



# REGIONAL ANALYSIS OF CHALLENGES AND NEEDS

for the Budapest Region

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Partner name

<i>CORCAP partner(s)</i>	<i>Related catchment area (area of analysis)</i>	<i>Related cross-border relations</i>
<b>BSZL &amp; KTI</b>	<b>Pest county, Budapest</b>	-

A PROJEKT AZ INTERREG CENTRAL EUROPE PROGRAMBÓL, AZ EURÓPAI REGIONÁLIS FEJLESZTÉSI ALAP TÁMOGATÁSÁVAL, AZ EURÓPAI UNIÓ ÉS MAGYAR ÁLLAM TÁRSFINANSZÍROZÁSÁVAL VALÓSUL MEG.



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## 1. CURRENT SITUATION ANALYSIS

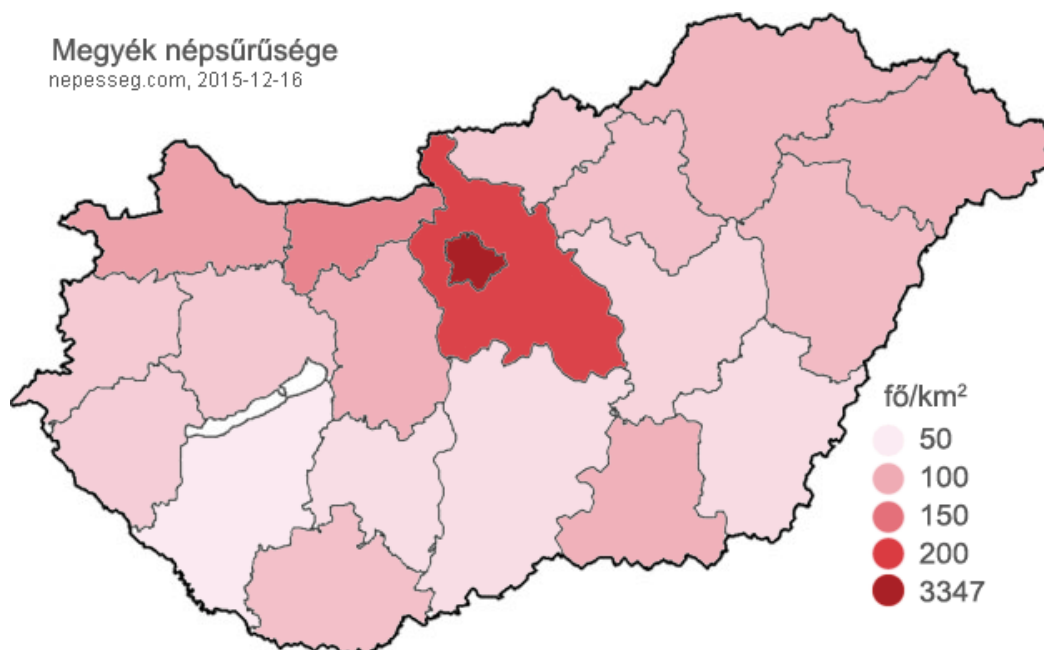
### 1.1. Geographical and socio-economic description of the area, delimitation and definition of its catchment area

#### 1.1.1. Geographical data, relief, natural and administrative boundaries

Budapest is the capital of Hungary, a political, cultural, commercial, economic and transport center. It covers an area of 525 sqkm, covers 25 km north-south and 29 km east-west. Budapest is divided by the Danube: Buda on the right bank and Pest on the left bank. The central part of the Buda side is hilly, the southern and northern areas with economic zones, the Pest side is flat, administrative, economic and commercial center with significant housing estates.

The city is divided by the Danube into a north-south direction with an average width of 400 m. There are nine road bridges and two rail bridges connecting the left and right banks of the Danube. There are 3 islands on the Danube in the area. The largest of these is the Csepel Island, which is nearly fifty kilometers long, with the free port of Budapest at its northern end.

Budapest has 23 districts and currently has 1.7 million inhabitants. The population density is 3347 inhabitants / sqkm. (figure 1.). The number of people living in the suburbs is also significant, so the Budapest agglomeration has a total population of 2.5 million.



1. Figure The population density of Hungary 2015.

Source: nepesseg.com





### 1.1.2. Identifying the corridor and determining its catchment area

The freight corridor related to CORCAP is located along the Budapest - Bratislava and Budapest - Vienna axes. The corridor includes the motorway M1 and road number 1, important for road transport, and the Budapest - Győr - Hegyeshalom (- Vienna) - Rajka - Bratislava railway line, the Danube shipping route from Budapest to Vienna and Bratislava, and the Liszt Ferenc International Airport.

The catchment area of the Budapest region can be extended to Pest county (figure 2.). Although Budapest is an industrial center of national importance, in the present study we focus on Pest County.



2. Figure Pest County

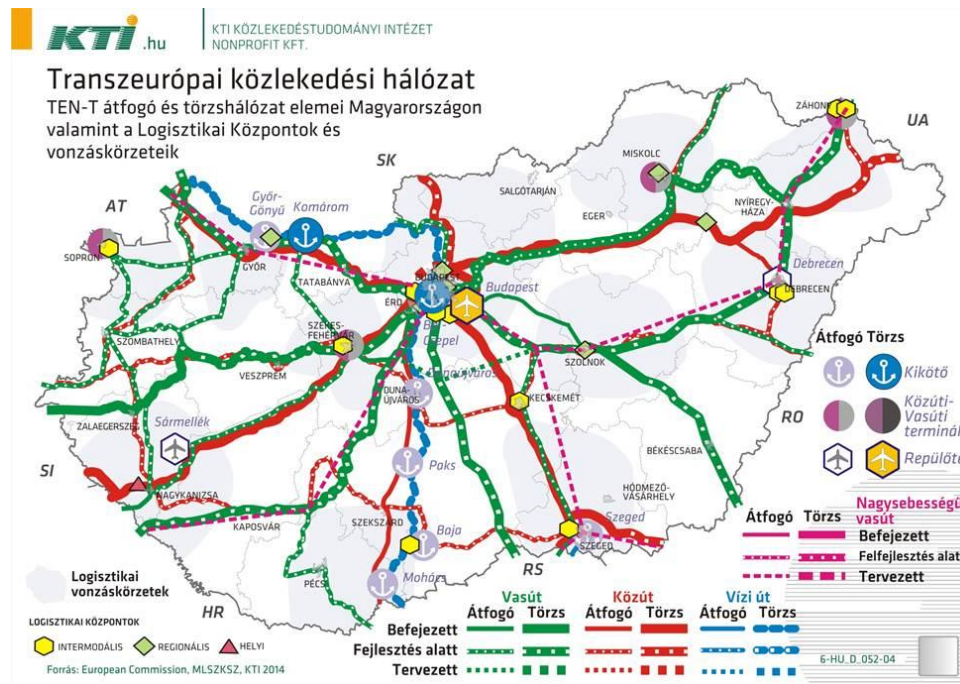
Source: [http://sikerado.hu/hataron-tul/europa/tamogatta\\_pest\\_megye\\_onallo\\_regiova\\_valasat\\_a\\_kozgyules/](http://sikerado.hu/hataron-tul/europa/tamogatta_pest_megye_onallo_regiova_valasat_a_kozgyules/)



### 1.1.3. Connections with relevant TEN-T and RFC corridors in the area

The following figure presents the Hungarian elements of TEN-T network. The following corridors run through Budapest: IV., V., X/B (road and rail), VII (Danube waterway).

The rail freight corridors (RFC) 6, 7 and 11 run via Budapest. See figure 3.



3. Figure The Hungarian elements of TEN-T network

Source: KTI

### 1.1.4. Examination of technical parameters of the area

Hungary basically has a transport network concentrated in Budapest, so the motorways and highways M1, M2, M3, M5, M6 and M8 depart from Budapest and runs around the capital the M0 motorway. 11 national and 3 local railway lines run from Budapest, and the city is home to the country's largest marshalling yard (Budapest-Ferencváros). The bottleneck of the railway network is the two-track Southern Railway Interconnection Bridge between Kelenföld and Ferencváros, on which all East-West train traffic flows. The only line of water transport is represented by the Danube River, which is part of the European waterway corridor of the Rhine-Danube, the freight bearer of the North-West-South-East European traffic route. The largest port in the country is the Freeport of Budapest. The bottleneck of the waterway is caused by the uncontrolled water level of the river, which limits economic navigability for much of the year. Most of the air traffic in Hungary is concentrated at the Liszt Ferenc (BUD) International Airport in Budapest, both in passenger and freight traffic.



### 1.1.5. Examination of intermodality and terminals in the area

Budapest and its environs are the economic and cultural center of the country, accounting for more than 40% of Hungary's GDP, not only for a significant part of public institutions, but also for the largest Hungarian tourist destination and the largest financial center of Central and Eastern Europe as well. Due to the industrial and commercial potential of the region, much of the logistics industry is concentrated in this area.

There are currently two intermodal hubs of national importance in the Budapest region. One is the Freeport of Budapest on Csepel Island, which provides intermodal connections by water, rail and road, and the other is the Budapest Logistics Center (BILK) (figure 4. & 5.), which serves as a rail and road connection at Soroksár Terminal station.



4. Figure Budapest Logistics Center (BILK)

Source: <https://www.slideshare.net/sandorlegendi/logisztikai-szolgltat-kzpontok-magyarorszgon>



### A Budapesti Intermodális Logisztikai Központ módosított elrendezési helyszínrajza



2-1. sz. ábra

5. Figure Budapest Logistics Center (BILK)

Source: <http://www.bfmt.hu/referenciak/budapest-xxiii-ker-budapesti-intermodalis-logisztikai-kozpont.html>

## 1.1.6. Bottlenecks, barriers

### Road transport

The condition and capacity of the transport infrastructure detailed below is low and traffic jams have become permanent. The major deficiency of the road network is the incompleteness of the M0 ring road and the condition of the Budapest road network. Crossing Budapest through the city is slow, which is why many people use the M0 motorway. The problem is that if something goes wrong (e.g. an accident, road construction), the capacity of the road will be highly reduced and congestion of several kilometers may be sustained (figure 6.). Figure 6 shows that on a normal weekday morning, there was a significant congestion in the southern sector of the M0 motorway and the Könyves Kálmán Krt - Hungária Krt. ringroad.



6. Figure Traffic jam map Budapest: Average workday

Source: Google map

The deficiency of the internal road network structure of Budapest plays a major role in this: low number and insufficient capacity of transversal road network elements. Another reason is that a significant part of Hungarian logistics is settled along the M0 motorway near the southern border of the capital, so not only significant transit traffic, but also a similar amount of targeted traffic is concentrated here.

### Rail traffic

The railway capacity of Budapest is limited, both north-south and east-west rail traffic run on a double-track railway bridge, which is at the border of its infrastructure element. If the bridge would be damaged, the rail traffic passing through Budapest would ruin.

51,000 passenger and 35,300 freight trains run over the bridge each year. The bottleneck is the bridge and the associated Ferencváros station (figure 7.) as a node point where all tracks crossing at the same level, thus significantly reducing capacity.



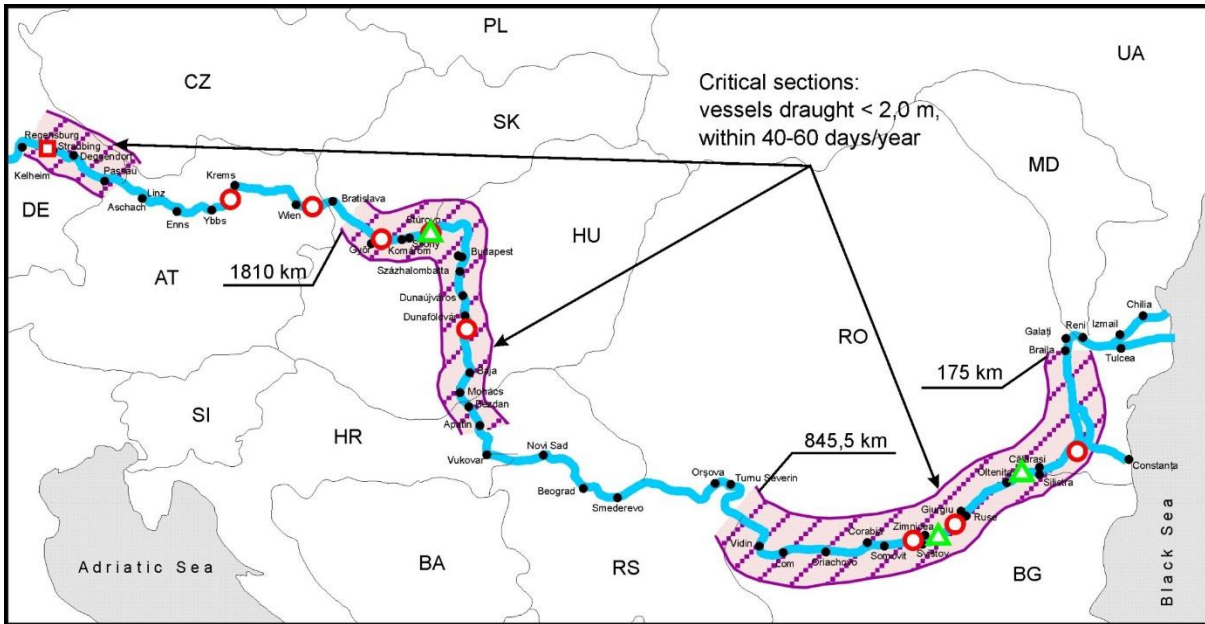
7. Figure Southern part of the ring railway line in Budapest, featuring the southern railway bridge

Source: <http://bvs.hu/budapest-vasuti-strategia-bvs-budapest-rail-node-study-brns-első-szakcikk/>

## Water transport

A key factor in the inland navigation system is the capacity of the Danube waterway, which is primarily determined by the prevailing navigability conditions (ie the Danube's navigability over a year, in a cost-effective manner, with a fully loaded dive). Navigability has a direct impact on the potential capacity utilization of infrastructure along the river. Provided they have adequate navigability conditions and ongoing maintenance of the waterway infrastructure, the sector provides reliable and competitive freight services. All these are key prerequisites for integrating inland shipping as an environmentally friendly mode of transport into the logistics system of a modern economy.

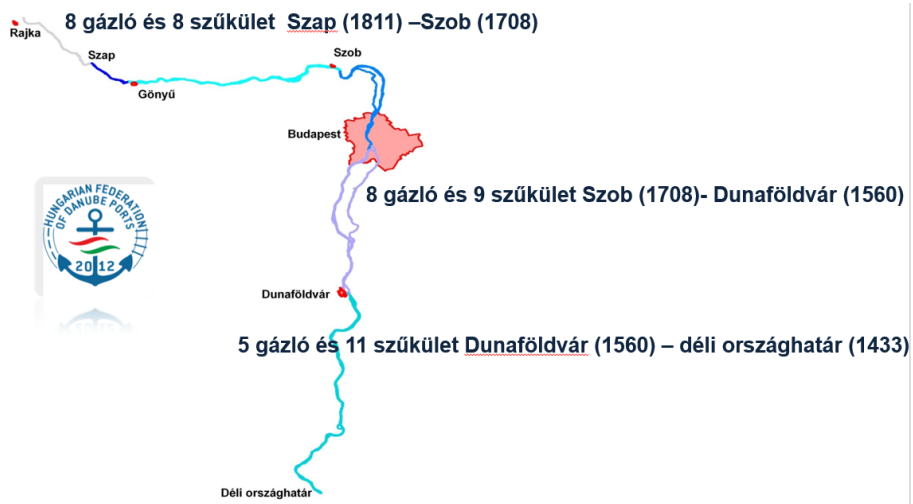
The Danube canals and bottlenecks are significant (figure 8. & 9.), which also limits the flow of the Danube-Main-Rhine waterway system. Integrated water management and river management are needed not only for navigation but also for upset sediment balance, water base protection, groundwater subsidence, backwaters and flood protection.



8. Figure Critical sectors along the Danube and planned developments

Source: [http://www.fomterv.hu/mmk/sites/default/files/balatonfoldvar-2012/Szalma\\_Botond.pdf](http://www.fomterv.hu/mmk/sites/default/files/balatonfoldvar-2012/Szalma_Botond.pdf)

Legend: ○ creation of retaining section, ▲ important hydrotechnical projects without retaining scheme, □ local hydrotechnical project



9. Figure Location of gasifiers and bottlenecks on the Hungarian Danube section

Source: presentation of Capt. Szalma Béla előadása, Főmterv Conference, 30.01.2019

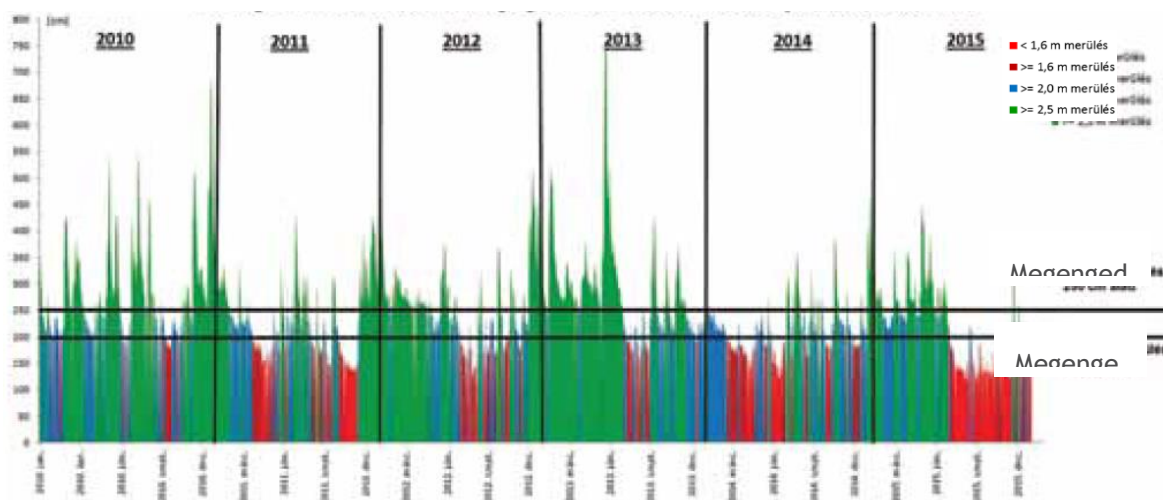
There are three critical sections of the Danube where the depths of vessels are less than 2 meters for 40-60 days a year. One of them is the Danube section of Hungary.





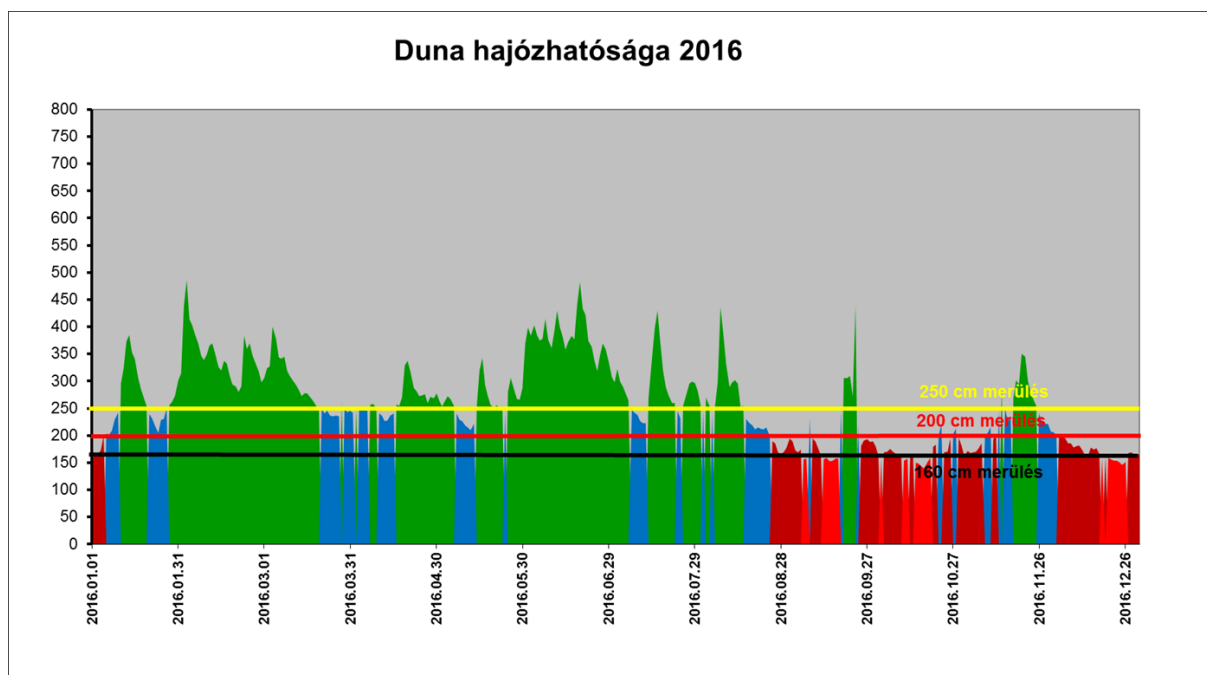
In the Hungarian and Hungarian-Slovakian Danube sections, at low navigable water levels, there are 21 wading and 28 seaway bottlenecks and 6 ice barrier sites at 378 river kilometers, which, due to an average depth of 50 cm (50-100 m wide) shipping (figure 10. & 11.). The fairway has been virtually unmanaged on the Danube for 20 years, with the result that navigation at low water levels is limited, or at times not possible at all, with European standards.

