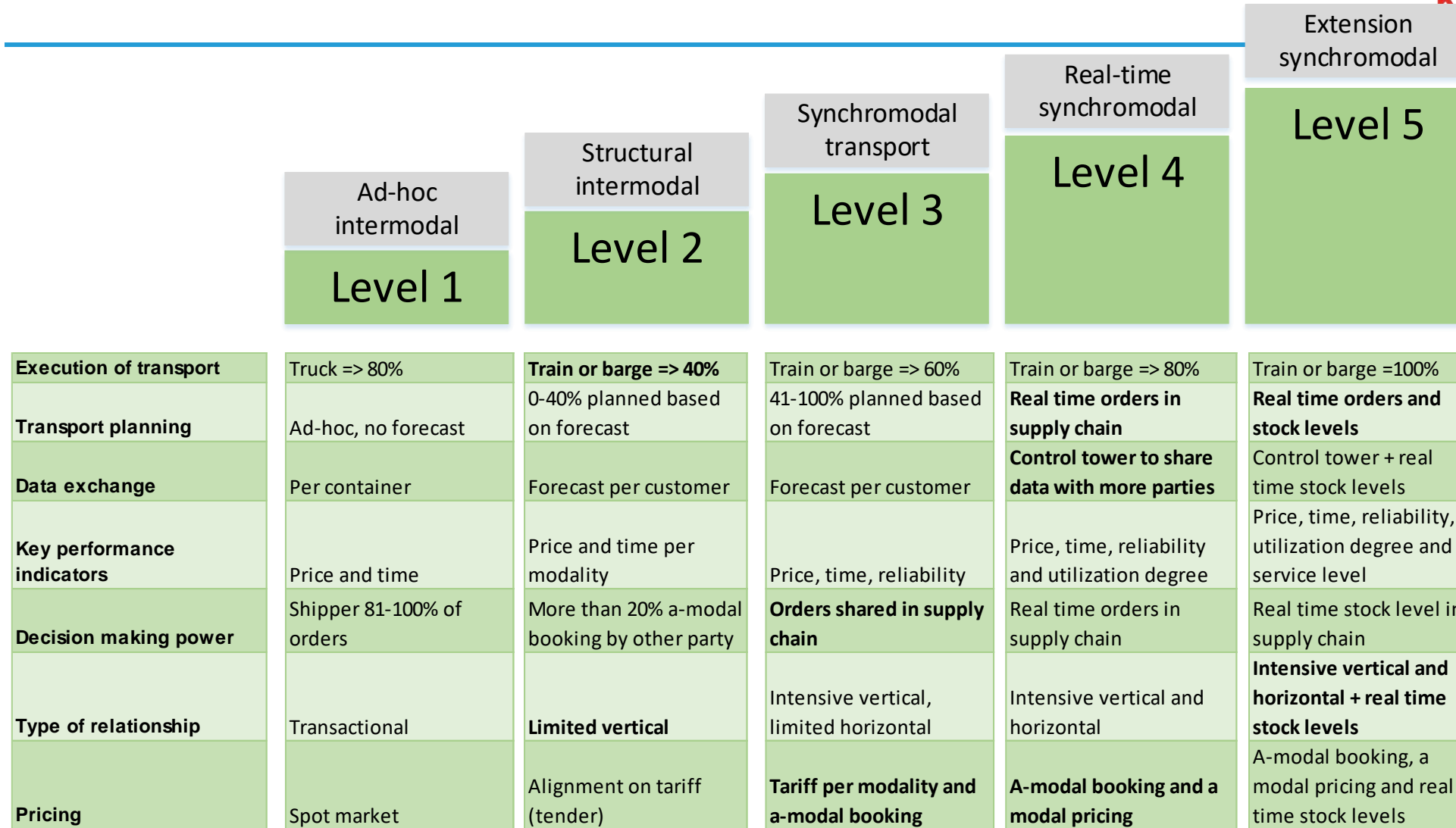
Adjusted from: Somers and Tißen (2014), & Singh, van Sinderen, and Wieringa (2016)

