



Distances in Intermodal statistics in the Netherlands

Peter Smeets

UNECE WP 6, 12-14 June 2019, Geneva

Content

1. Context
2. Solutions
3. Statistical results



Context



context

1. Intermodal transport statistics are comparable on tonne-kilometre level
2. Distances are calculated based on EU-legislation
3. To calculate/estimate tkm per country adjustments are needed:
 - distance on national territory
 - total distance
4. SDG indicator 9.1.2 is partly based on tkm



Tonne-Kilometre (tkm) in EU legislation



Reference Manual on **Inland Waterways** Transport Statistics:

Unit of measurement of goods transport which represents the transport of one tonne by inland waterways over one kilometre. The distance taken into account is the ***distance performed in the reporting country***.



Rail Transport statistics methodology manual:




Tonne-km means the unit of measure of goods transport which represents the transport of one tonne (1 000 kilograms) of goods by rail over a distance of one kilometre. Only the distance on the ***national territory of the reporting country*** shall be taken into account.


















Road freight transport methodology manual:

Unit of measurement representing the movement of a road motor vehicle over one kilometre. ... The distance to be taken into consideration is the ***distance actually run***. It excludes the distance covered when the goods road vehicle is being transported by another means of transport.

Principles in data collection

Distance on national territory	Total distance	Principle
		territoriality principle
		territoriality principle
		nationality principle

Use of tkm

			
a. total tkm in the Eu (by reporting countries)			
b. total tkm in country X			
c. total tkm by nationality X			
d. tkm international transport loaded and unloaded in country x (incl. modal split)			

- 1) a. distance to the border of international transport is missing
b. transport of foreign companies is missing
- 2) distance abroad of cross-border journeys is missing

Solutions



Solutions: IWW total distance

1. determining distance between IWW ports (UNLocodes) by using the Eurostat distance matrix. (circabc under 04. Inland waterways > 4_nomenclatures)
2. If not successful : NUTS3-NUTS3, NUTS2-NUTS3
NUTS2-NUTS2, NUTS2-NUTS1
NUTS1-NUTS1, NUTS0-NUTS3, NUTS0-NUTS2
3. Look up on internet (marinetraffic, the blue road etc.)
4. Future: AIS data : averages or per journey

UNLoA	UNLoB	DISTANCE_NL	DISTANCE_TOTAL
DEKAS	BETES	175	768
DEKAS	BEZEL	237	805
DEKDR	BEANR	204	769
DEKDR	BECHE	176	801
DEKDR	BEGBB	195	760
NLRTM	ATVIE	138	1207
NLRTM	ATXXX	138	1341
NLRTM	NLAMS	95	95

NutsA	NutsB	DISTANCE_NL	DISTANCE_TOTAL
AT	BE257	147	1420
AT12	NL112	275	1012
AT124	NL4	148	1230



Solutions: rail

1. Detailed response from 1 (main) respondent
2. NUTS-NUTS table
3. Time-table scheduled transport with distances.



Solutions: Territorialisation of road transport

Geocoding :Location name or postal code are processed by an internet route planner (commercial software)

Result:

- Standardized location names and country codes
- latitude and longitude
- Border crossings
- ***Distance on national territory***
- ***Total distance***
- ***Distance matrix (place-place and also NUTS3-NUTS3)***

NUTS3 code : determined by a common used algorithm using latitude and longitude in combination with detailed NUTS3-shapes (provided by Eurostat).



Solutions: foreign road hauliers

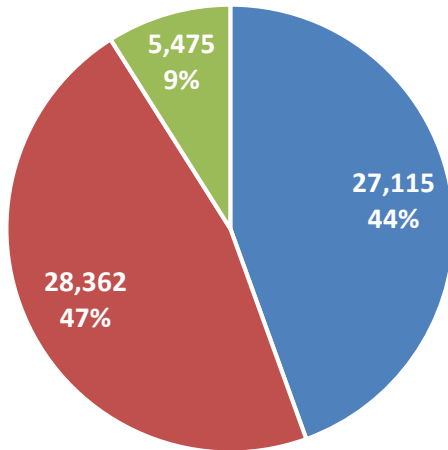
1. Using the “D-tables” provided by Eurostat
2. Selecting all transport that touches the national territory
3. Calculating the distance on national territory by using the NUTS3-NUTS3 matrix.