The hectic change in the water level of the Danube, as a result of melting and drought, affects the navigability of the Danube and the capacity utilization of cargo vessels.

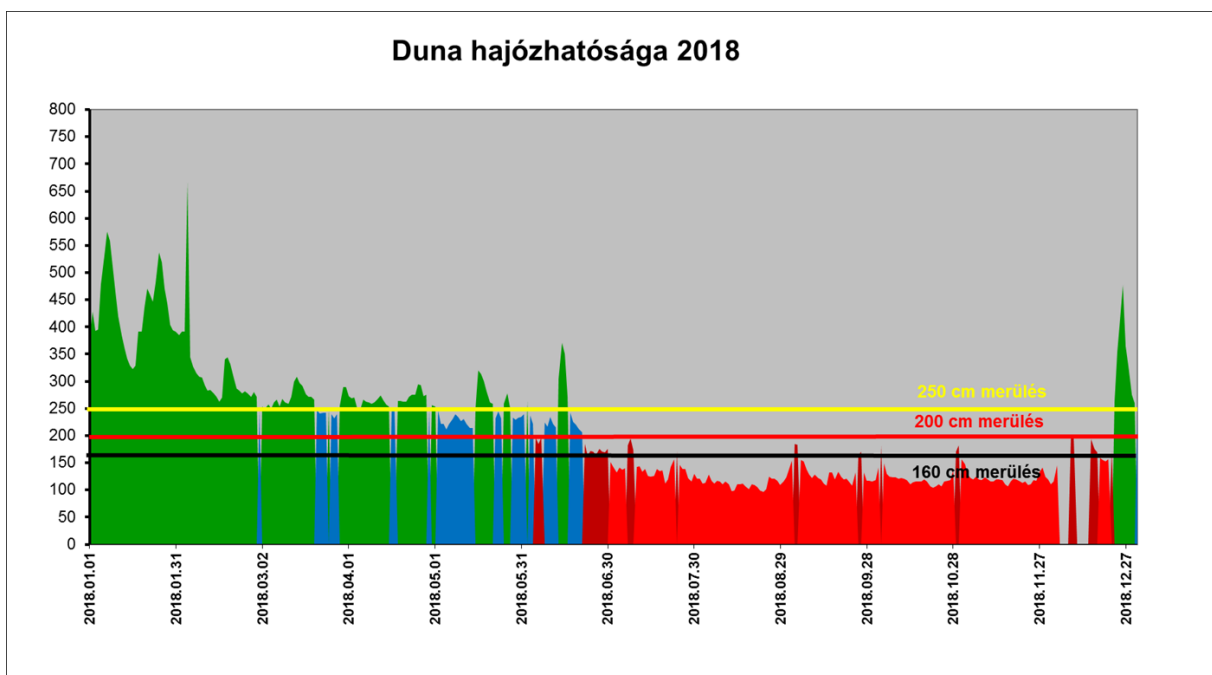
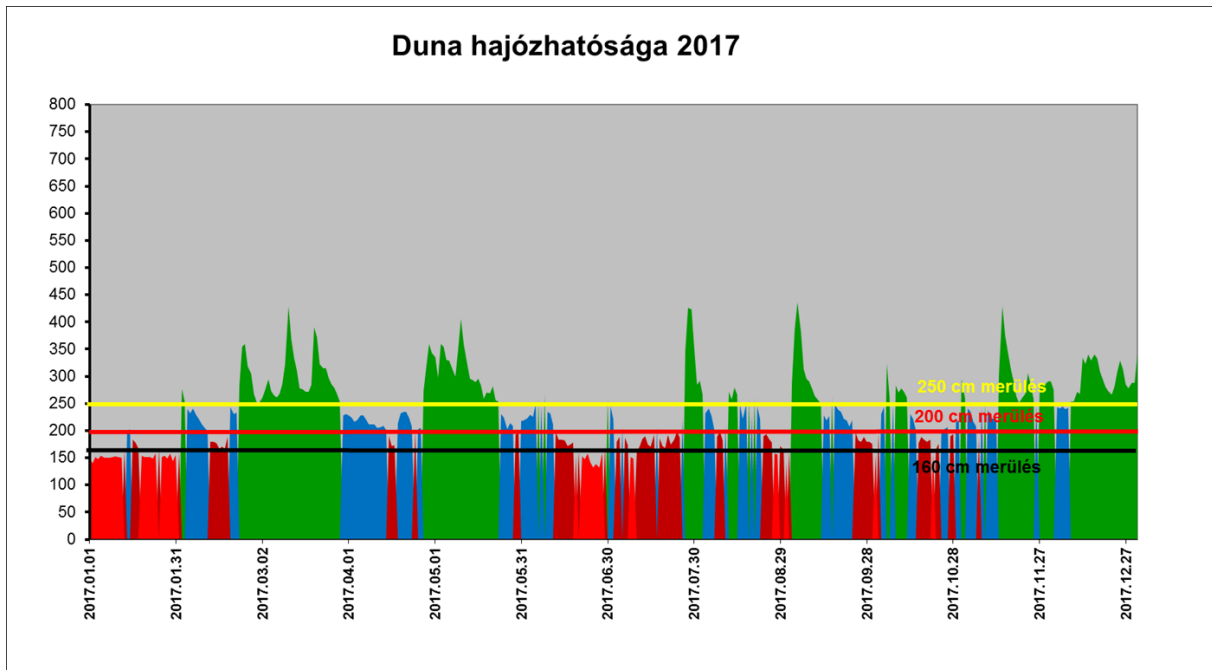


10. Figure Navigability of the Danube in the Hungarian section 2010-2015

Source: G. Horváth - B. Kozma: "A dunai vízi út fenntartható kihasználtságának vizsgálata" 2017.







11. Figure Navigability of the Danube in the Hungarian section 2016-2018

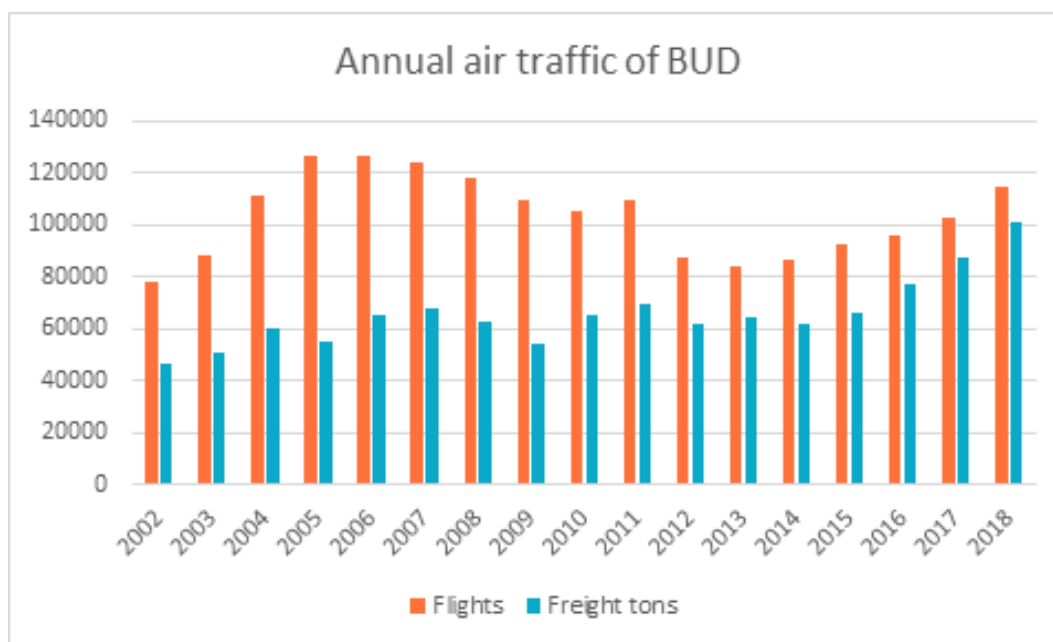
Source: Plimsoll Zrt.

In recent years, the most dramatic situation was in 2018 when inland waterway transport became impossible for half a year after favourable water conditions at the beginning of the year.



## Air traffic

Air traffic is mainly limited by the capacity of Liszt Ferenc Airport. The number of boardings and landings has decreased due to the night ban, and a significant number of day slots are used by airlines. Nonetheless the air traffic is growing (figure 12.).



12. Figure Annual air traffic of Liszt Ferenc Airport, Budapest (2002-2018)

Source: KSH

## 1.2. Presentation of the transport infrastructure system

### 1.2.1. Transport infrastructure characteristics (road, railways, waterways, airports)

#### Road infrastructure

Both Bratislava and Vienna are connected with Budapest by the M1 motorway, which runs 2x2 lanes and with a few exceptions, with a maximum speed of 130 km/h. Due to the terrain the speed limit is 120 km/h on a short stretch of the Tatabánya area. The speed in the area of Budapest is only 100 km/h, which is due to the fact that the introductory section of the M7 motorway leading to Lake Balaton, which leads to Croatia / Slovenia, causes traffic jams during peak times.

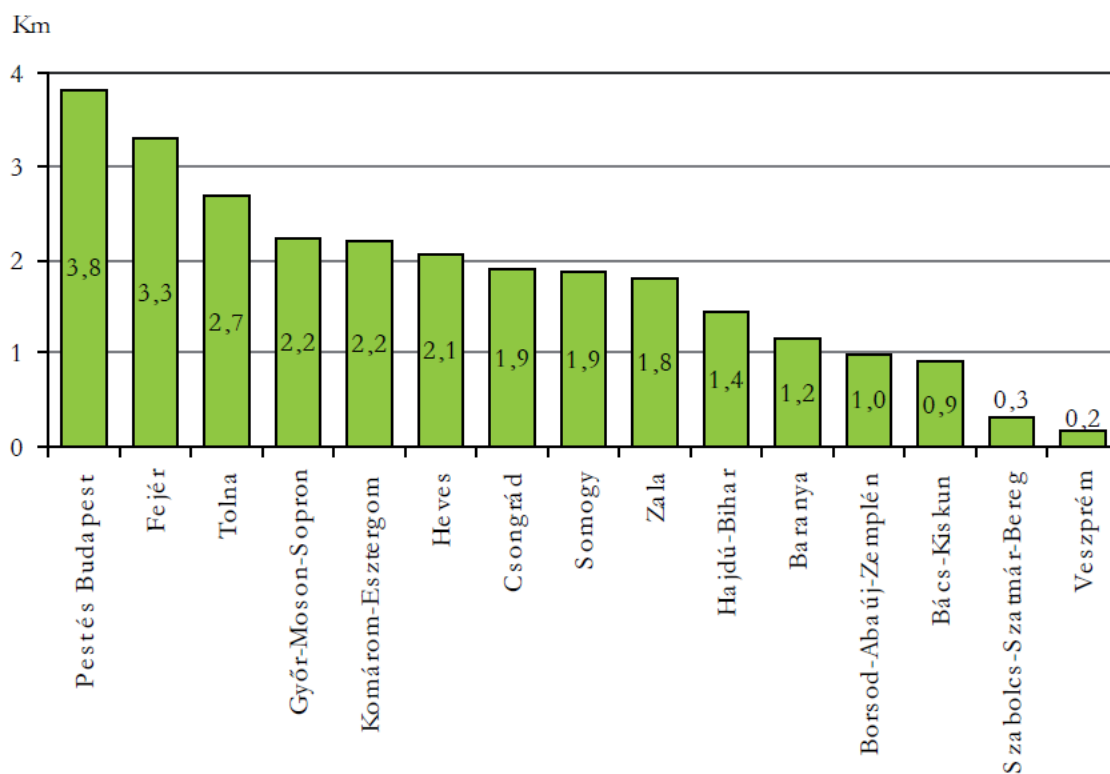
In the direction of Bratislava, the new highway has been completed, so the speed can reach the 110 km/h, the Budapest-Győr-Bratislava-Brno-Prague road connection has been fully completed. The construction of the third traffic lane between Budapest and Győr is urgently needed as this section is the most significant congestion on the highway network.



No. 1. main road has 2x1 lane and parallel to the M1 motorway. Towards Bratislava you can drive from Mosonmagyaróvár on the No. 150 road on 2x1 lanes.

The M0 motorway extends around Budapest with a minimum of 2x2 lanes, which is used to drive traffic through Budapest out of town. The busiest - the southern Budapest section of the M1, M7, M6 and M5 motorways, has been expanded to a 2 x 3 lane, but the major disadvantage of the motorway is that it is not fully built in the north-west sector. The figure 13. represents the length of the highways / 100 sqkm / counties.

### A 100 km<sup>2</sup>-re jutó gyorsforgalmi utak (autópályák és autóutak) hossza\*, 2011

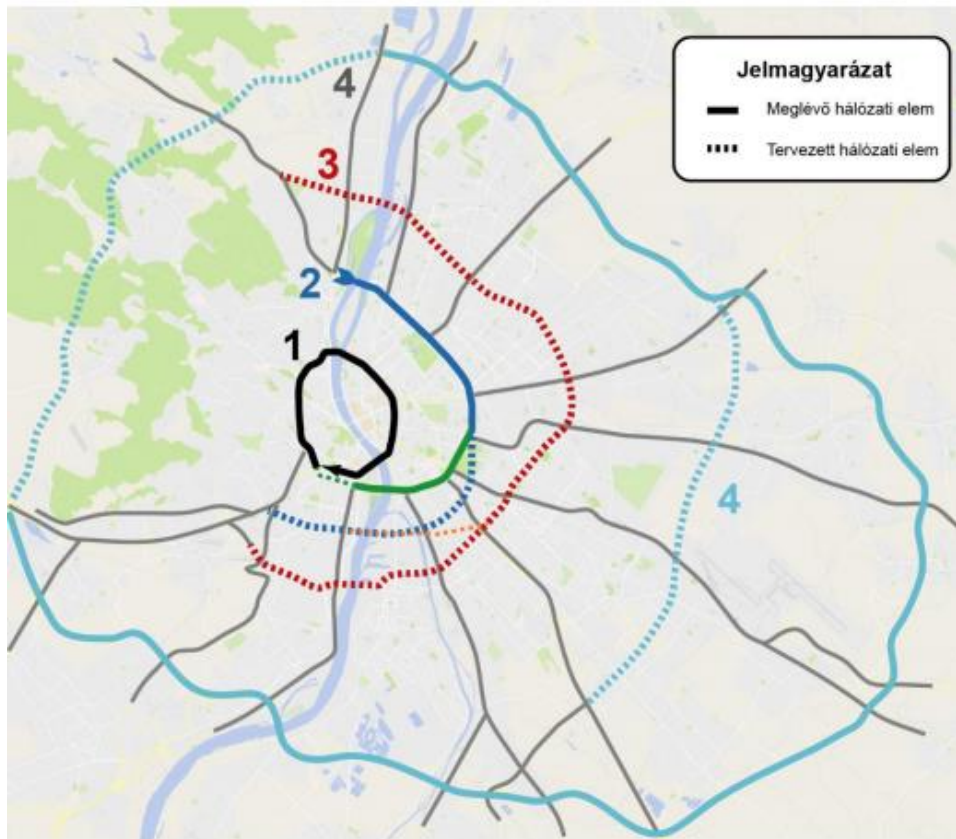


\* Vas, Jász-Nagykun-Szolnok, Nógrád és Békés megyékben nem található gyorsforgalmi út.

13. Figure Density of the highway network per county

Source: KSH

The structure of the road network of Budapest was formed in the 19th century and as a result, like other European cities, it has not enough capacity of a transit vehicles, but also internal vehicles. Today's urban and public policy expectations do not require the development of the internal road network but the humanization of urban roads. Thus, the main goal is to eliminate transit traffic from the inner-city area, which at the same time requires the development of external road network connections (figure 14.). In the latter, Budapest is significantly lagging behind, with the result that long-term congestion is developing.



14. Figure Developptconcept for roadnetwork of Budapest agglomeration  
 Source: Budapest Mobility Plan 2030

## Railway infrastructure

There are two international railway lines in the transport corridor determined by CORCAP project:

- Budapest - Győr - Rajka - Pozsony
- Budapest - Szob - Pozsony

The main line of CORCAP runs via Rajka, but there is another line via Szob towards Bratislava, as a detour.

The Budapest - Győr - Rajka line has double track between Budapest and Hegyeshalom and a single track from Hegyeshalom to Rajka. The line is electrified with DC 25 kV 50 Hz. And equipped with automatic interlocking system and with ETCS level 2. The maximum speed is 160 km/h. On some section there is limited speed of 120 km/h. The freight trains can run on the whole section with the necessary 120 km/h.

The Budapest - Szob line is also double tracked, electrified and equipped with automatic interlocking system. The maximum speed is 120 km/h on some section with reduction to 100 km/h. The line is not equipped with ETCS.

The railway infrastructure of Budapest cannot be said to be up to date. The network was built in the early 20th century. Ferencváros, the largest marshalling yard, is located in the city, with a wide territory that hinders its development. Freight trains on both lines run here and the trains are settled here.



Railway service of the Freeport of Budapest is also served via Ferencváros. Due to inadequate construction, freight trains must first go to Ferencváros station and then reach the port's logistics center.

The realization of the real estate development plans of today's "rusty zone", which will affect the relocation of today's Budapest-Kelebia 150 railway line and consequently the future role of today's Soroksári út station, will be a major problem. The Freeport's rail link needs to be resolved in the future, both in terms of layout and train arrangement.