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Synchromodal maturity model



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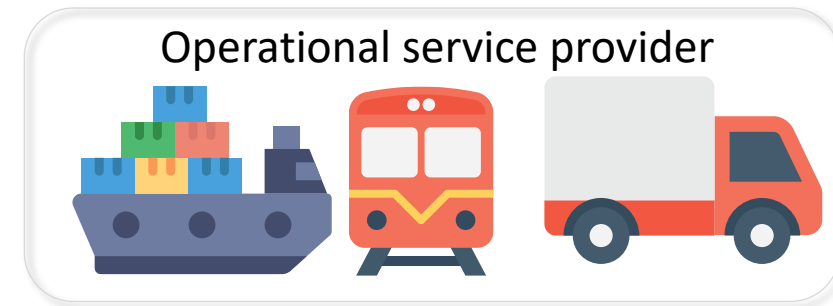
Application maturity model (1)

- Fontys University of Applied Sciences (Netherlands)
- Rotterdam University of Applied Sciences (Netherlands)
- HAN University of Applied Sciences (Netherlands)
- PXL University of Applied Sciences (Belgium)



Application maturity model (2)

- Online tool development
- Advise and benchmark companies
- More widespread application of intermodal and synchromodal transport



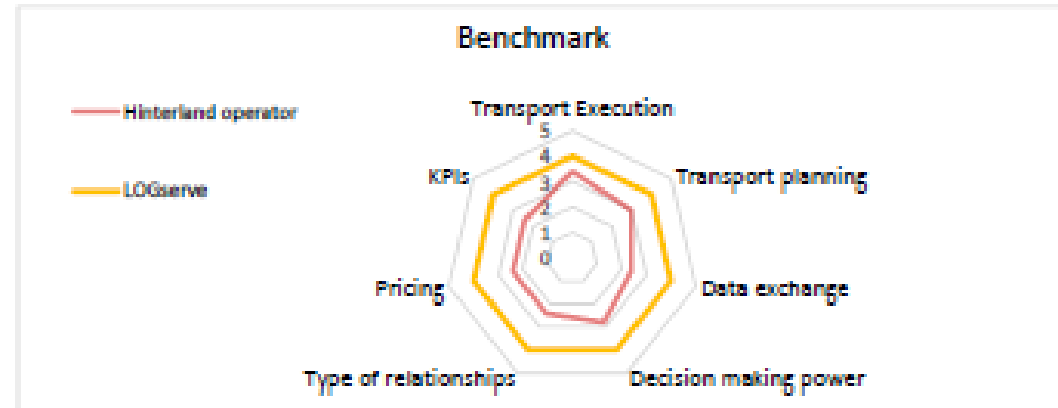
Synchromodal report advice

Supply chain transport analysis



Project: Synchro Maturity Model 3.0
Partners: Fontys Hogescholen
Hogeschool Rotterdam
Hogeschool van Arnhem en Nijmegen
Hogeschool PXL

With financial support from: KennisDC Logistiek & Connekt



Maturity model matrix	Level 1	Level 2	Level 3	Level 4	Level 5
Transport execution					
Transport planning					
Data exchange					
Key Performance Indicators					
Decision making power					
Type of relationship					
Pricing					