Statistical results



Modal split (tkm) of International freight transport, 2017

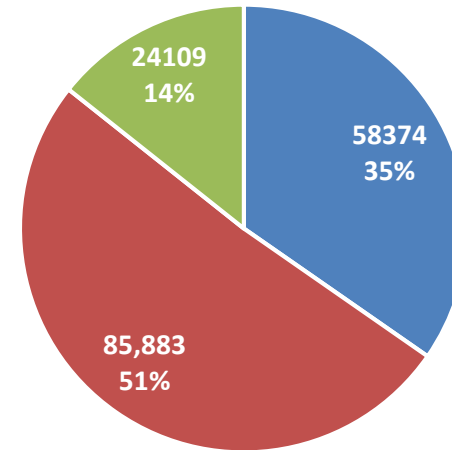
reported data



IWW and rail : distance on national territory
Road : total distance (NL hauliers)



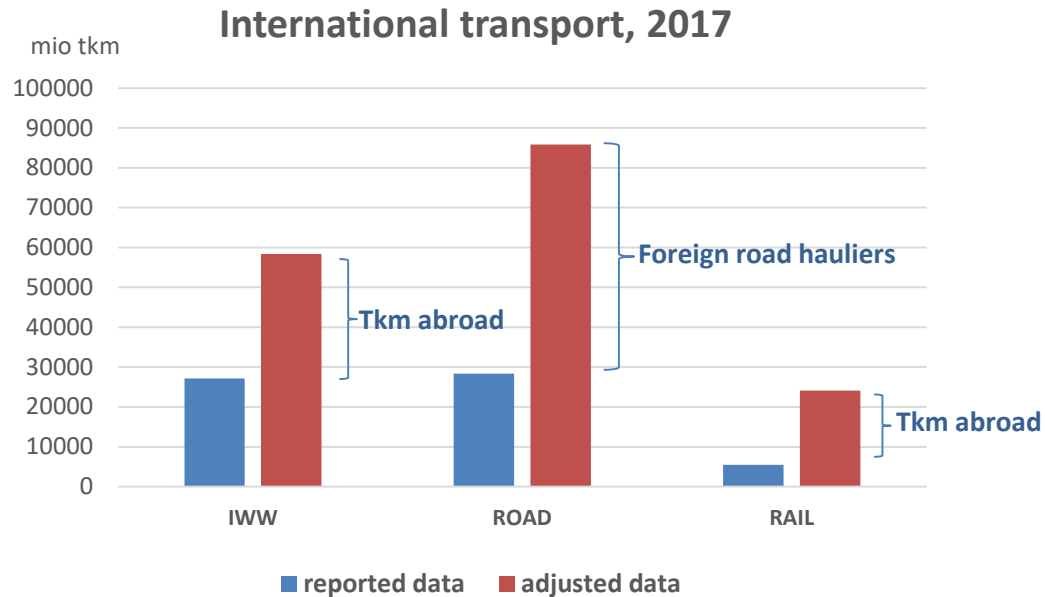
adjusted data



IWW and rail : total distance
Road : total distance (NL+foreign hauliers)

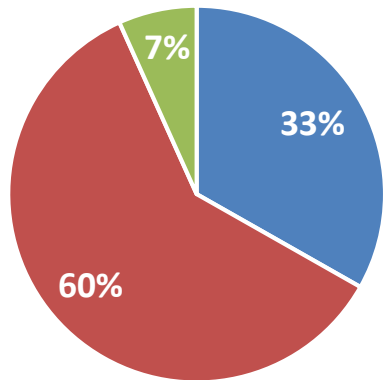


Effect of adjusting distance on tkm

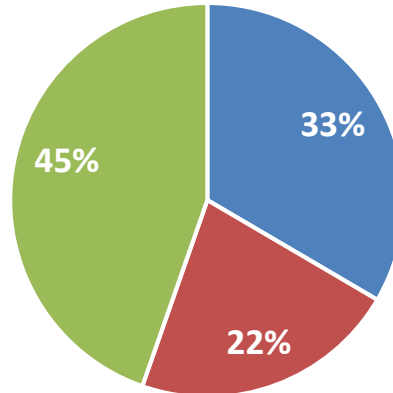


Modal split, 2017 (domestic and international bilateral)