**Water infrastructure:**

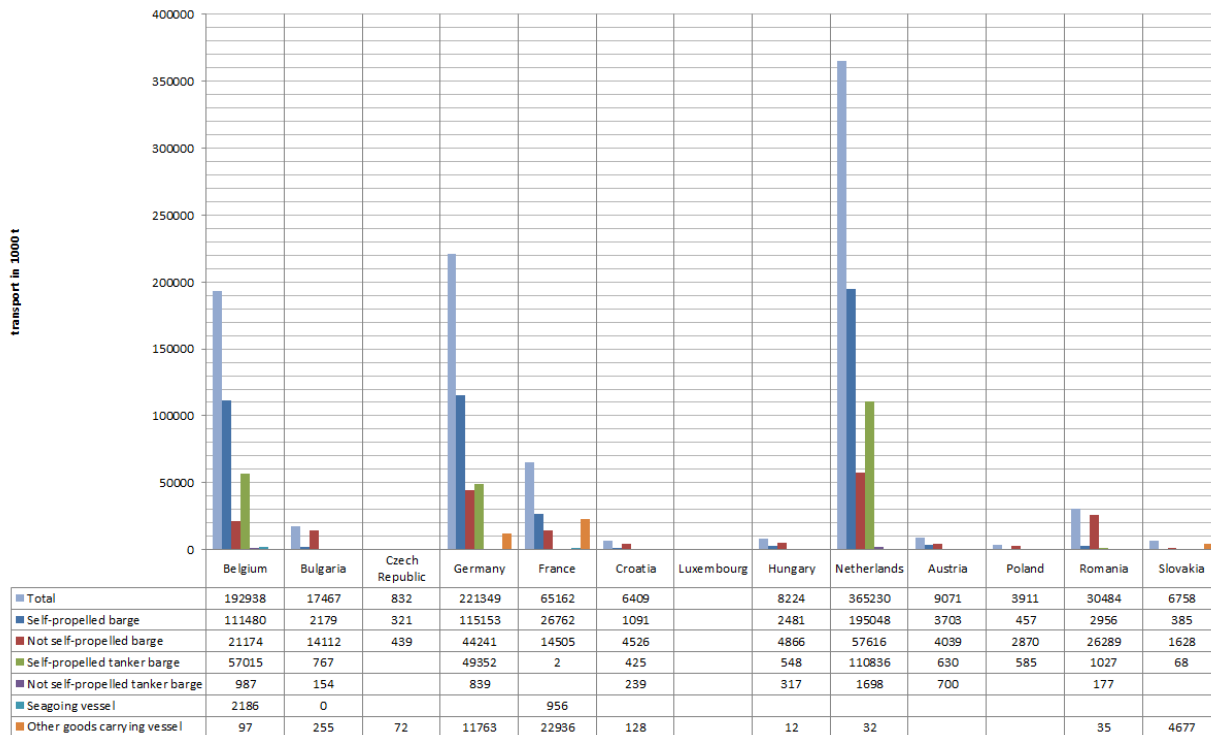
The following map shows the major ports along the Danube that generate the whole waterway transport volume along the Danube.



15. Figure Danube river navigation map

Source: [www.folyamhajo.hu](http://www.folyamhajo.hu)

The volume of the Hungarian inland waterway freight transport has represented 2,5-5% share of the total freight volume in the recent years. The Figure below shows the freight volume compared to other countries' in 2016. It also represents the proportions of vessel types in each county.

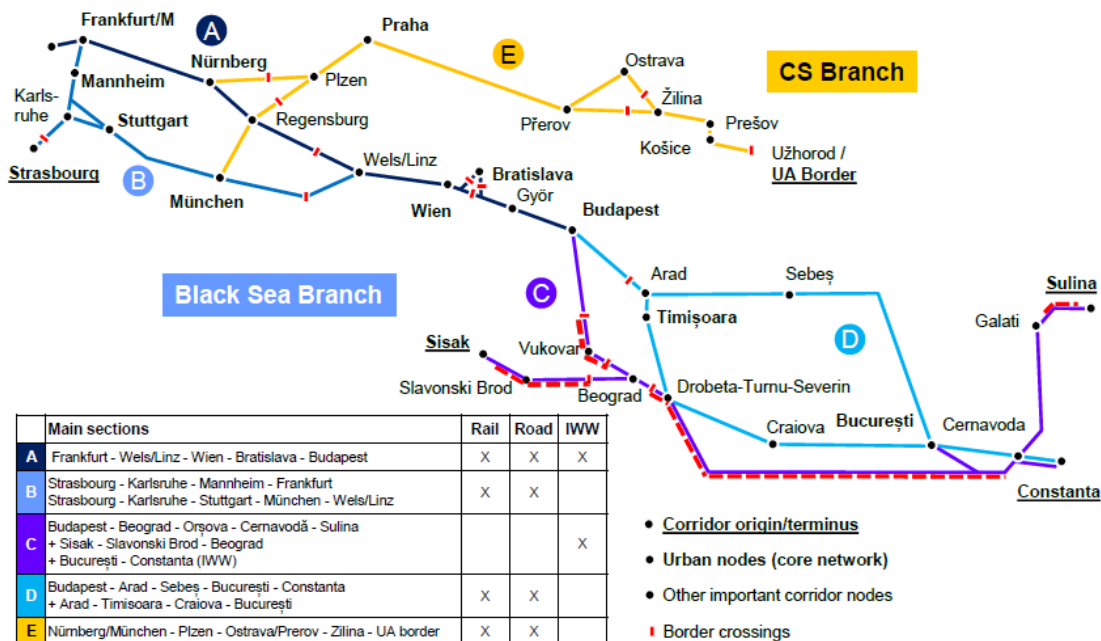


16. Figure Inland waterway transport by countries and by type of vessels in 2016

Source: HFIP

The total transported amount on waterways was 80 million mto in 2016, of which the Hungarian Danube turnover is 8 million mto and the Austrian is 11 million mto. These data indicate that there is still a lot of untapped capacity and potential in the Hungarian section.

The Hungarian section of the Danube, as part of the Danube - Rhine - Main waterway system connects not only with countries affected by inland-waterway, but also with the North - Sea and the Black - Sea. The Danube, as part of the Rhine-Danube corridor, is the main east-west link in continental Europe (figure 17.).



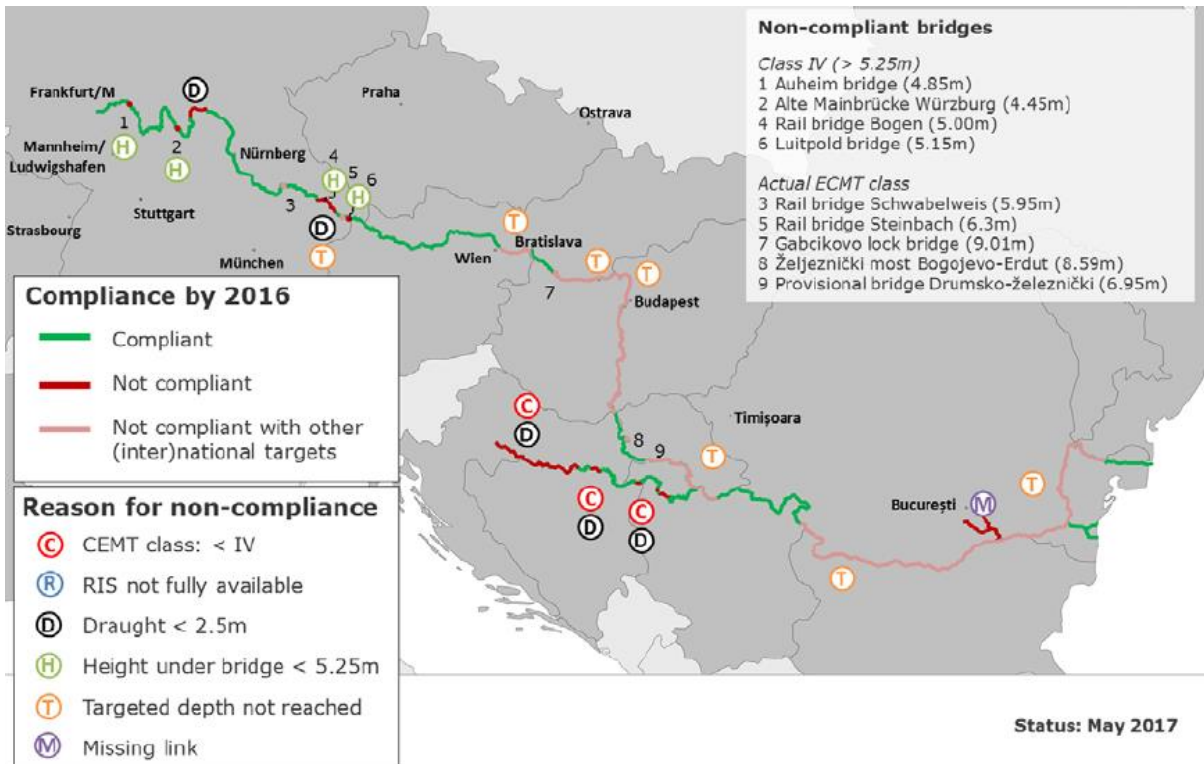
17. Figure The elements of the corridor of Rhine - Danube

Source: Rhine Danube Third Work Plan of the European Coordinator  
[https://ec.europa.eu/transport/sites/transport/files/3rd\\_workplan\\_rd\\_0.pdf](https://ec.europa.eu/transport/sites/transport/files/3rd_workplan_rd_0.pdf)

The corridor consists of 5715 km railroad network, 4488 km public road and 3656 river km inland seaway altogether, which crosses 9 EU countries and 4 non-EU countries. 18 inland ports and 1 seawater port can be found in its territory. 11 airports belong to it. and 16 trimodals and 27 railroads - public road terminals are part of the corridor.

The following chart below demonstrates the inland way of the corridor in 2016 with its infrastructural characteristics of navigability.





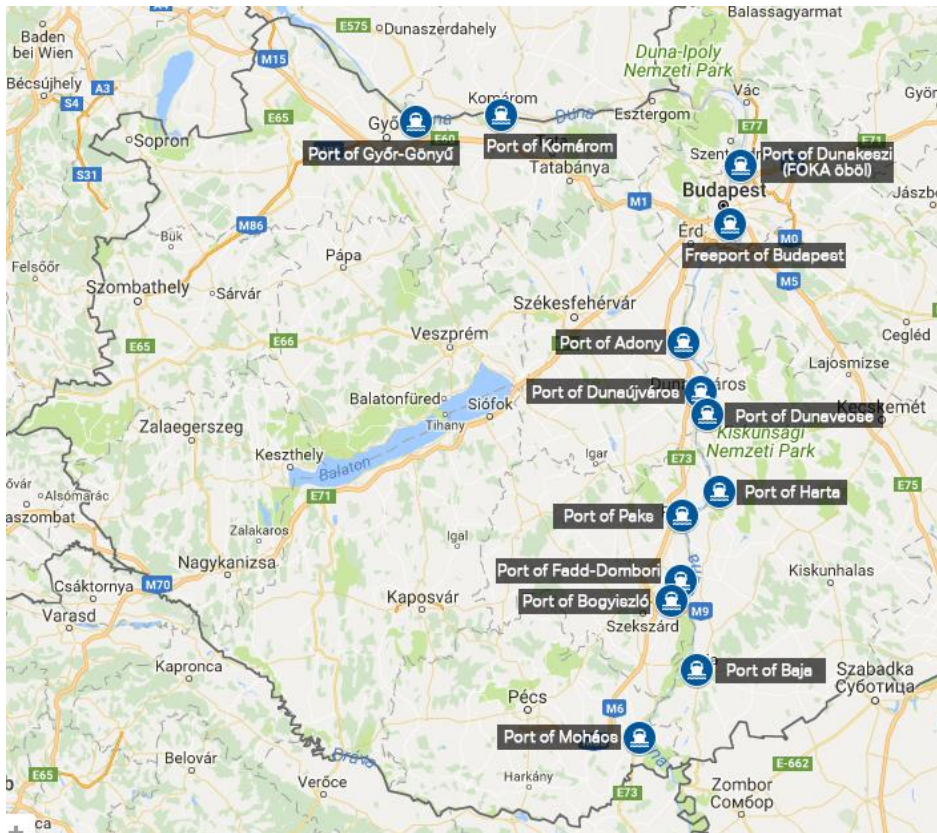
18. Figure The characteristics of the inland waterway in 2016

Source: Rhine Danube Third Work Plan of the European Coordinator  
[https://ec.europa.eu/transport/sites/transport/files/3rd\\_workplan\\_rd\\_0.pdf](https://ec.europa.eu/transport/sites/transport/files/3rd_workplan_rd_0.pdf)

Hungary's main international shipping route is the Danube, which has several ports. The largest port in the area examined by CORCAP is Budapest Freeport. Other ports: Győr-Gönyű, Komárno (Slovakia), Dunaújváros, Baja south of Budapest. The Danube is in principle a navigable route throughout the year, but the water level does not allow shipping during certain periods. The reason for this is that the low-slope bed is not properly designed for shipping.

The Figure below shows the name and the location of Hungarian ports.





19. Figure Hungarian ports

Source: Own editing based on Google Maps

The length of the Danube main riverbank is 417 km within the territory of Hungary. The Danube enters the country at Győr-Gönyű at the 1794 rkm and crosses the border at the port of Mohács at the 1450 rkm.

In the examined region, there are numerous waterways along the Danube. The sections and classification of the surface waters concerned are shown in the following figure.

The name of the waterway	Location (rkm-rkm)	Classification of waterway	Affected county
Danube (international waterway)	1641-1586	VI/C	Pest
Danube (international waterway)	1708-1641	VI/B	Pest
Ráckevei Duna	58-0	III	Pest

20. Figure Internationally and nationally important waterway sections of the affected counties

Source: Spatial development plans of affected counties

**Air traffic:**

The country's largest airport is the Liszt Ferenc International Airport in Budapest. It covers an area of 1,515 ha. It is 16 km from the city center. In addition, there are also regional airports in Debrecen and Sármellék,

but they are mainly used for passenger traffic, and air freight is concentrated at Budapest Airport. Local pressure is expected to limit air traffic during the night hours (no boarding and landing between 0 and 5 hours).

The airport has two runways and two terminals (2A and 2B) (figure 21.).

The airport's freight traffic has grown significantly in recent years (figure 22.), already surpassing the annual traffic volume of 100,000 tonnes. There are many logistics centres in the immediate vicinity of the airport which require significant aircargo. The airport has good road links (M0, M4) and also has a rail link from a cargo point of view.

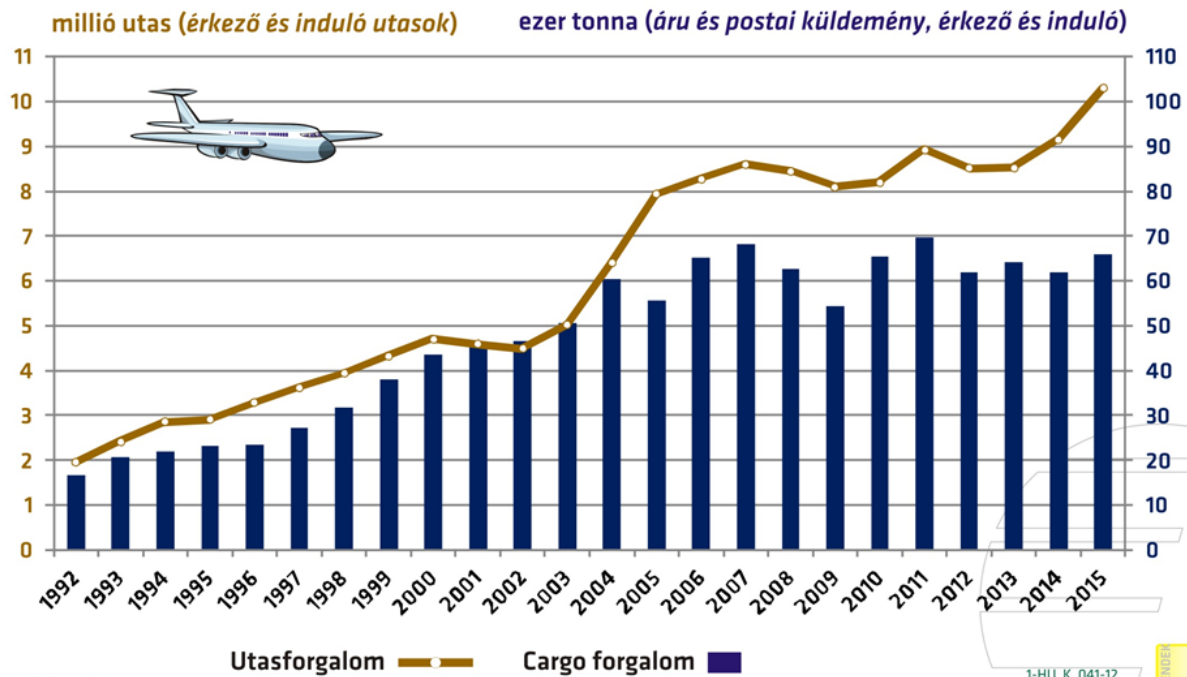


21. Figure Liszt Ferenc International airport

Source: Szarvas Gábor: Bud: 2020



## A Budapest Liszt Ferenc Nemzetközi Repülőtér forgalma



22. Figure The volume of air traffic at Liszt Ferenc Airport (passenger and freight)

Source: KTI

### 1.2.2. Multimodal interfaces

The two largest multimodal transshipment centers in the Budapest agglomeration are the Freeport of Budapest in Csepel, where water-rail-road transshipment takes place, and the Budapest Logistics Center (BILK), where rail-road transshipment takes place. Alongside the two "big" ones, there is the Prologis-Harbor park on the Buda side, where there is also a significant amount of rail-road transshipment (figure 23.).



## Magyarországi kombiterminálók és OLSZK-k



23. Figure Logistic centers and combiterminals in Hungary

Source: KTI

### 1.2.3. Cross-border links

Pest county, as the catchment area of Budapest Regio, has a cross-border link with Slovakia. On the road there is only one regional link on a bypass between Letkés and Ipolyszilka.

Rail border is Szob, on the line Budapest - Nové Zámky - Bratislava main line. This electrified double track line is the part of RFC 7 and 11

The Danube is in contact with Slovakia on the territory of Pest County. Liszt Ferenc Airport is one of the busiest international airports in the region.

### 1.3. Presentation of major economic activities and the settlement system

#### 1.3.1. Description of the settlement system

The settlement system of the Central Hungarian region is overwhelmingly dominated by the capital city Budapest and its metropolitan area. The population of this urban conglomeration make up about 80-90% of the population of the whole region which is slightly less than 3 million. Budapest has 23 districts (see figure 2.). The mayor biggest settlements and districts are the followings:





Districts in City Budapest	Population
XI. (Újbuda)	148 000
XIII. (Angyalföld - Újlipótváros)	131 000
XIV. (Zugló)	124 000

Town	Population
Érd	66 900
Dunakeszi	43 500
Szigetszentmikós	38 600
Cegléd	35 500
Vác	32 700
Gödöllő	32 100

24. Figure The most populous districts of Budapest and towns with population more than 30 thousand inhabitants in Budapest suburb (2018)

Source: KSH

### 1.3.2. Demographical and socio-economic situation

Central Hungary is the most developed region of the country and accounts for almost half of the gross domestic production, thus the economic performance of the capital region is overrepresented compared to its demographic weight that constitutes only less than third of the total national population. Even though the region has relatively advantageous socio-economic perspectives, the sub-regions of Central Hungary show a high diversity of income and the physical and human infrastructure, having more prosperous municipalities in the northern and western areas and communities with higher poverty rates in the east and the south. The metropolitan region of Budapest is similarly fragmented along the different districts spanning from the deprived older blocks to the modern suburban areas.

Since the Central Hungarian region is a target for significant domestic migration inflow, the demographical structure of the population is rather advantageous, especially in the booming external suburbs of Budapest.