Proces flow questionnaire



Student
workshop



Practice 2nd time
with cases



Contact company



1st interview with
questionnaire



Send e-mail to
Fontys



Receive results



Discuss results
with company



Write final report

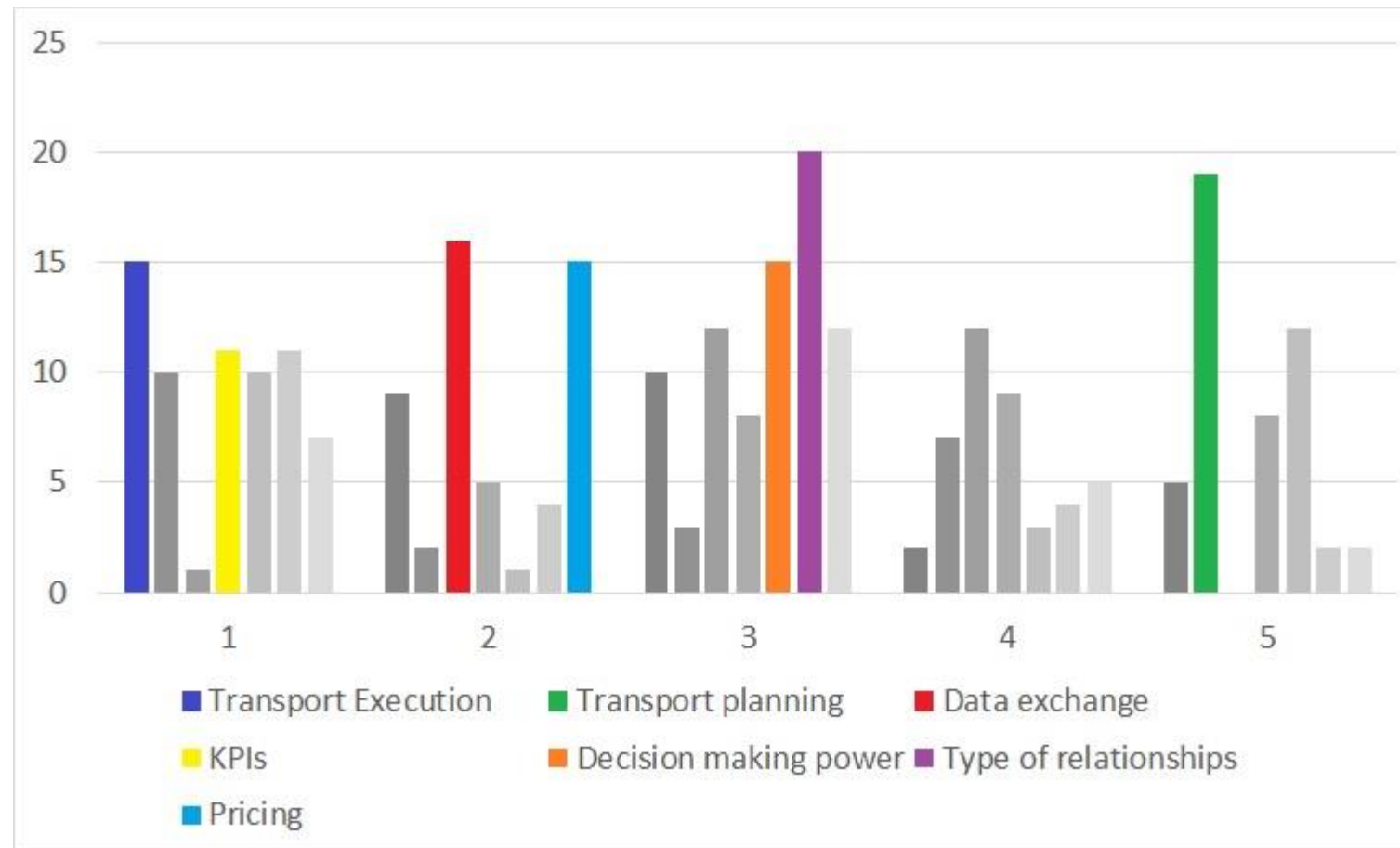
Sample

- 41 companies
 - 23 Logistics service providers
 - 15 Shipper/ Manufacturers
 - 1 Forwarder
 - 1 Hinterland operator
 - 1 Shipping line
- 32 based in the Netherlands, 7 in Belgium, 2 other

Usage of modalities in Belgium and Netherlands

- Road is preferred modality
 - For 75% preferred modality in the Netherlands
 - For 57% preferred modality in Belgium
- Rail is used more in Belgium (29% first and 57% 2nd)
- Barge is used more in the Netherlands (16% first and 47% 2nd)