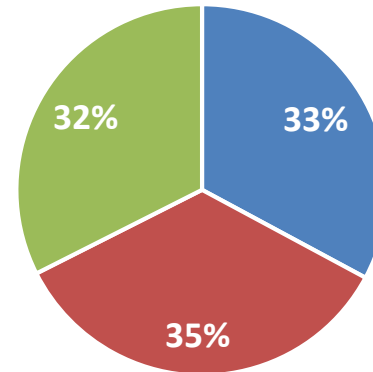
Tkm
(non containerised)



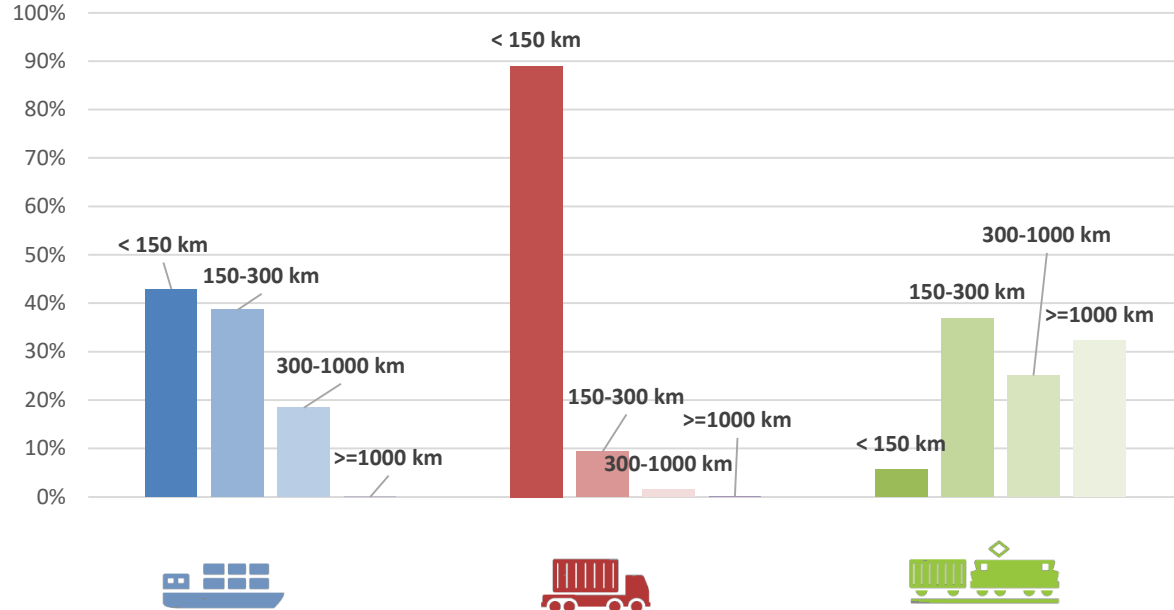
Tkm
(containerised)