Central Hungary - Budapest and Pest county

#### A) Budapest

Population: 1.753 thousand inhabitants

Population density: 3347 inh./km<sup>2</sup>

Territory: 526 km<sup>2</sup>

#### B) Pest county

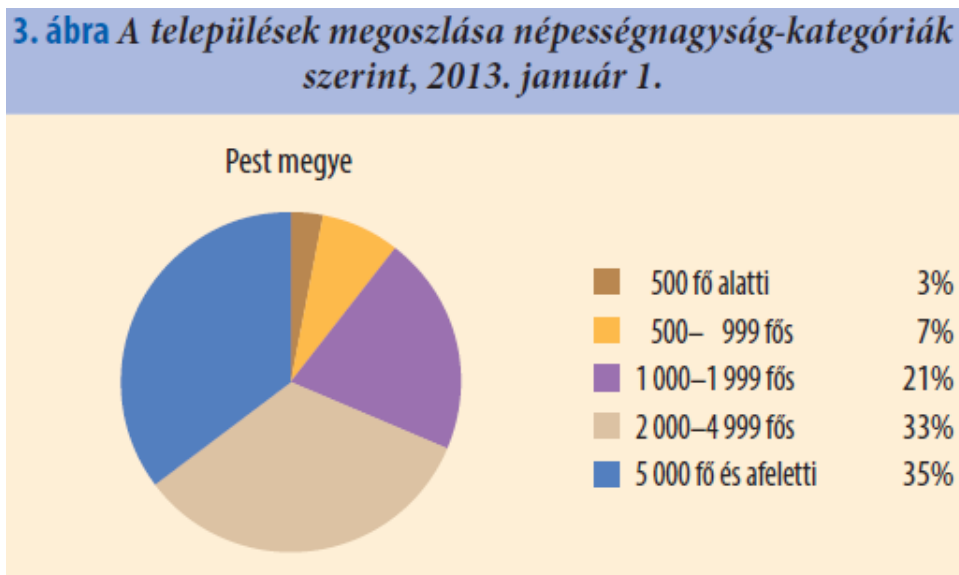
Population: 1.238 thousand inhabitants



Population density: 190 inh./km<sup>2</sup>

Territory: 6.393 km<sup>2</sup>

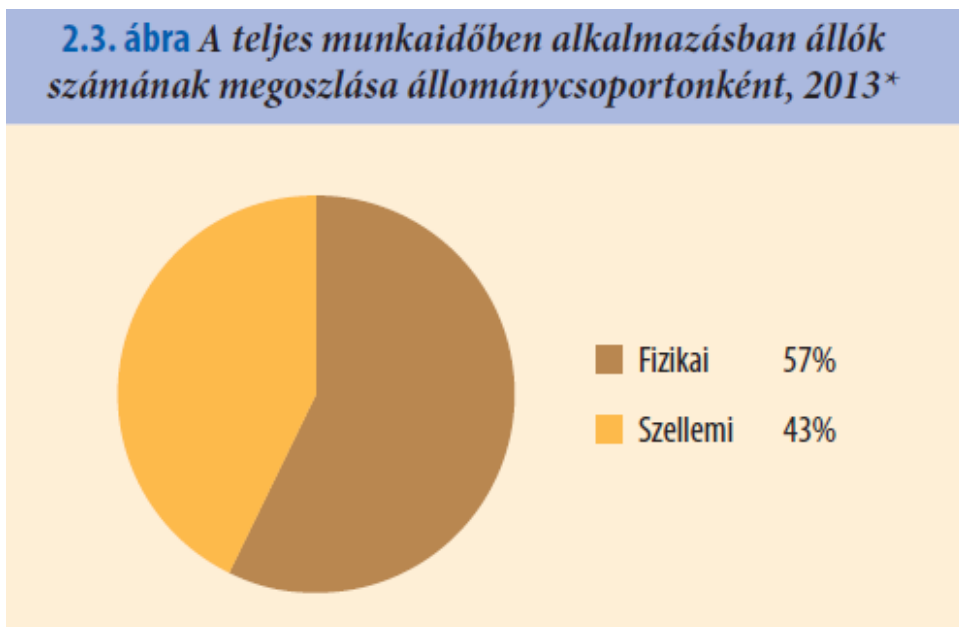
The following figures represent some data of the Hungarian settlements and households:



25. Figure Distribution of settlements by population-category in Pest county

Source: KSH

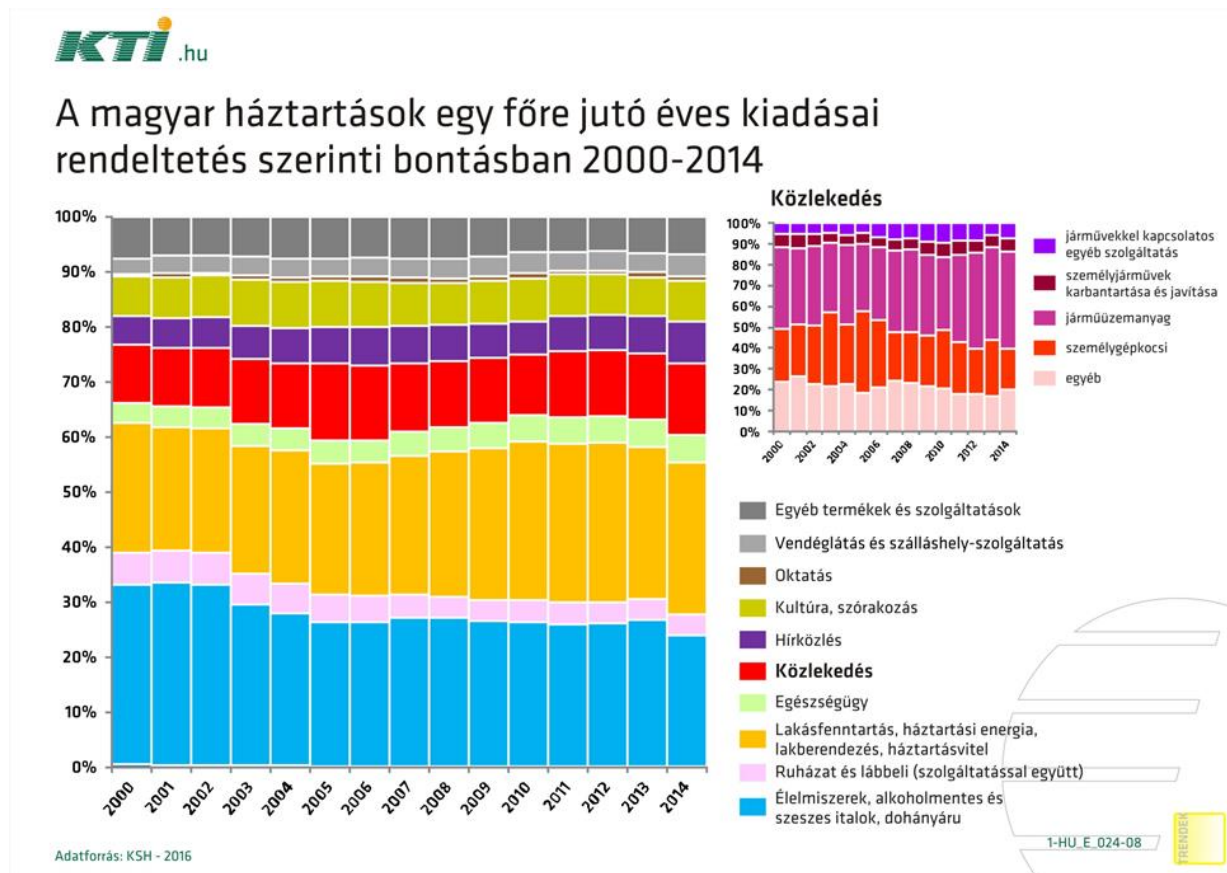
Blue: more than 5.000 inh.; light brown: 2.000-4.999 inh.; purple: 1.000-1.999 inh.; orange: 500-999 inh.; brown: under 500 inh.



26. Figure Distribution of employees by type of work

Source: KSH

Brown: physical workers; orange: intellectual employees



27. Figure Per capita expenditure of the Hungarian households by purpose (2000-2014)

Source: KTI

The most expenditures are the foodstuffs (blue) and the overhead costs (orange). By the transport costs (small diagram) fuel cost is the most significant (purple).

### 1.3.3. Description of cross-border relations

Slovakia is the only foreign country the Central Hungarian region is adjacent to, more specifically the Western Slovakian region. Even though the neighbouring areas along the border are scarcely populated, the traffic connections are rather strong as railway, shipping and road border crossings are also present and more road crossing are to be opened according to the development strategies of the two countries.

### 1.3.4. Presentation of companies in the area (manufactures, logistics, transport), identifying their activities

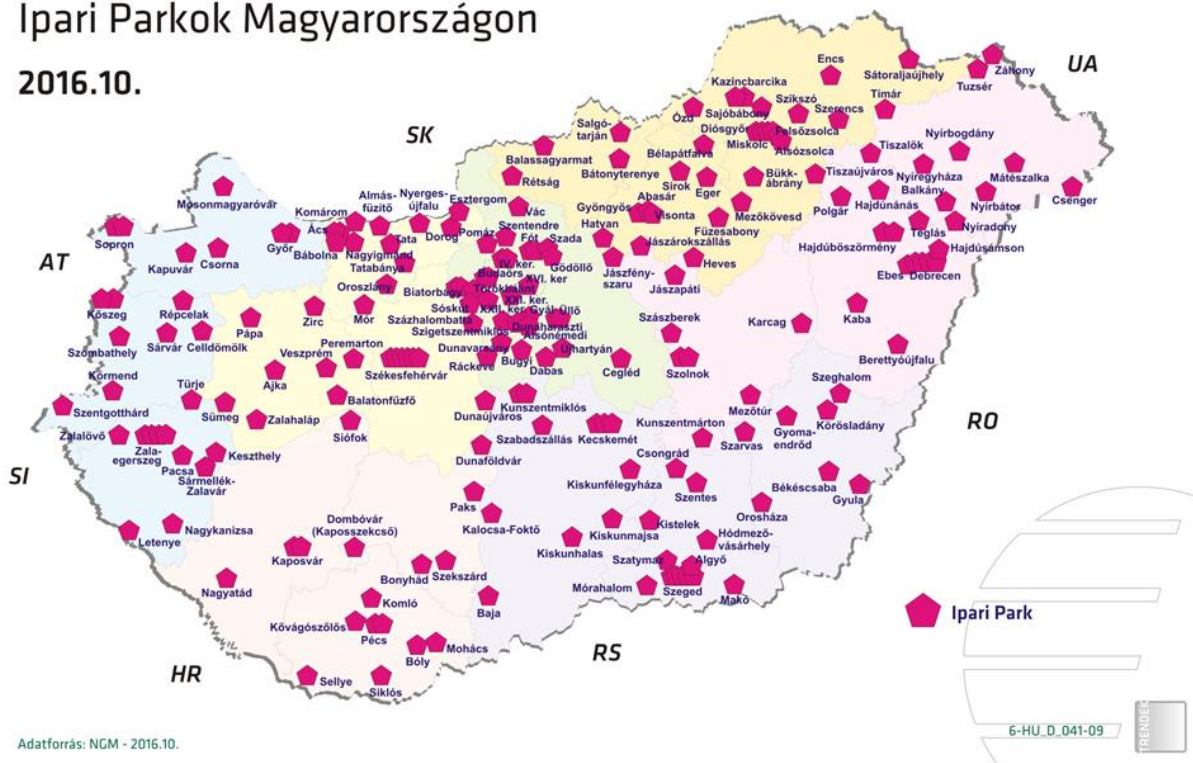
Firstly, the following map presents the industrial areas of Hungary.



KTI.hu

## Ipari Parkok Magyarországon

2016.10.



28. Figure Industrial centres in Hungary

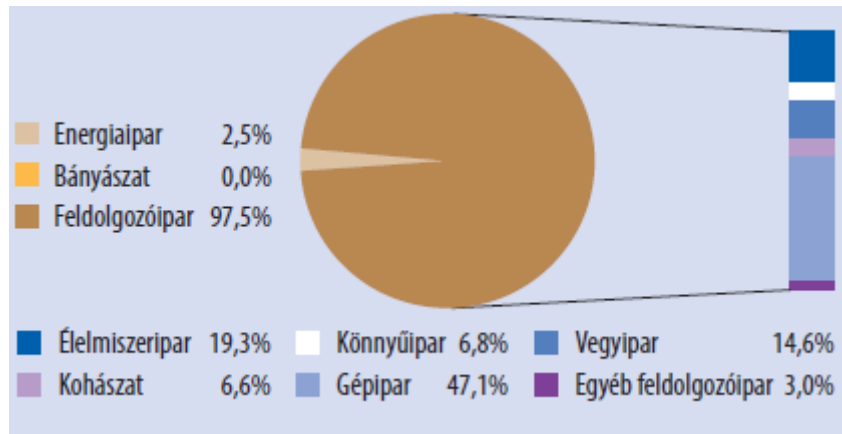
Source: KTI

Budapest and Pest county are the economic centres of the country, all branches of production can be found in the area. Therefore, any of the products cannot be highlighted as the main product. Delivery covers all kinds of goods (figure 29. & 30.).

We have already demonstrated that all transport modes are present in the area, so we will not describe them here.

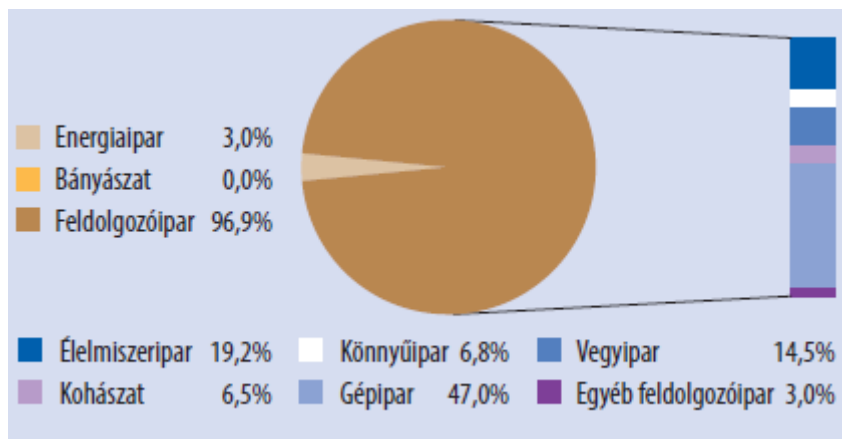
The activity of the companies is outstanding because a large part of the produced goods is not used locally. The major logistics companies present in the area are summarized in point 1.3.7.





29. Figure Distribution of production values of firms based in Pest county by industrie arts

Source: KSH



30. Figure Distribution of incomes of firms based in Pest county by industrie arts

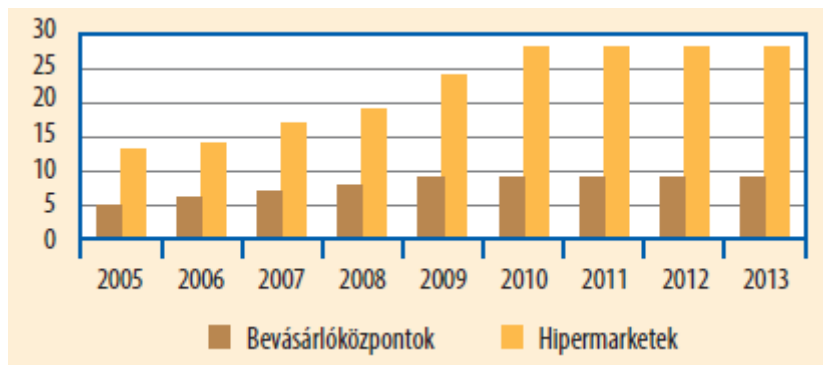
Source: KSH

These two figures show that the most represented industry art is the manufacturing industry (brown).

### 1.3.5. Industrial production, major floater (origin) and destination points

Most of the companies operating in Budapest and Pest County are non-manufacturing companies, so the products produced by the industry arrive here (e.g. cars). Budapest can thus be interpreted as a major industrial destination point. This is also true for agricultural products. The food demand of more than 2 million people living in the area is served by the country and the rest of the world, agricultural products are also finding a significant market in Budapest.

The transportations, they are typical in Budapest and Pest County are represented by the development of the major shopping centers in the area (figure 31.).



31. Figure Number of shopping centers and malls in Pest county

Source: KSH

Shopping centers (brown), malls (orange).

At the same time, the companies in the area are floating points of their products shipped to the whole world (e.g. Pharmatial products).

### 1.3.6. Agriculture production, food processing

Regarding the capacity of the food processing industries Budapest is and since the 19<sup>th</sup> century has been one of the most important Central European hubs.

In the agricultural areas around Budapest and in Pest county, crop production is the most characteristic, although the proportion of agricultural areas is decreasing (figure 32.).



Művelési ág	2000	2013	
	hektár	2000=100,0	
Szántó	267 619	250 679	93,7
Konyhakert	12 011	10 008	83,3
Gyümölcsös	11 104	9 836	88,6
Szőlő	7 097	3 051	43,0
Gyep	45 626	43 675	95,7
<b>Mezőgazdasági terület</b>	<b>343 457</b>	<b>317 249</b>	<b>92,4</b>
Erdő	154 452	165 007	106,8
Nádas	3 491	3 580	102,5
Halastó	6 611	6 541	98,9
<b>Termőterület</b>	<b>508 011</b>	<b>492 377</b>	<b>96,9</b>
Művelés alól kivett terület	89 412	107 437	120,2
<b>Összesen</b>	<b>597 423</b>	<b>599 814</b>	<b>100,4</b>

32. Figure Agriculture data of Pest county

Source: KSH

Livestock production in this area does not exceed 10% of the national data (figure 33.).

Megnevezés	Szarvas- marha	Sertés	Juh	Tyúk
<b>Főbb gazdasági haszonállatfajok állománya</b>				
Pest megye, ezer egyed	67	88	75	1 946
Az országos százalékában	8,7	3,0	6,1	6,8

33. Figure Livestock data of Pest county

Source: KSH

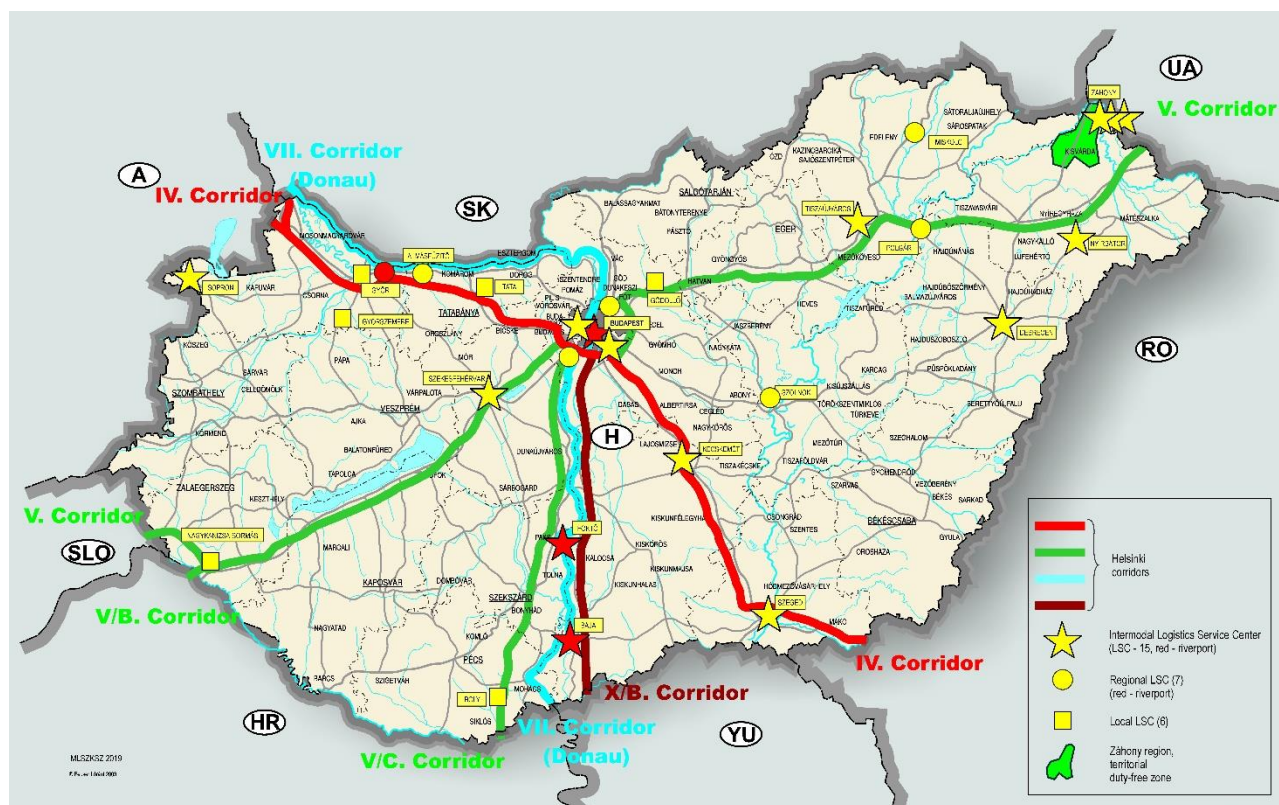
### 1.3.7. Logistic, storage and distribution points

Logistic centres (figure 34.) play an important role in stimulating the foreign relations of Hungary, in the day-to-day trading activities, as well as in the exchange of expertise in the area of human resources. In order to ensure that the logistic service centres are able to meet the expectations dictated by the changes of the accelerated economic processes, to satisfy the development needs of combined transport and



complex logistic systems as well as the approved guidelines of transport policy, it is vital to support them from central - EU- resources, by grants.