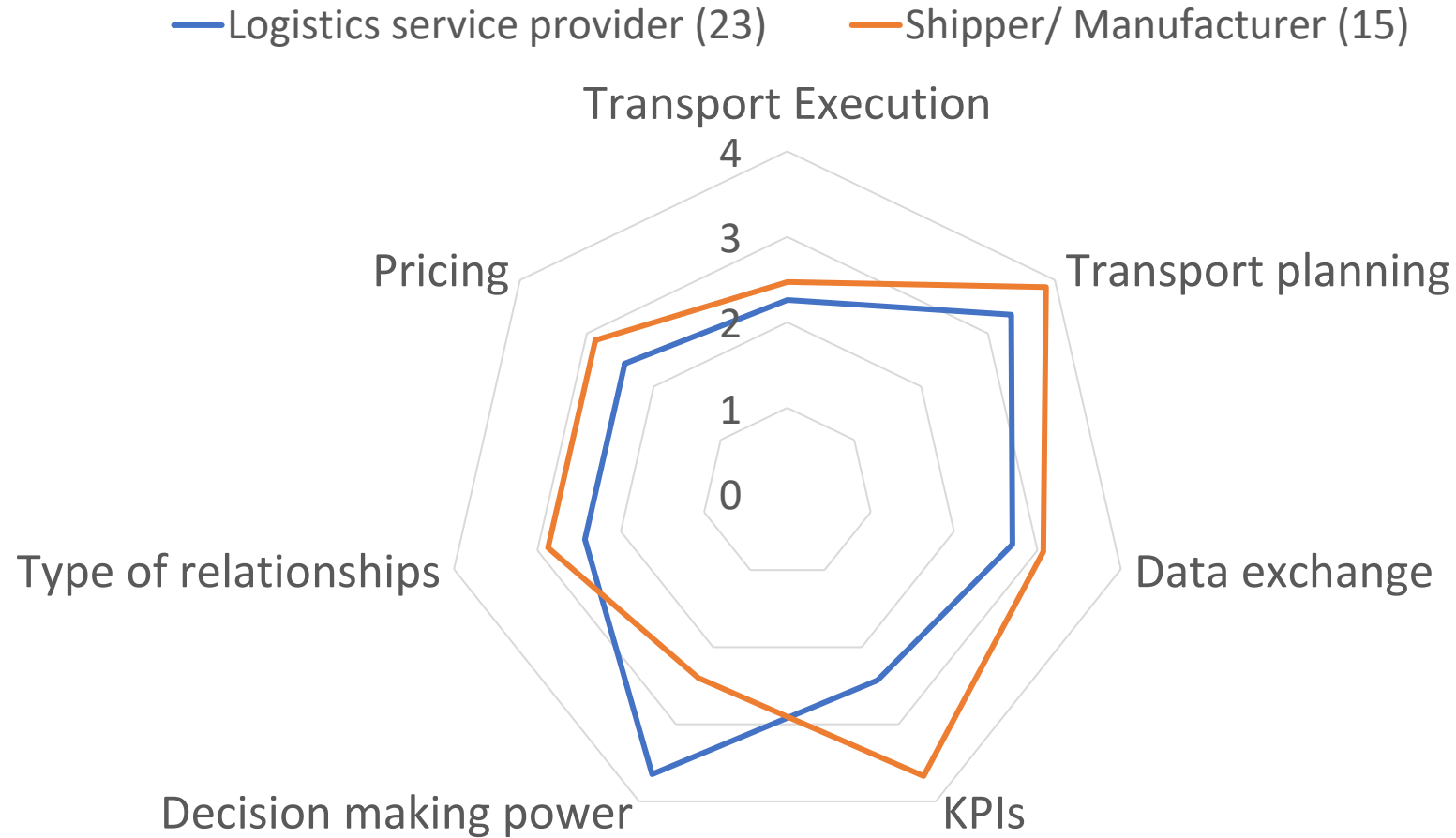
Score count for maturity factors



Maturity score per component

Component	Average score	Predicting score
Transport Execution	2.34	0.34
Transport planning	3.56	0.29
Data exchange	2.85	0.44
KPIs	2.95	0.34
Decision making power	3.15	0.39
Type of relationships	2.56	0.54
Pricing	2.51	0.46