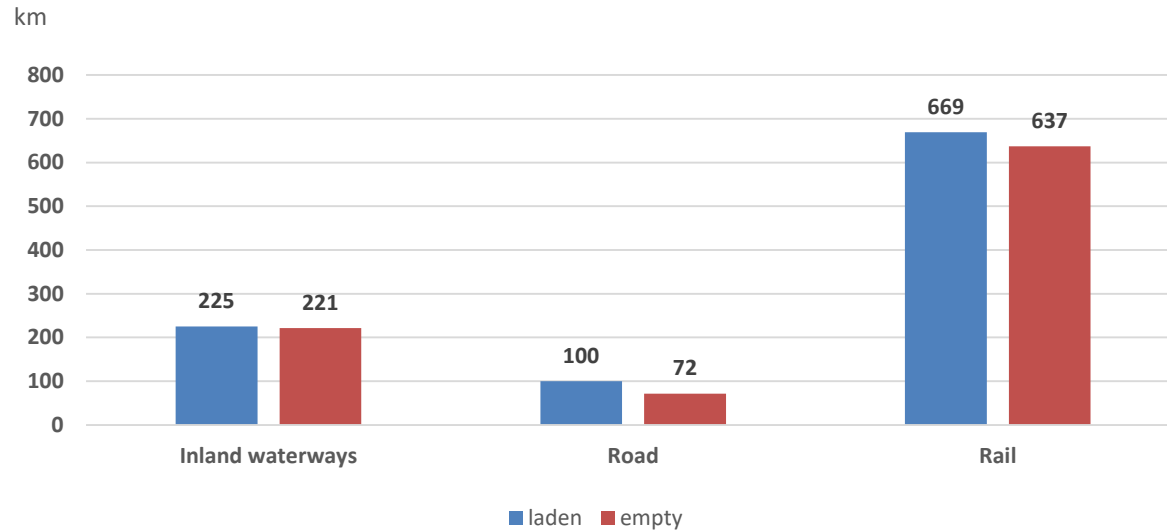
TEUkm



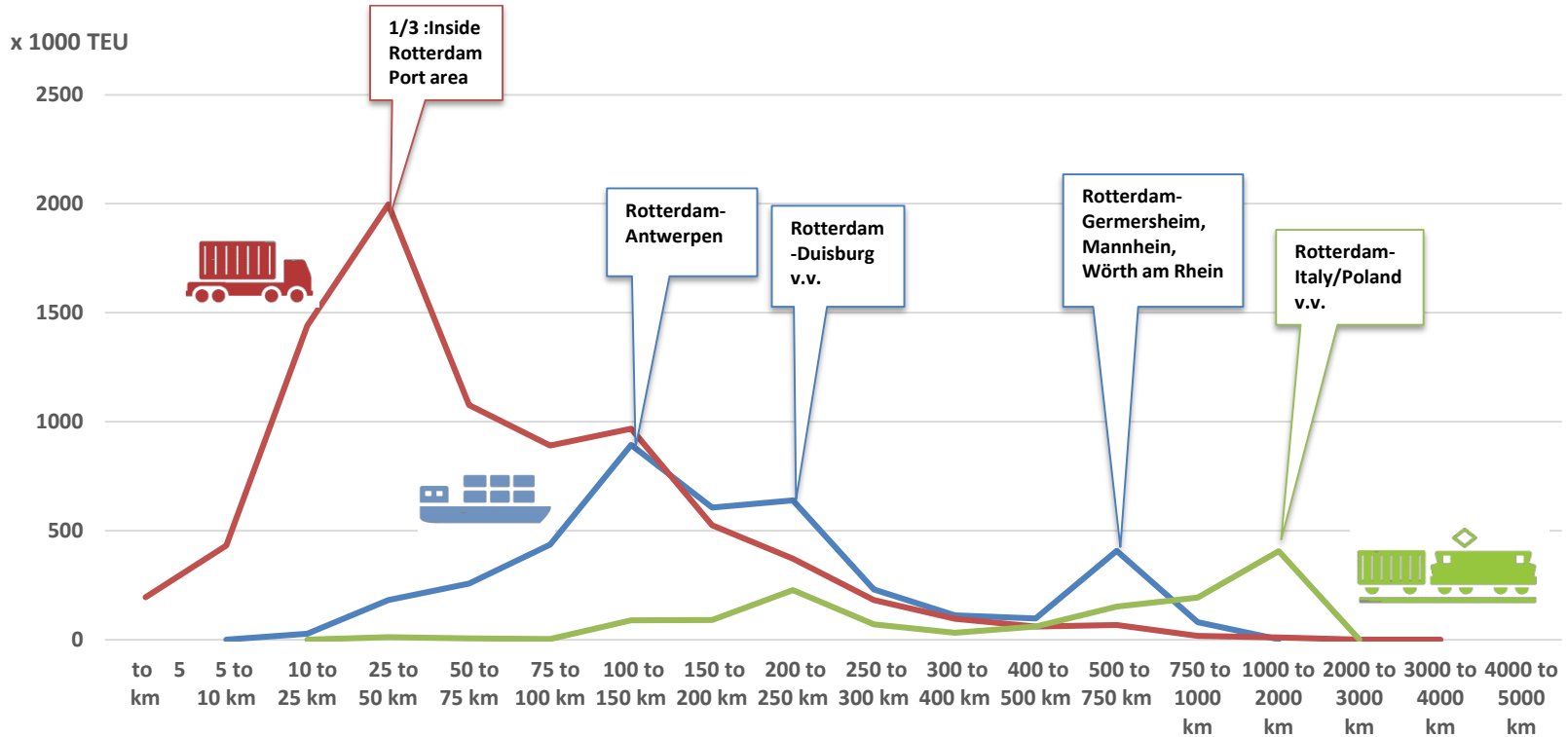
Container transport, empty TEU by distance class, 2017



Average distance of laden and empty containers, 2011-2017



Container transport per distance class (average 2011-2017)



Thanks for your attention