The standard way of support shall be ensured by tenders. The introduction of a new system of classification and qualification criteria is essential - among others - to create a harmonized support system approved by the profession, and to ensure the synergic growth of development needs and support systems.




34. Figure. Qualified logistics services centers in Hungary 2019

Source: MLSZKSZ

### Intermodal Logistics Services Centers

Its territory is at least 15 ha, at least 2 transport mode actively operate, the covered storage capacity is at least 10,000 m<sup>2</sup> or 10,000 TEU (container, swap body, semi-trailer, RO-LA, RO-RO, other combined consignment) traffic volume/year, open for public traffic.

Nr	Company name	Adress	Connection	Logo
001/ I /2007	Bajai Országos Közforgalmú Kikötőműködtető Kft.	6500 Baja, Szentjánosi út 12.	Web: <a href="http://www.portofbaja.hu">www.portofbaja.hu</a> E-mail: <a href="mailto:info@portofbaja.hu">info@portofbaja.hu</a> Tel: +36/79/422-502	



002/ I /2007	BILK Logisztikai Zrt.	1239 Budapest, Európa u. 6. és	Web: <a href="http://www.bilk.hu">www.bilk.hu</a> E-mail: <a href="mailto:bilk@bilk.hu">bilk@bilk.hu</a> Tel: +36/1/354-3180	
	Rail Cargo Terminal - BILK Zrt.	1239 Budapest, Európa u. 4.	Web: <a href="http://www.railcargobilk.hu">www.railcargobilk.hu</a> E-mail: <a href="mailto:info.rct.bilk@railcargo.com">info.rct.bilk@railcargo.com</a> Tel: +36/1/289-6000	
003/ I /2007	Budapesti Szabadkikötő Logisztikai Zrt.	1211 Budapest, Szabadkikötő u. 5-7.	Web: <a href="http://www.bszl.hu">www.bszl.hu</a> E-mail: <a href="mailto:info@bszl.hu">info@bszl.hu</a> Tel: +36/1/278-3102	
004/ I /2007	DELOG Kft.	4030 Debrecen. Vámraktár u. 3.	Web: <a href="http://www.delog.hu">www.delog.hu</a> E-mail: <a href="mailto:info@delog.hu">info@delog.hu</a> Tel: +36/52/510-100	
006/ I /2007	GYSEV Cargo Zrt.	9400 Sopron, Ipar körút 21.	Web: <a href="http://www.gysevcargo.hu">www.gysevcargo.hu</a> E-mail: <a href="mailto:info@gysevcargo.hu">info@gysevcargo.hu</a> Tel: +36/99/517-139	
007/ I /2007	LOGALBA Kft. LOGISZTÁR Kft.	8000 Székesfehérvár, Vásárhelyi út 7.	Web: <a href="http://www.eurosped.hu">www.eurosped.hu</a> E-mail: <a href="mailto:info@logalba.hu">info@logalba.hu</a> Tel: +36/22/510-001	
009/ I /2008	Kelet-Trans2000 Kft.	4625 Záhony, Ady Endre út 37/B.	Web: <a href="http://www.kelettrans2000.hu">www.kelettrans2000.hu</a> E-mail: <a href="mailto:kelettrans@kelettrans2000.hu">kelettrans@kelettrans2000.hu</a> Tel: +36/45/525-122	



010/ I /2008	Transit Speed Kft.	4625 Záhony, Rákóczi út 16.	Web: <a href="http://www.transitgroup.eu">www.transitgroup.eu</a> E-mail: <a href="mailto:info@transitgroup.eu">info@transitgroup.eu</a> Tel: +36/45/535-002	
011/ I /2008	Záhony Port Zrt.	4625 Záhony, Baross Gábor út 1.	Web: <a href="http://www.zahony-port.hu">www.zahony-port.hu</a> E-mail: <a href="mailto:info@zahony-port.hu">info@zahony-port.hu</a> Tel: +36/1/513-3010	
014/ I /2009	Trans-Sped Logisztikai Szolgáltató Központ Kft.	3581 Tiszaújváros, TVK-lpartelep	Web: <a href="http://www.transped.hu">www.transped.hu</a> E-mail: <a href="mailto:info@transped.hu">info@transped.hu</a> Tel: +36/52/510-120	
015/ I /2011	DEPO Logisztikai Központ Kft.	2046 Törökbálint, Hosszúrét 062/61. hrsz.	Web: <a href="http://www.depologisztika.hu">www.depologisztika.hu</a> E-mail: <a href="mailto:titkarsag@depologisztika.hu">titkarsag@depologisztika.hu</a> Tel: +36/23/338-044	
016/ I /2015	Gabonatóró és Logisztikai Kft.	6331 Foktó, Baráka 7.	Web: <a href="http://www.gabonatarolo.hu">www.gabonatarolo.hu</a> E-mail: <a href="mailto:info@gabonatarolo.hu">info@gabonatarolo.hu</a> Tel: +36/1/451-4010	
017/ I / 2015	TVP-Gabona Kereskedőház Kft.	4300 Nyirbátor Árpád út. 0203/4 hrsz	Web: <a href="http://www.tvpkft.hu">www.tvpkft.hu</a> E-mail: <a href="mailto:iroda@tvpkft.hu">iroda@tvpkft.hu</a> Tel: +36/30/995-9928	

018/ I / 2017	SYGNUS Kereskedelmi Kft.	7030 Paks, külterület HRSZ: 012	Web: www.sygnus.hu E-mail: paksport@sygnus.hu Tel: +36/75/510-187 Fax: +36/75/413-160	
019/ I / 2017	METRANS Konténer Kft.	1211 Budapest, Salak u. 1-39.	Web: www.metrans.eu E-mail: azahalka@metrans.hu Tel: +36/1/814-1202 Fax: +36/1/814-1229 Tel: +36/30/956-0997	
020/ I / 2017	Sygnus Kereskedelmi Kft.	6725 Szeged, Medencés kikötő	Web: www.sygnus.hu E-mail: szeged.execution@sygnus.hu Tel: +36/20/440-2998	
021/ I / 2017	Adony Logisztikai Központ Kft.	2457 Adony, Rév utca 8.	Web: www.portofadony.hu E-mail: transshipment@portofadony.hu Tel: +36/25/222-181 Fax: +36/25/222-191	

35. Figure. Intermodal Logistics Services Centers companies

Source: MLSZKSZ

### Regional Logistics Services Centers

Its territory is at least 10 ha, at least 2 transport mode connecting, the covered storage capacity is at least 5,000 m<sup>2</sup>, open for public traffic.






Nr	Company name	Adress	Connection	Logo
001/ R /2007	ÁTI Depo Zrt.	3526 Miskolc, Repülőtéri u. 6.	Web: www.atidepo.hu E-mail: vojdyla.judit@atidepo.hu Tel: +36/46/501-621	
003/ R /2007	Harbor Park Ingatlanfejlesztő Kft.	1225 Budapest, Campona u. 1.	Web: www.prologis.com E-mail: info- hu@prologis.com Tel: +36/1/577-7700	
004/ R /2007	Győr-Gönyű Kikötő Zrt.	9011 Győr- Károlyháza, Kikötő 1.	Web: www.portofgyor.hu E-mail: info@portofgyor.hu Tel: +36/96/544-200	
009/ R /2008	Magyar Területfejlesztési és Vagyonkezelési Társaság	1145 Budapest Emma köz 16.	Web: www.inverg.hu E-mail: inverg@inverg.hu Tel: +36/1/201-7883	
012/ R /2009	M3 Logisztikai Kft.	1151 Bp. Székely Elek u. 11.	Web: www.m3logisztika.hu E-mail: kereskedelem@m3logisztika.hu Tel: +36/1/305-2830	
013/ R /2010	BI-KA Logisztika Kft.	5000 Szolnok, Tószegi út 2.	Web: www.bikalogisztika.hu E-mail: info@bi- ka.hu Tel: +36/56/524-050	
014/R/ 2013	Polgár Ipari Park és Logisztikai Szolgáltató Központ	InfoGroup Ingatlanfejlesztési Cégcsoport	Web: www.infogroup.hu E-mail: info@infogroup.hu	






		1115 Budapest Bartók Béla út 105-113.	Tel: +36/1/481-4530	
015/R/2017	P-Development Vagyonkezelő Kft.	6000 Kecskemét, Wéber Ede utca 10/A.	Web: www.pdev.hu E-mail: drccsima@pdevelopm ent.hu Tel: +36/76/999-160 Fax: +36/76/999-170	

36. Figure. Regional Logistics Services Centers companies

Source: MLSZKSZ

### Local Logistics Services Centers

Its territory is at least 5 ha, the covered storage capacity is at least 3,000 m<sup>2</sup>, open for public traffic.

Nr		Company name	Adress	Connection	Logo
001/ /2007	H	Trans-Sped Trint Raktározó és Szállítmányozó Kft.	2890, Tata Barina u.1.	Web: www.trans- sped.hu E-mail: info@trans- sped.hu Tel: +36/34/586-600	
002/ /2007	H	Kanizsa Sprint Kft. Real-Amnon Kft. Agro Boy Kft.	8881 Sormás Ipartelep 1.	Web: www.kanizasprint.h u E-mail: info@kanizasprint.h u Tel: +36/93/312-321	
003/ /2007	H	R. Quehenberger Spedition Kft.	9026 Győr, Szentiváni út 2.	Web: www.quehenberger. com/hu/ E-mail: gabriella.szovati@qu ehenberger.com Tel: +36/96/500-703	




005/ /2007	H	TEVA Magyarország ZRt.	2100 Gödöllő Liget utca 2.	Web: www.teva.hu E-mail: Tel: +36/1/577-5600	
007/ /2009	H	Rail Cargo Logistics Hungaria Kft.	Győrszemere Raabersped út 1. 9121	Web: www.railcargologisti cs.hu/hu/ E-mail: rcl.hu@railcargo.co m Tel: +36/1/430-8500	
008/ /2010	H	Agro Boy Kft, Czett-Trans Kft, Reiso-Hungária Kft.	7754 Bóly Kodály Zoltán u. 2.,	Web: www.agroboy.hu E-mail: ugyvezeto@agroboy. hu Tel: +36/69/569-940	
009/ /2016	H	MAXX Pont Kft.	4600 Kisvárd Városmajor út 86-90.	Web: www.hadakft.hu E-mail: lakatos.krisztian@ha dakft.hu Tel: +36/30/955- 1561	
010/ /2017	H	Innovativ Special Transport Kft.	9012 Győr, Zsigmond Király út 21.	Web: www.innovativ- special.hu E-mail: info@innovativ- special.hu Fax: +36/96/411-680	
011/ /2017	H	LOCARGO Nemzetközi Szállítványozó és Logisztikai Kft.	8200 Veszprém, Házgyári u. 1.	Web: www.locargo.eu E-mail: info@locargo.hu Telefon: +36/88/590-800 Mobil: +36/30/946- 5328	



012/ /2017	H	Botlik-Trans Kft.	2534 Tát, Nefelejcs utca 5.	Web: <a href="http://www.botliktrans.hu">www.botliktrans.hu</a> E-mail: <a href="mailto:roland.botlik@botliktrans.hu">roland.botlik@botliktrans.hu</a> Tel: +36/33/514-801 Fax: +36/33/514-808 Mobil: +36/30/366-8066	
013/ /2017	H	GlobalLog Kft.	6728 Szeged, Budapesti út 34.	Web: <a href="http://www.szilk.hu">www.szilk.hu</a> E-mail: <a href="mailto:globallog@szilk.hu">globallog@szilk.hu</a> Tel: +36/62/557-500	
014/ /2017	H	Galambos Logistic Kft.	9751 Vép, Kassai u. 73.	Web: <a href="http://www.galamboslogistic.hu">www.galamboslogistic.hu</a> E-mail: <a href="mailto:info@galamboslogistic.hu">info@galamboslogistic.hu</a> Tel: +36/30/845-2520	
015/ /2017	H	Alföldi Hűtőház Szövetkezet	5600 Békéscsaba, Kétegyházi út 12-14.	E-mail: <a href="mailto:drszigetibela@t-online.hu">drszigetibela@t-online.hu</a> Tel: +36/30/862-6641	
016/ /2017	H	ICE Solution Kft.	9027 Győr, Hűtőház u. 2.	Web: <a href="http://www.hutohaz.eu">www.hutohaz.eu</a> E-mail: <a href="mailto:iroda@hutohaz.eu">iroda@hutohaz.eu</a> Tel: +36/96/528-737 Fax: +36/96/528-738	
017/ /2017	H	K és V Nemzetközi Fuvarozó Kft.	3200 Gyöngyös, Déli külhatár út 10-12.	Web: <a href="http://www.k-v.hu">www.k-v.hu</a> E-mail: <a href="mailto:raktar@k-v.hu">raktar@k-v.hu</a> Tel: +36/30/983-3162	




018/ /2017	H	Zoll - Sped Spedíciós és Szolgáltató Kft.	9700 Szombathely, Tátika u. 5	Web: www.zollsped.hu E-mail: zollsped@t-online.hu Tel: +36/94/327-842 Fax: +36/94/344-640	
019/ /2019	H	TRANSDANUBIA Logisztikai Kft.			

37. Figure Local Logistics Services Centers companies

Source: MLSZKSZ

### Duty free zone

Customs free zone, according to the conditions as stipulated by legislation.

Nr	Company name	Adress	Connection	Logo
	Záhony Port Zrt.	4625 Záhony, Baross Gábor út 1.	Web: www.zahony-port.hu E-mail: info@zahony-port.hu Tel: +36/1/513-3010	

38. Figure. Duty free zone company

Source: MLSZKSZ

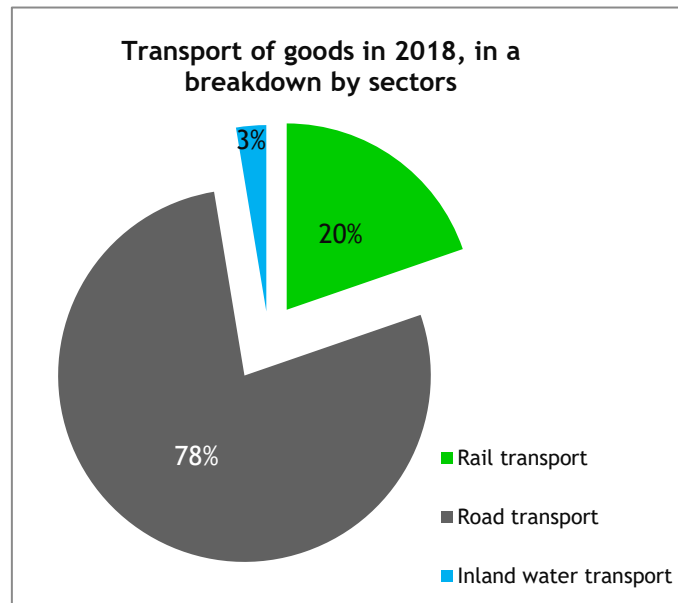
## 1.4. Presentation of freight characteristics

### Road transport

According to data published by the Central Statistical Office (CSO) the volume of goods transported by road started to grow again in 2018, after a period of decline in 2016 and 2017. A 1.45% decrease in 2015/2016 and another drop of 6.41% in 2016/2017 was followed by an increase of 10% in 2017/2018. An analysis of the transport directions reveals change in the dominant trend: the amount of goods transported to international destinations decreased by 10.6%, while domestic transport increased by a substantial 15.8%. Since the Hungarian economy has been on a growth path for years now, the massive increase in the domestic road transport of goods is partly a result of the outstanding growth rates recorded in the construction industry (motorways, railways, homes). The decrease in international freight transport is somewhat more interesting, because it is not accompanied by an increase in transport by rail or inland waterways - that is, this traffic has disappeared for some reason from roads or become invisible to the statistical system. The reasons may only be guessed - the EKÁER effect or an increase in the share of third country carriers.



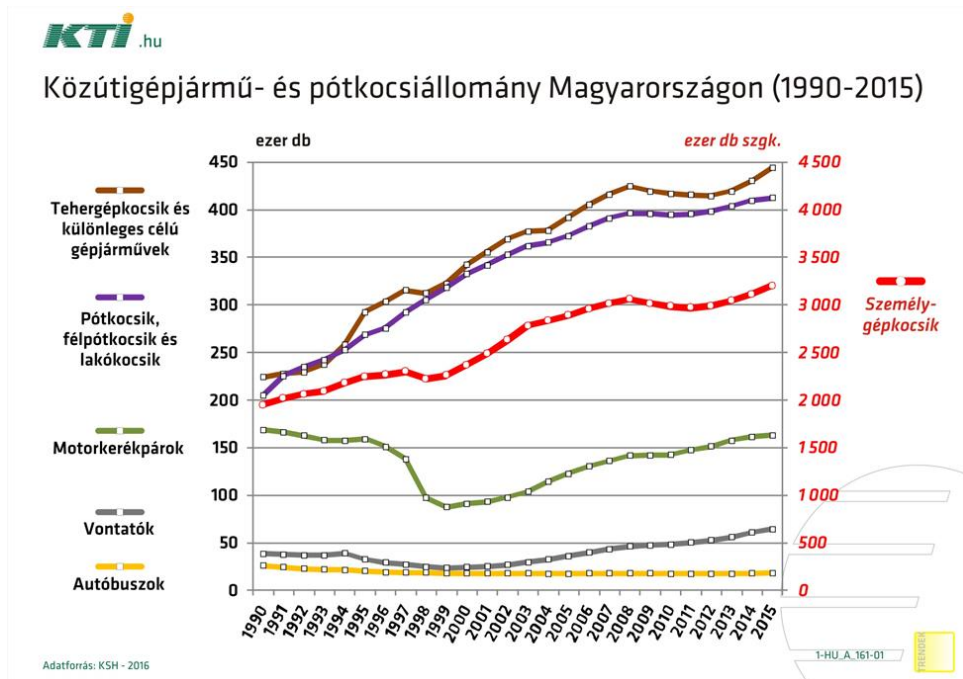
The CSO's 2018 data show that a total of 78% of the goods carried by transport operators registered in Hungary were transported by road (figure 39.). This equals goods of a total of some 169.3 million tons carried by road, involving the use of roads by a total of over 10.5 million freight transport vehicles, up 15% year-on-year.