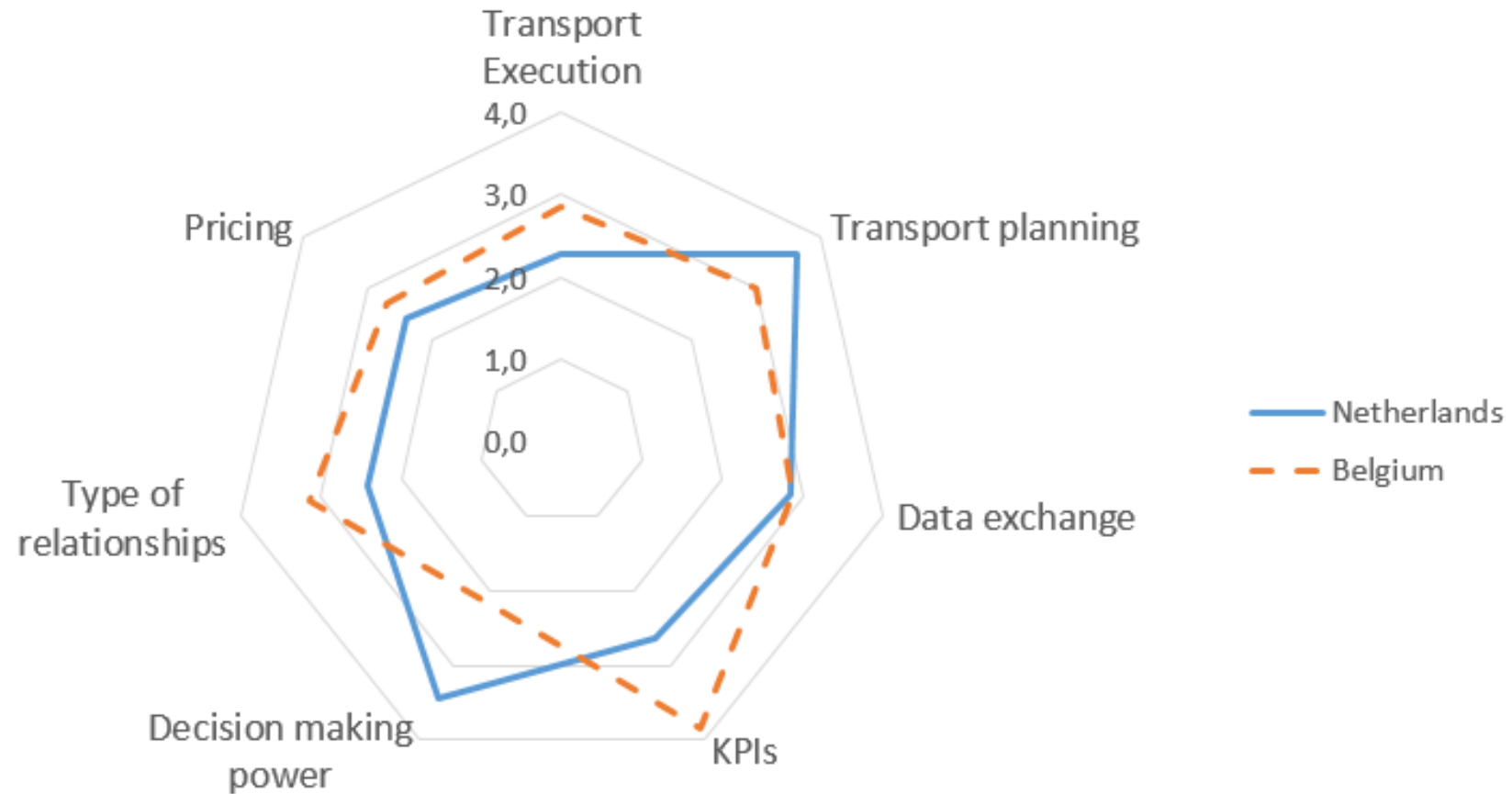
Average maturity scores per role



Maturity scores per role

	Logistics service provider (23)		Shipper/ Manufacturer (15)	
	Average	Standard deviation	Average	Standard deviation
Transport Execution	2.26	(1.63)	2.47	(0.99)
Transport planning	3.35	(1.87)	3.87	(1.25)
Data exchange	2.70	(0.97)	3.07	(0.70)
KPIs	2.43	(1.38)	3.67	(1.50)
Decision making power	3.65	(1.30)	2.40	(1.50)
Type of relationships	2.43	(1.34)	2.87	(0.74)
Pricing	2.43	(1.12)	2.87	(0.92)