39. Figure. Transport of goods in 2018, in a breakdown by sectors

Source: KSH

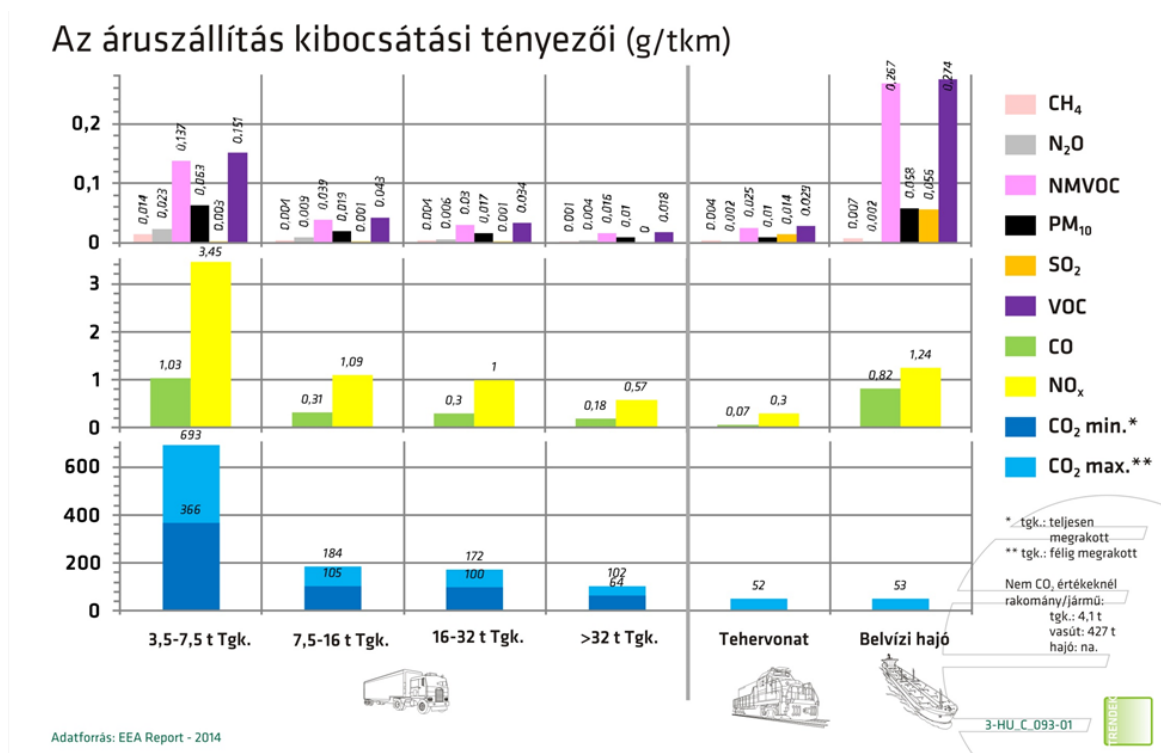
The total volume of goods carried by road national across borders was 36.7 million tonnes in 2018. Most of the goods were transported by heavy articulated vehicles exceeding 40 tonnes in total weight, that is, some 2.29 million lorries on the roads. The number of road vehicle (brown) and trailer stocks (purple) are shown on the figure 40, below:



40. Figure. Road Vehicle and Trailer Stock in Hungary

Source: KTI

Today's one of the most important question is the emission of the freight vehicles. On the next figure, the emission data are presented.



41. Figure. Emission factors for freight transport (g/tkm)

Source: KTI



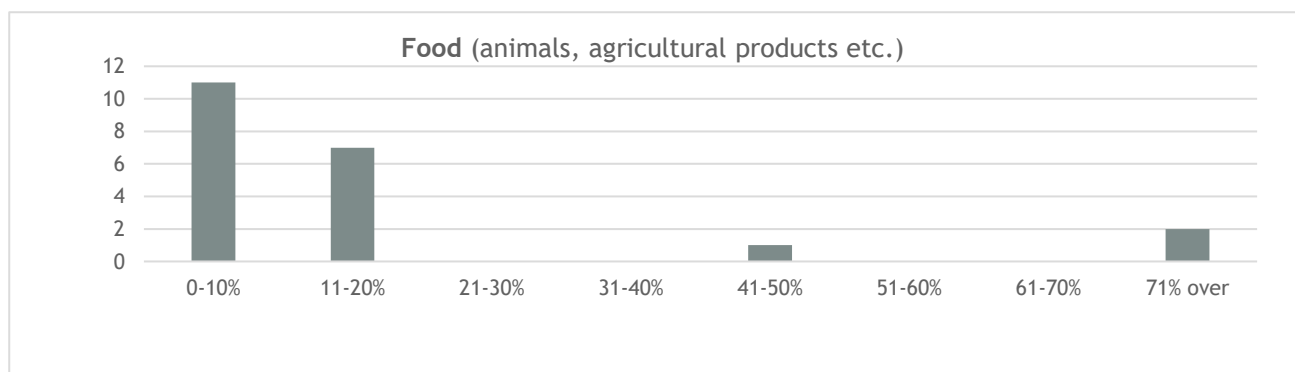


*Survey*

According to the report of the companies participating in the survey, 90.5% of the transported goods classified by the type of packaging were palletised.

The main types of classification for the transported goods are the following:

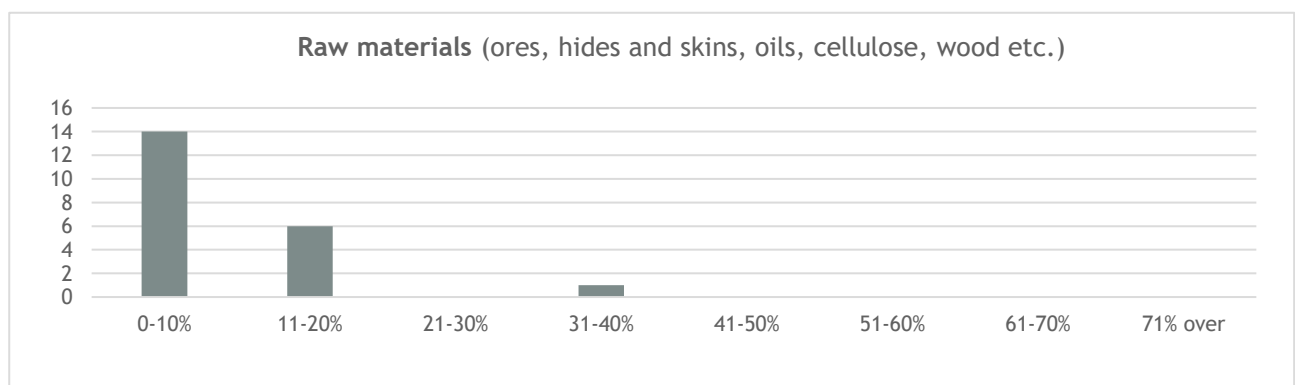
**Food** (animals, agricultural products etc.): these goods represented a share of less than 20 % in 85 % of the companies; there was one example of a share of 50 %, and in two cases the rate was over 70 %. The quantity of food related goods transported by the companies which participated in the survey and submitted their reports was not significant.



42. Figure Food - animals, agricultural products etc. Road transport

Source: Own editing

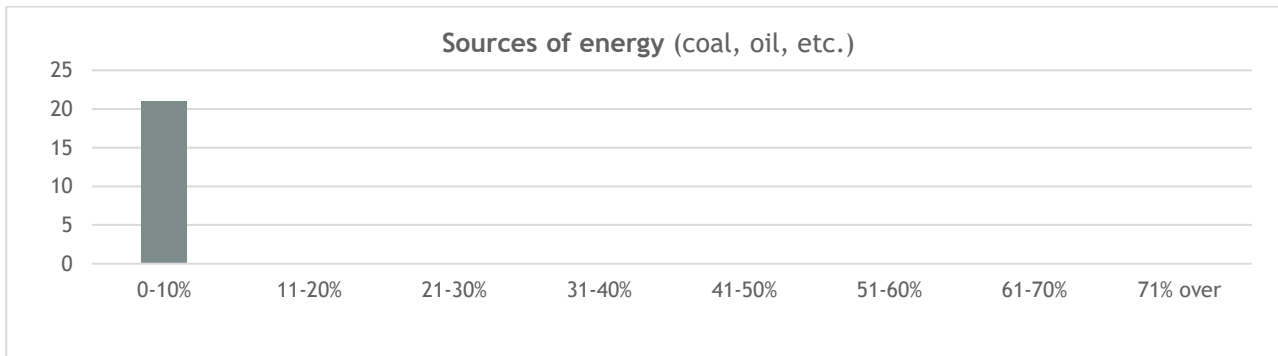
**Raw materials** (ores, hides and skins, oils, cellulose, wood etc.): represented less than 20 % in the case of 95 % of the companies, only 5% of the companies reported a share of over 30 %. The quantity of raw materials transported by the companies which participated in the survey and submitted their reports was not significant.



43. Figure Raw materials - ores, hides and skins, oils, cellulose, wood etc. Road transport

Source: Own editing

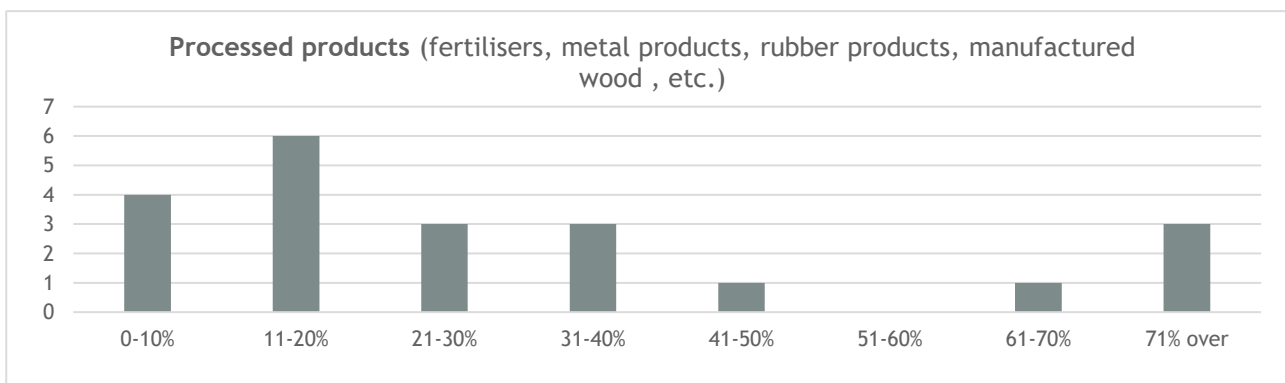
**Sources of energy** (coal, oil, etc.): they represented 0-10 % of the transported goods for 100 % of the respondents, which means that they transport hardly any sources of energy.



44. Figure Sources of energy - coal, oil, etc. Road transport

Source: Own editing

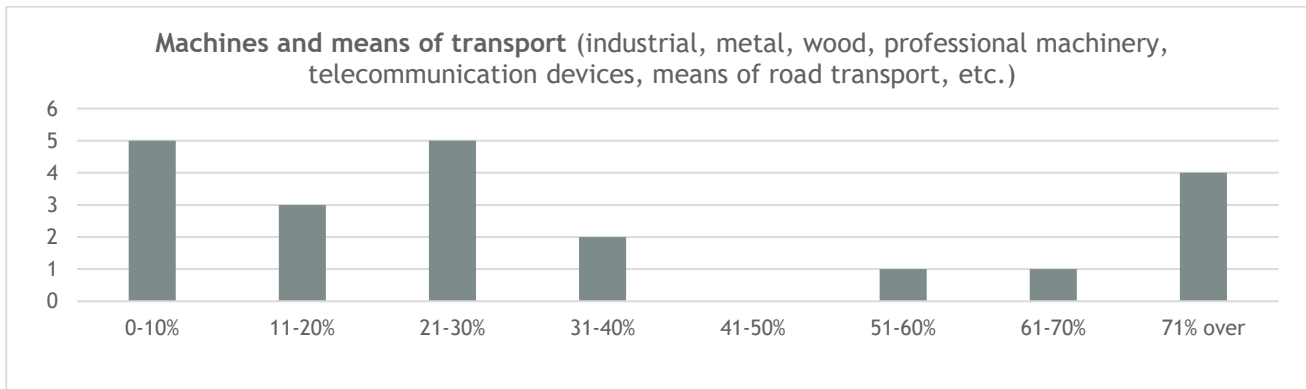
**Processed products** (fertilisers, metal products, rubber products, manufactured wood, etc.): 50 % of the companies reported a lower than 20 % share, whereas 7 companies reached a rate between 20-40 %, and 3 companies reported a rate over 70 %. Here the difference was already bigger - several companies transported bigger quantities.



45. Figure Processed products - fertilisers, metal products, rubber products, manufactured wood, etc. Road transport

Source: Own editing

**Machines and means of transport** (industrial, metal, wood, professional machinery, telecommunication devices, means of road transport, etc.): 38 % of the companies reported a share of less than 20 %, in 7 cases the rate was between 20-40 %, in 6 cases over 50 %. The majority of the respondent companies transported this type of goods.



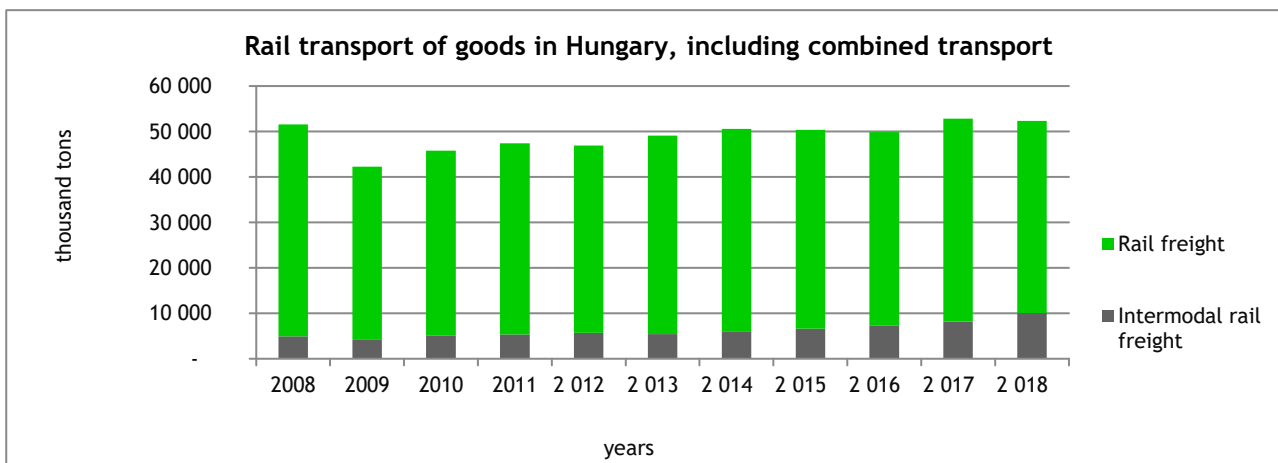
46. Figure Machines and means of transport - industrial, metal, wood, professional machinery, telecommunication devices, means of road transport, etc. Road transport.

Source: Own editing

The results show that the majority of the transported goods belong to the categories of processed products and machines as well as the means of transport.

### Railway transport

A look at the CSO's figures for the past 5 years shows that rail transport remained in 2018 at the previous year's level. Rail transport dropped by 0.9% between 2017 and 2018, which is regarded as stagnation in comparison with the modest growth rates recorded in earlier years. Some 20% of the total amount of goods were carried by rail in 2018. The stagnation in rail transport resulted definitely from the track closures necessitated by refurbishment projects, delays caused by de-tours, capacity restrictions and an outdated system of regulations.



47. Figure. Rail transport of goods in Hungary, including combined transport

Source: KSH and MLSZKSZ

According to data gathered by AHLSC domestic intermodal transport (including Ro-La up to end-2012) increased within the rail transport segment between 2017 and 2018 by 10%, which is quite a substantial rate in comparison to earlier years. The share of domestic intermodal transport in rail transport increased in 2018 to over 20%, which is regarded as a favourably high level, as we have reached the lower end of the 20-25% range that is characteristic of West European countries. The increase, of a ratio exceeding the ratios

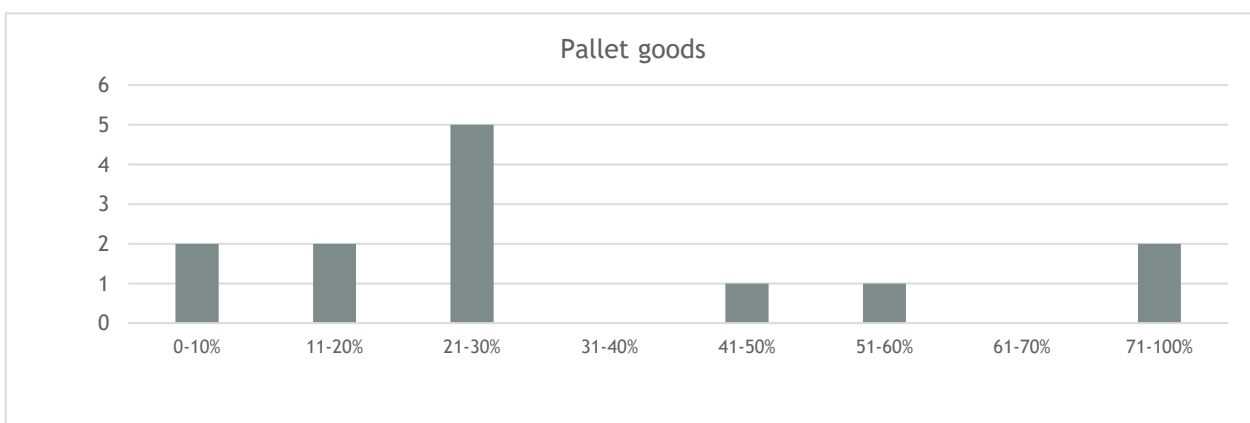


recorded in earlier years, was a result of the attraction of the new METRANS terminal in Csepel: 2018 was the first full business year of the combi-terminal delivered in 2017.

### Survey

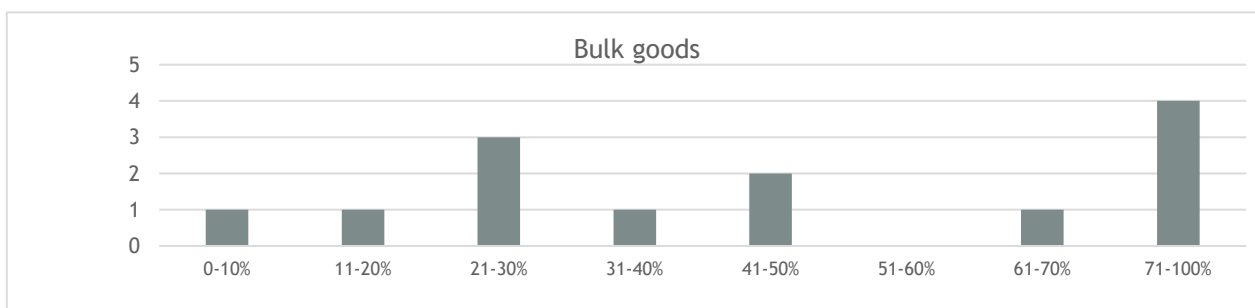
Both bulk cargo and palletised goods were represented in the transported goods classified by the type of packaging. Four companies account for 30 % of the palletised turnover, which amounts to over 50 % in terms of the quantity of the transported goods. Nine companies had less than 30 % of palletised transport. Bulk cargo amounted to less than 40 % of their total turnover for 6 companies, in 7 cases the share of bulk cargo transport was over 50 %. Considering the rate of transported goods according to their type of packaging the railway represents mostly the transport of bulk cargo.

31 % share of single wagon traffic, and 69 % share of block train traffic.



48. Figure Pallet goods

Source: Own editing



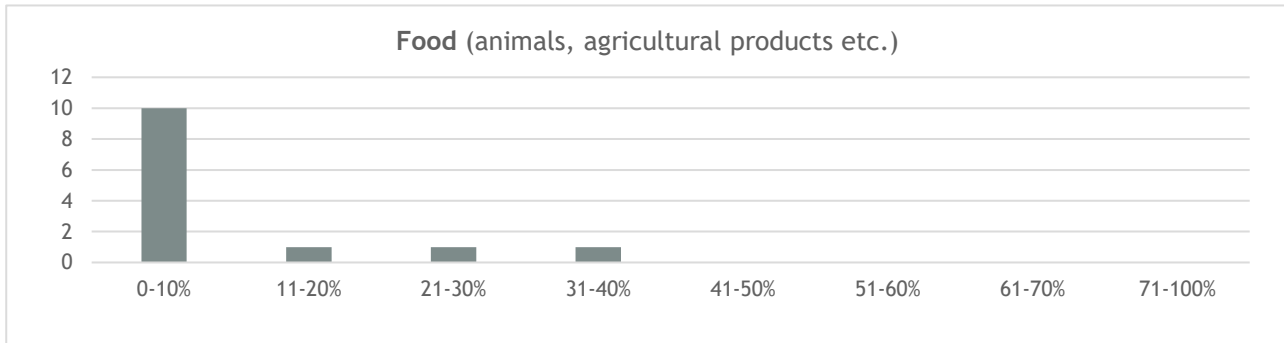
49. Figure Bulk goods

Source: Own editing

The main types of classification for the transported goods are the following:



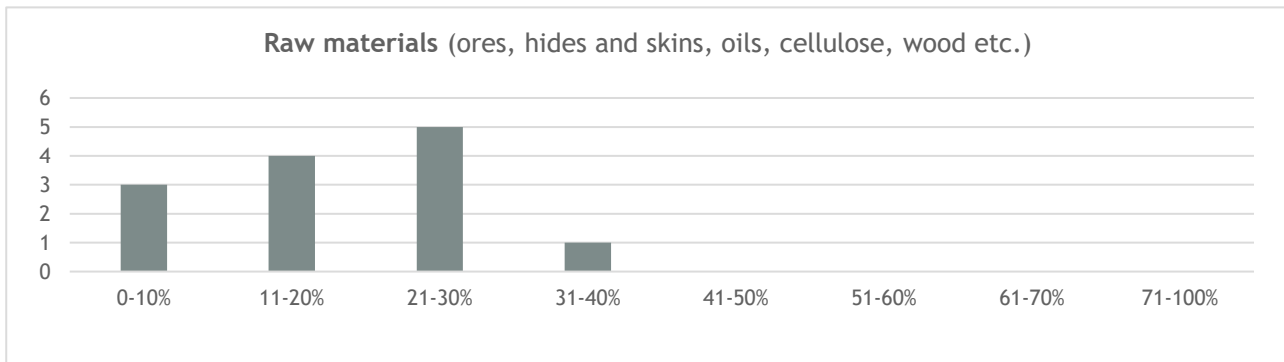
**Food (animals, agricultural products etc.):** these goods represented a share of less than 20 % in 85 % of the companies, and 15 % of the companies reported a share below 40 %. The quantity of food transported by the respondent companies was not significant.



50. Figure Food - animals, agricultural products etc. Rail transport

Source: Own editing

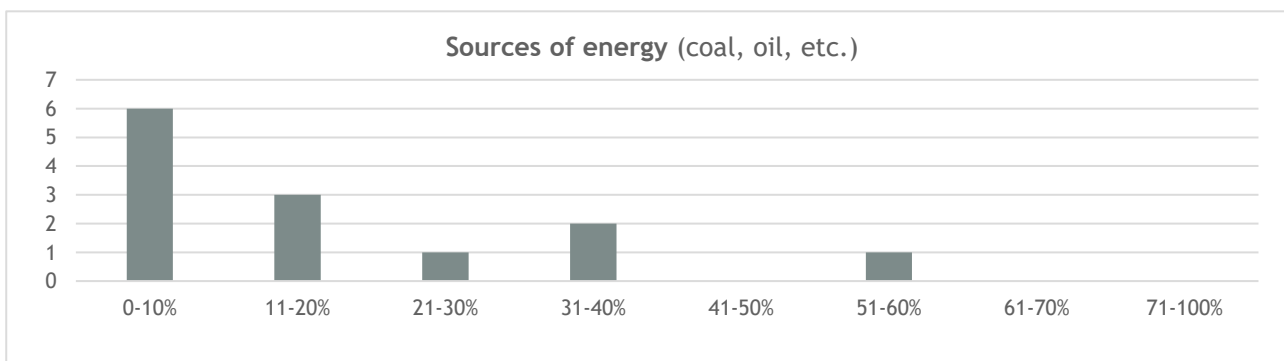
**Raw materials (ores, hides and skins, oils, cellulose, wood etc.):** these goods represented a share of less than 20 % in 54 % of the companies, and they have not reached the rate of 30-40 % in 46 % of the companies. Considering the traffic of raw materials, the respondent companies reported a substantial quantity.



51. Figure Raw materials - ores, hides and skins, oils, cellulose, wood etc. Rail transport

Source: Own editing

**Sources of energy (coal, oil, etc.):** 70 % of the companies reported a less than 20 % share for this type of goods, 23 % of the companies reached a share of 30-40 % and 1 company reported a share of over 50 %. Considering the traffic of the sources of energy the respondent companies reported a medium level traffic.

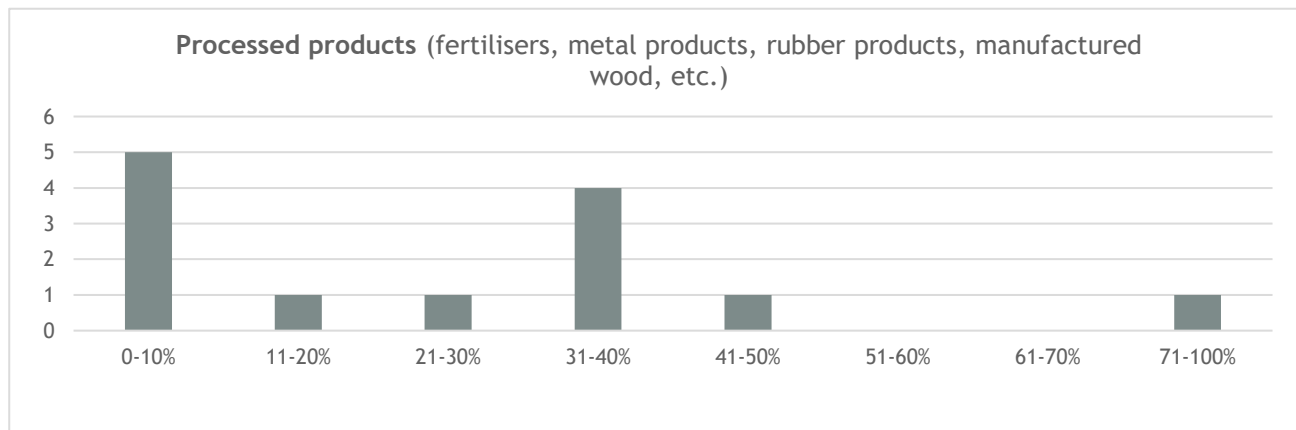




52. Figure Sources of energy - coal, oil, etc. Rail transport

Source: Own editing

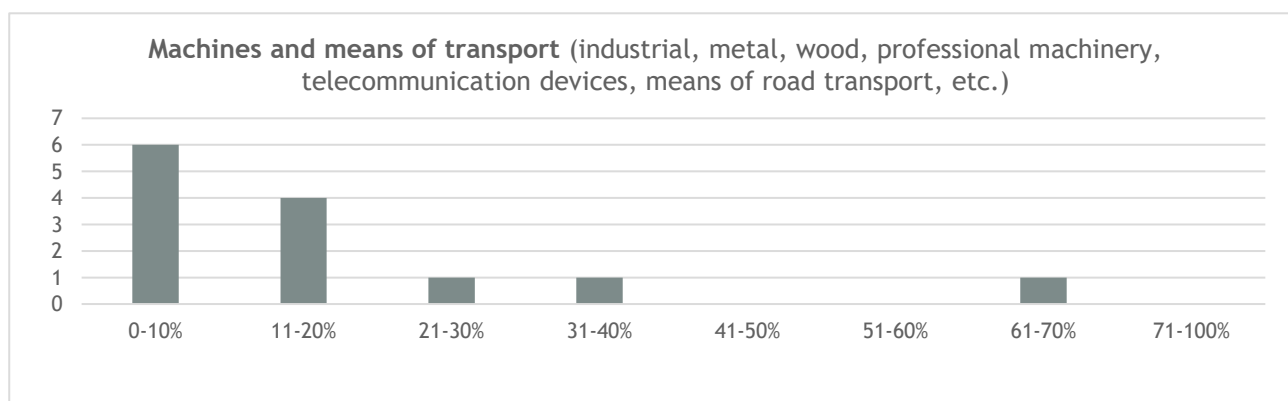
**Processed products** (fertilisers, metal products, rubber products, manufactured wood, etc.): 46 % of the companies reported a lower than 20 % share, whereas 39 % of the companies reached a rate between 20-40 %, moreover, 15 % of the companies reported a rate over 50 %. Considering the traffic of processed food, the respondent companies reported a medium level of traffic.



53. Figure Processed products - fertilisers, metal products, rubber products, manufactured wood, etc. Rail transport

Source: Own editing

**Machines and means of transport** (industrial, metal, wood, professional machinery, telecommunication devices, means of road transport, etc.): these goods represented a share of less than 20 % in 77 % of the companies, and 33 % of the companies reported a share between 30-70 %. In this case we can speak of a medium level of traffic.



54. Figure Machines and means of transport - industrial, metal, wood, professional machinery, telecommunication devices, means of road transport, etc. Rail transport

Source: Own editing

The results show that the majority of the transported goods belong to the categories of raw materials, processed products and machines as well as the means of transport.



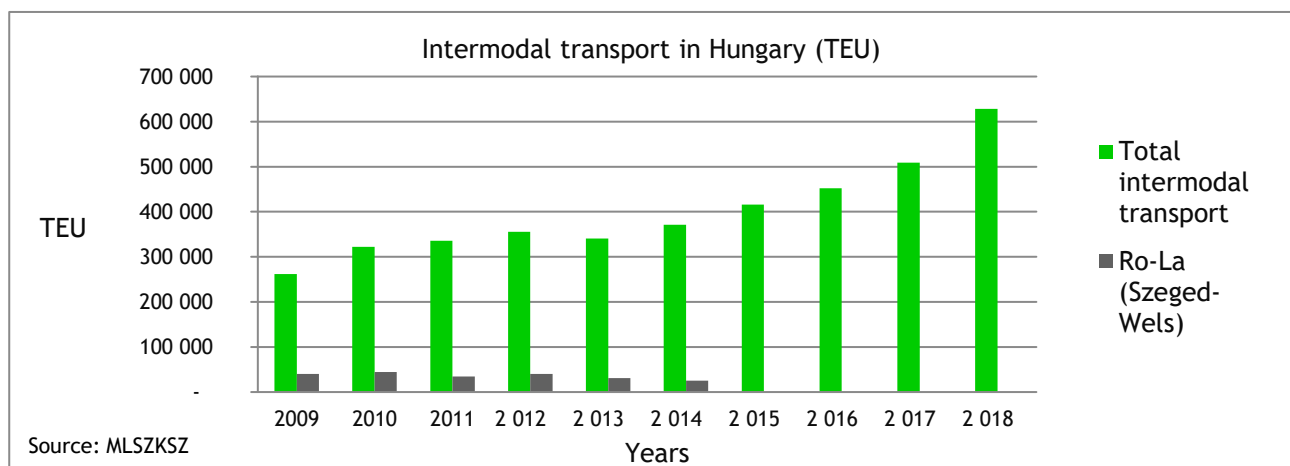


## Combi Terminal

Intermodal transport in Hungary has been growing steadily in the last 6 years, with a 10% increase between 2017 and 2018.

The increase resulted in part from an upswing in the overall economic output (with a 4.9% growth in GDP in 2018) and partly from an increase in the transport of goods suitable for containerisation and the increase in the quantity of goods transported through the METRANS combi-terminal in Csepel.

AHLSC data show that the combi-terminals of the logistics service providing centres in Central Hungary manage practically the entire intermodal transport taking place in Hungary. This is where international goods trains arrive and depart from. Some 92.5% of the total domestic intermodal traffic arrived in Hungary through the three combi-terminals in Central Hungary (BILK Kombiterminál, Mahart Container Center, METRANS) in 2018. Törökbálint Kombiterminál was closed down in 2019, its traffic has been redirected to Mahart Container Center. Of the terminals in rural Hungary the traffic through one in Sopron decreased by 14% while container traffic through Záhony plummeted by 27%. The traffic through Záhony and Sopron typically involves reloading, with a small proportion of the goods being carried on locally by road.



55. Figure. Intermodal transport in Hungary (TEU)

Source: MLSZKSZ

As to the future, the ratio of intermodal transport in the total quantity of transport will increase (and this process is already under way) for the following reasons: Up to 1200 km in 24 hours (by rail, the time to delivery is somewhat longer by water), it can be well-organised, competitive rail transport costs, favourable total costs, substantially lower environmental pressures, reduced risk of migration, reduced stationary time/exhaust emission on congested roads, direct cost reduction on the part of road fleet operators: 1 locomotive driver instead of as many as 30 car drivers: fewer drivers, fewer tractors, reduced tire wear, reduced repair and maintenance, longer trailer replacement cycles.

### 1.4.1. Partners (market actors)

#### Road transport

The above-mentioned questionnaire was sent out to 36 significant road transport companies, which have their registered domicile and site(s) in the region of Central Hungary (Budapest Region), or in West-Hungary (Sopron-Burgenland region).



The representative survey had been conducted with 36 road transport companies, out of which 19 companies sent back questionnaires that could be evaluated. This results in a performance of 53 %.

- |  |  |
|--|--|
| 1. Alba-Zöchling Kft.  | 19. Trans-Sped Kft.                                      |
| 2. Industria Kft.  | 20. Duvenbeck IMMO Logisztikai Kft.                      |
| 3. K & V Nemzetközi Fuvarozó Kft.                            | 21. P-Development Kft.                                   |
| 4. Horváth Rudolf Intertransport Kft.                        | 22. Maglog Kft.  |
| 5. Raben Trans European Hungary Kft.                         | 23. Botlik - Trans Kft.                                  |
| 6. RBT Europe Kft.   | 24. F-Trans  |
| 7. Versteijnen Logistics Kft.                                | 25. Gartner Intertrans Hungária Kft.                     |
| 8. G.E.B.E. Kft.   | 26. Transdanubia Logisztikai Kft.                        |
| 9. BI-KA LOGISZTIKA Kft                                      | 27. cargo-partner Hungary Kft.                           |
| 10. EKOL Logistics Kft.                                      | 28. DOÓR & DOÓR TRANS Fuvarozási és<br>Kereskedelmi Kft. |
| 11. Galambos Logistic Kft.                                   | 29. J&S Speed Kft.                                       |
| 12. BÁBOLNA Sped Kft.  | 30. EUROSPED Zrt.  |
| 13. FLOTT-TRANS Szállítványozó és Fuvarozó<br>Kft.           | 31. Szám Sped Kft.                                       |
| 14. Liegl internationale Transporte Kft.                     | 32. Transintertop Szállítványozó és Fuvarozó<br>Kft.     |
| 15. Innovatív Speciál Transport Kft.                         | 33. BHS Trans Kft.                                       |
| 16. LOCARGO Nemzetközi Szállítványozó és<br>Logisztikai Kft. | 34. Gászler Fuvarozási és Kereskedelmi Kft.              |
| 17. Kanizsa Sprint Kft                                       | 35. Gelbmann Kft.  |
| 18. Waberer's International NyRt.                            | 36. Fiala-Trans Kft.                                     |

### Rail transport

The questionnaire mentioned above was sent out to 15 significant railway transport companies, which have their registered domicile and site in the region of Central Hungary (Budapest Region), or in West-Hungary (Sopron-Burgenland region).

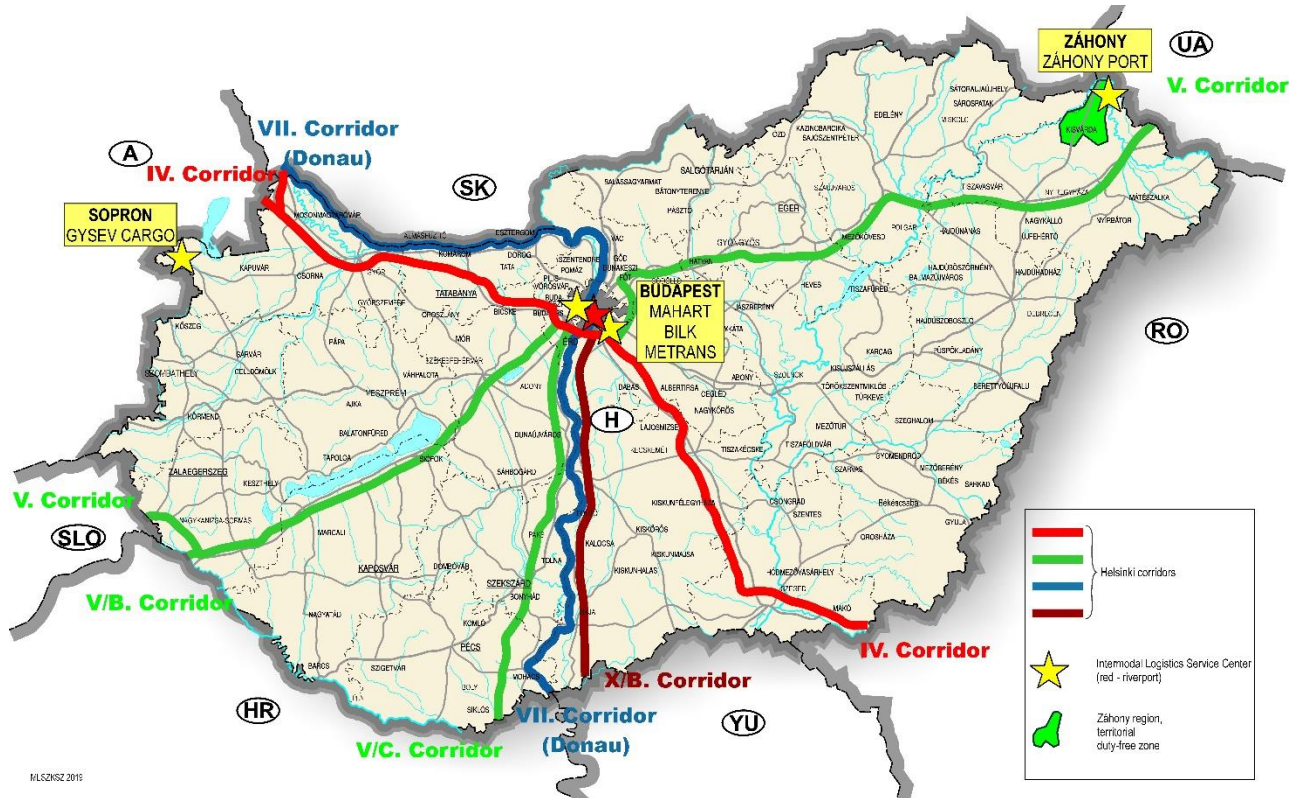
During the survey we were hindered by the same obstacle as in the case of road transport, namely that the majority of the companies do not make separate statements, where the transport is broken down by the types of goods according to the region. Therefore, the respondents had to be specifically asked about the types of classification as introduced above. Luckily, the bigger companies could provide us with a classification broken down by region. Consequently, the received figures represent 90% of the Central-Hungarian region, and 8 % of the West-Hungarian region.

Out of the 15 posted questionnaires 9 were sent back filled in, which shows a participation of 60 %.

- |  |                                      |
|--|--------------------------------------|
| 1. GYSEV Cargo Zrt.                    | 9. Floyd Zrt.                        |
| 2. Rail Cargo Carrier Kft.             | 10. METRANS Danubia Kft.             |
| 3. Rail Cargo Hungaria Zrt.            | 11. PC Cargo Hungária Kft.           |
| 4. Rail Cargo Operator - Hungaria Kft. | 12. VTG Rail Logistics Hungaria Kft. |
| 5. Rail Cargo Logistics Hungária Kft.  | 13. FOXrail Zrt                      |
| 6. AWT Rail HU Zrt.                    | 14. TRAIN HUNGARY MAGÁNVASÚT Kft.    |
| 7. LTE Hungária Kft.                   | 15. CER Hungary Zrt.                 |
| 8. MMV Zrt.                            |                                      |



## Combi Terminals



56. Figure. Hungarian Combi Terminals network

Source: MLSZKSZ

### Sopron:

GYSEV Cargo Zrt. - Combi Terminal

H - 9400 Sopron, Ipar körút 21.

### Budapest:

1. Mahart Container Center Kft. - Combi Terminal

H - 1211 Budapest, Weiss Manfréd út 5-7.

2. Rail Cargo Terminal - BILK Zrt. - Combi Terminal

H-1239 Budapest, Európa utca 4.