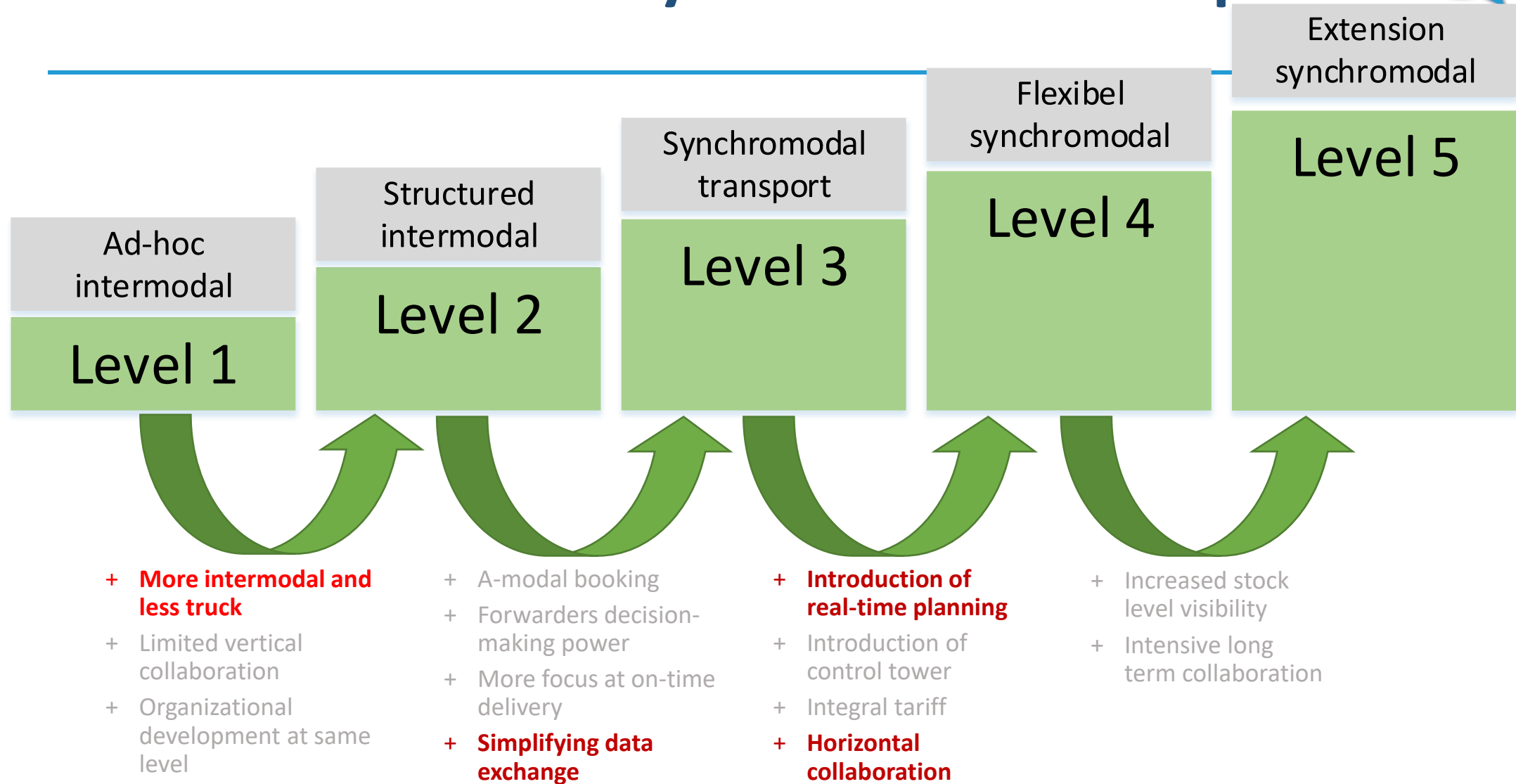
Maturity scores per country



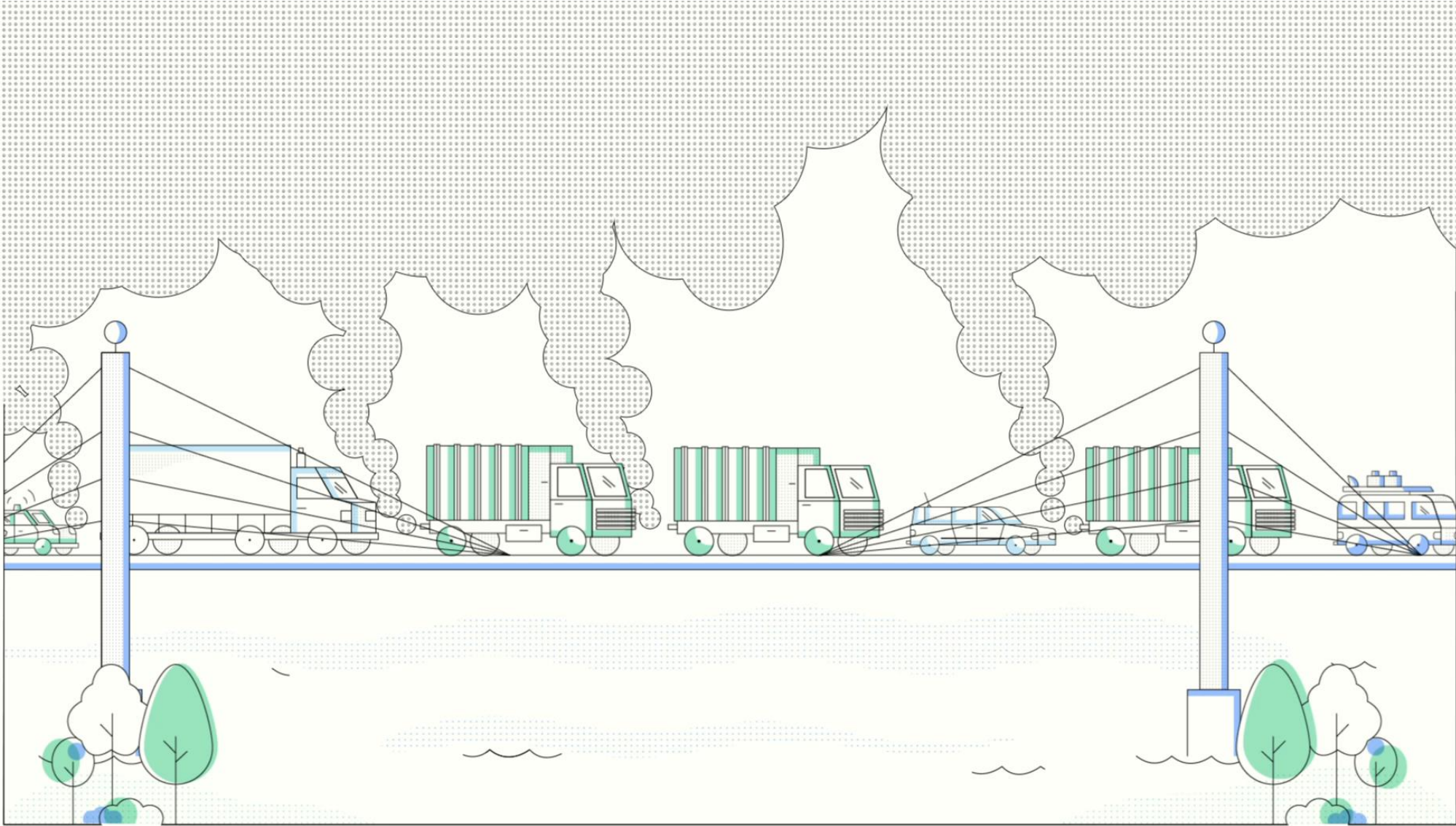
Relation between factors

- Strong correlation between:
 - Transport planning and data exchange
 - Data exchange and decision making power
 - Relationship type and KPIs

From intermodal to synchromodal transport



Future application within Europe



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Thank you for your attention!



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