3. METRANS Konténer Kft. - Combi Terminal

H-1211 Budapest, Salak utca 1-39

### Záhony

Záhony-Port Zrt. - Combi Terminal, Duty free Zone

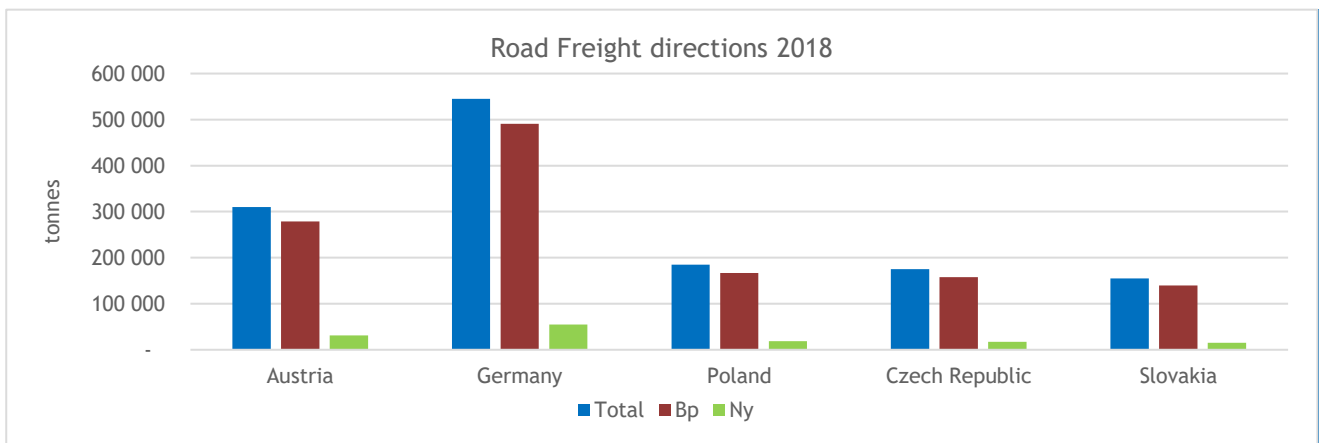
H-4625 Záhony Európa tér 12.



### 1.4.2. Current major directions

#### Road transport

During the survey we were hindered by an obstacle, as the companies do not make separate statements, where the transport is broken down by the types of goods according to the region. Therefore, the respondents had to be specifically asked about the types of classification as introduced above, therefore the majority of the figures given by the respondents were estimates. Consequently, the received figures represent 90% of the Central-Hungarian region, and 10 % of the West-Hungarian region.



57. Figure Road Freight directions 2018

Source: Own editing



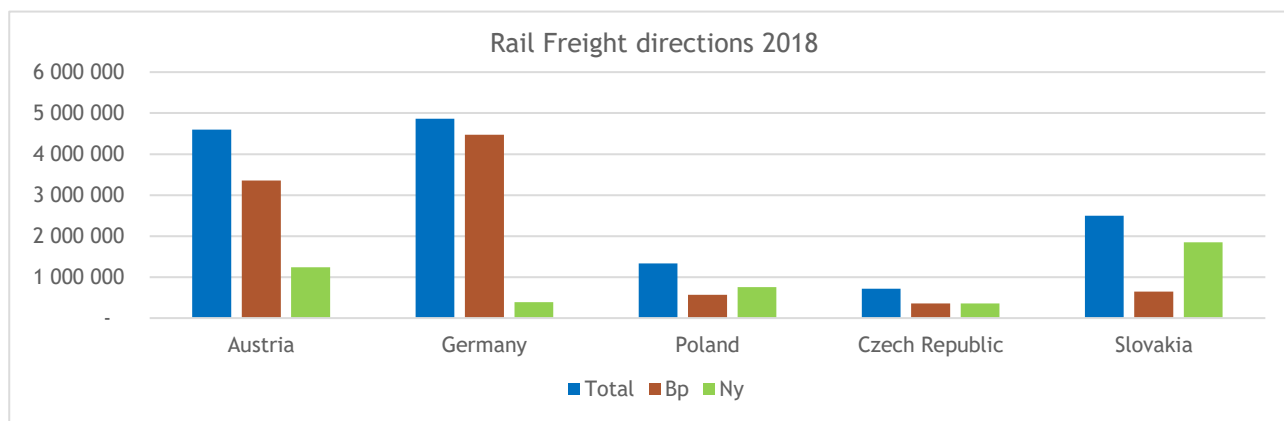
58. Figure. Road Freight flows 2018

Source: Own editing



### Rail transport

During the survey we were hindered by the same obstacle as in the case of road transport, namely that the majority of the companies do not make separate statements, where the transport is broken down by the types of goods according to the region. Therefore, the respondents had to be specifically asked about the types of classification as introduced above. Luckily, the bigger companies could provide us with a classification broken down by region. Consequently, the received figures represent 92% of the Central-Hungarian region, and 8 % of the West-Hungarian region.



59. Figure Rail Freight directions 2018

Source: Own editing



60. Figure. Rail Freight flows 2018

Source: Own editing





### 1.4.3. Dimensions of the freight traffic

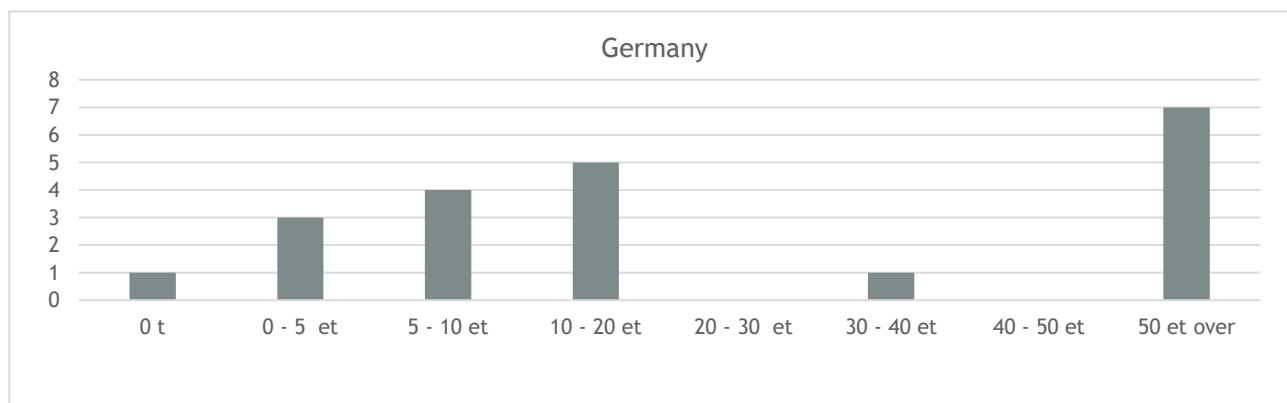
Road transport destinations - trend analysis.

The questionnaire mentioned above was sent out to 40 significant road transport companies, which have their registered domicile and site(s) in the region of Central Hungary (Budapest Region), or in West-Hungary (Sopron-Burgenland region).

During the survey we were hindered by an obstacle, as the companies do not make separate statements, where the transport is broken down by the types of goods according to the region. Therefore, the respondents had to be specifically asked about the types of classification as introduced above, and the majority of the figures given by the respondents were estimates. Consequently, the received figures represent 90% of the Central-Hungarian region, and 10 % of the West-Hungarian region.

Evaluation of traffic destinations:

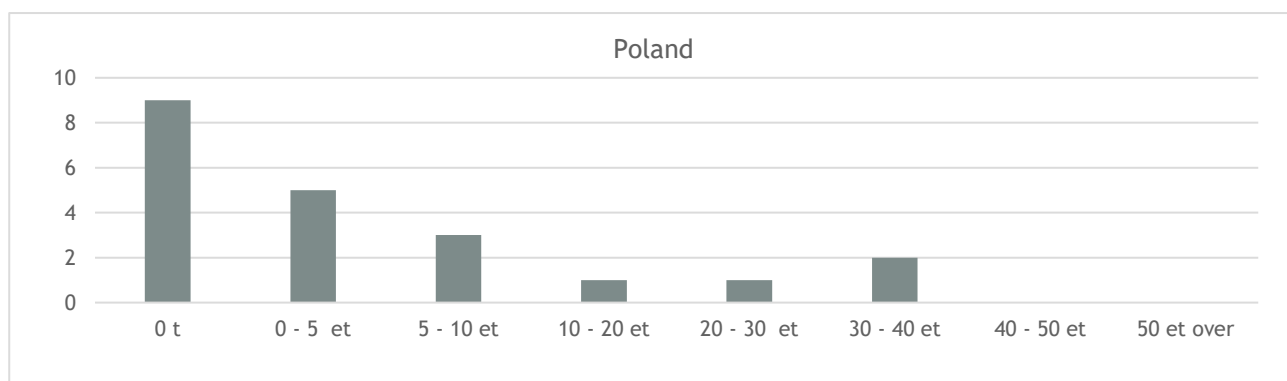
This proportion represents at least 545 000 tonnes of goods traffic between Hungary and Germany, 490 500 tonnes of it went out from the Budapest region and 54 500 tonnes from the Sopron-Burgenland region.



61. Figure Road transport traffic Hungary-Germany

Source: Own editing

This proportion represents at least 185.000 tonnes of goods traffic between Hungary and Poland, 165.500 tonnes of it went out from the Budapest region and 18.500 tonnes from the Sopron-Burgenland region.



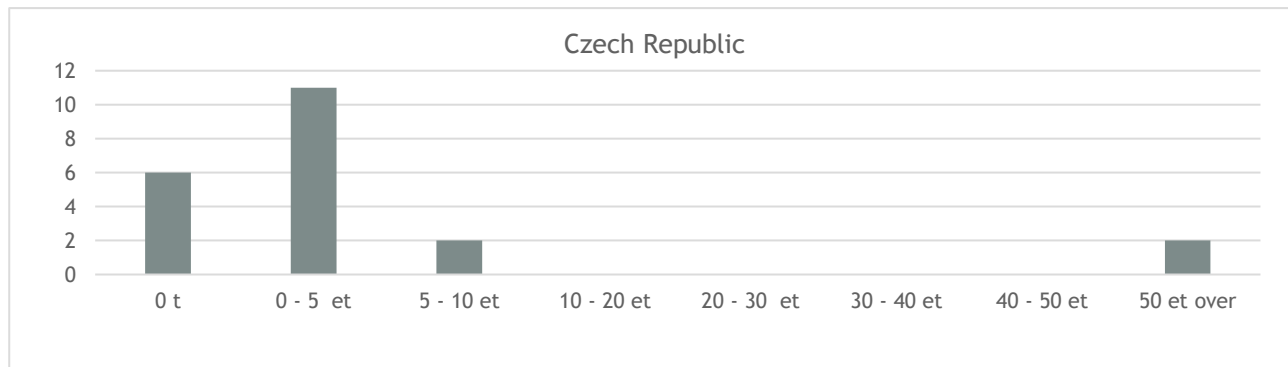
62. Figure Road transport traffic Hungary-Poland

Source: Own editing





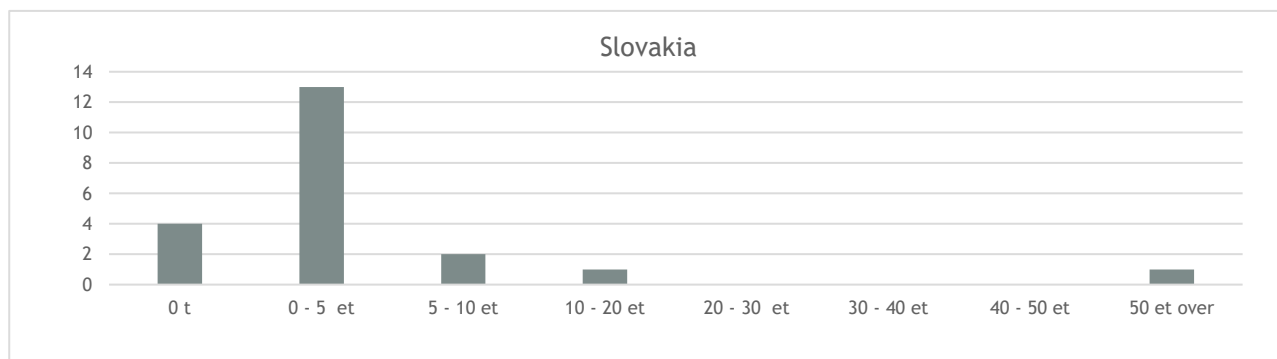
This proportion represents at least 175.000 tonnes of goods traffic between Hungary and Czech Republic, 157.500 tonnes of it went out from the Budapest region and 17.500 tonnes from the Sopron-Burgenland region.



63. Figure Road transport traffic Hungary- Czech Republic

Source: Own editing

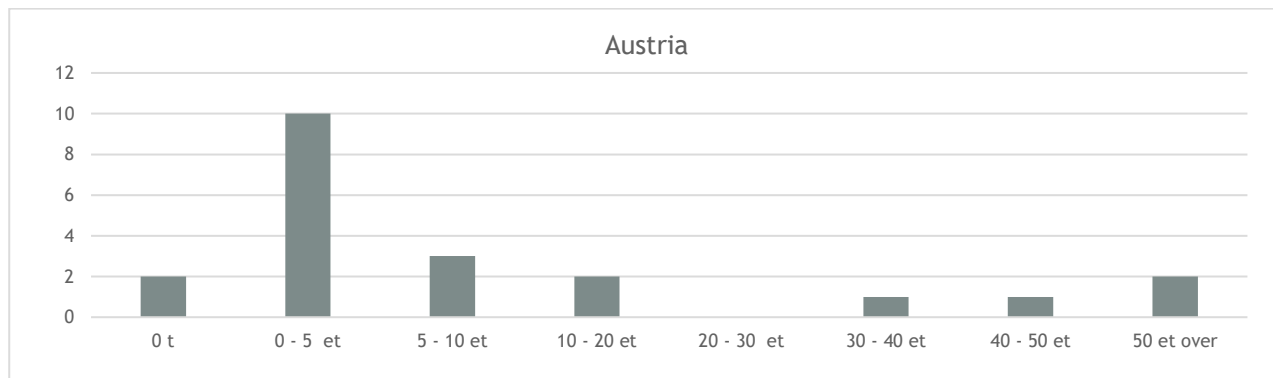
This proportion represents at least 155.000 tonnes of goods traffic between Hungary and Slovakia Republic, 139.500 tonnes of it went out from the Budapest region and 15.500 tonnes from the Sopron-Burgenland region.



64. Figure Road transport traffic Hungary - Slovakia

Source: Own editing

This proportion represents at least 310.000 tonnes of goods traffic between Hungary and Austria Republic, 279.000 tonnes of it went out from the Budapest region and 31.00 tonnes from the Sopron-Burgenland region.



65. Figure Road transport traffic Hungary - Austria

Source: Own editing

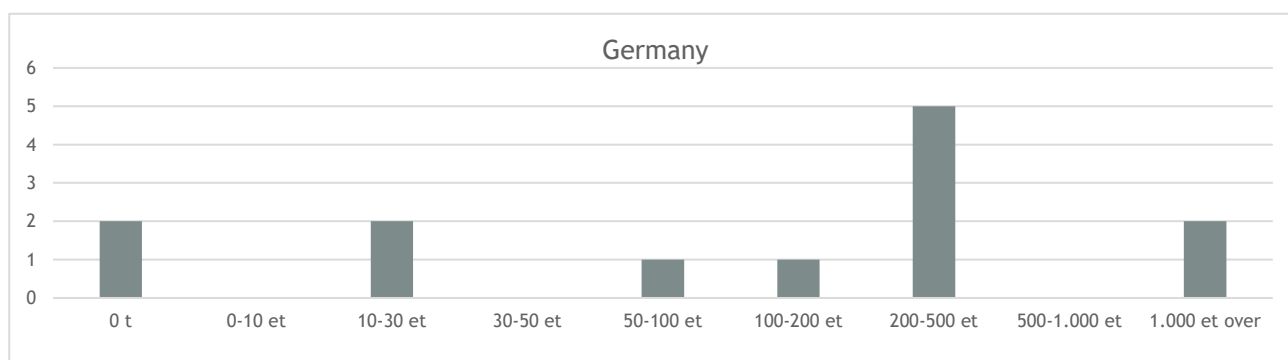
### Rail transport destinations - trend analysis.

The questionnaire mentioned above was sent out to 15 significant rail transport companies, which have their registered domicile and site(s) in the region of Central Hungary (Budapest Region), or in West-Hungary (Sopron-Burgenland region).

During the survey we were hindered by the same obstacle as in the case of road transport, namely that the majority of the companies do not make separate statements, where the transport is broken down by the types of goods according to the region. Therefore, the respondents had to be specifically asked about the types of classification as introduced above. Luckily the bigger companies could provide us with a classification broken down by region. Consequently, the received figures represent 92% of the Central-Hungarian region, and 8 % of the West-Hungarian region.

Out of the 15 posted questionnaires 10 were sent back filled in, which shows a participation of 66 %.

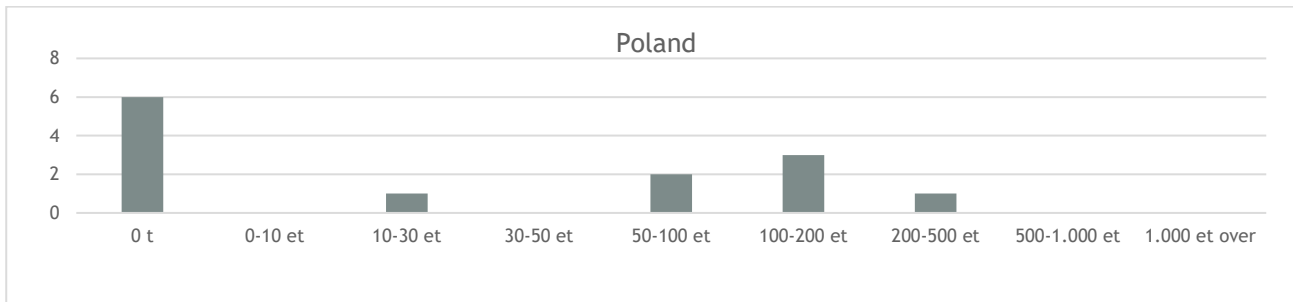
Evaluation of traffic destinations:



66. Figure Rail transport traffic Hungary - Germany

Source: Own editing

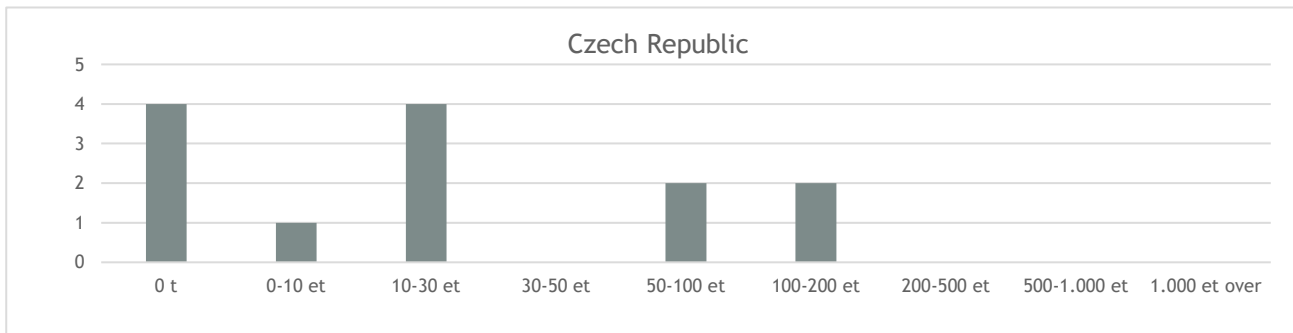
This proportion represents at least 4 860 000 tonnes of goods traffic between Hungary and Germany; 4,471,200 tonnes of it went out from the Budapest region and 388 800 tonnes from the Sopron-Burgenland region. Consequently, the received figures represent 92% of the Central-Hungarian region, and 8 % of the West-Hungarian region.



67. Figure Rail transport traffic Hungary - Poland

Source: Own editing

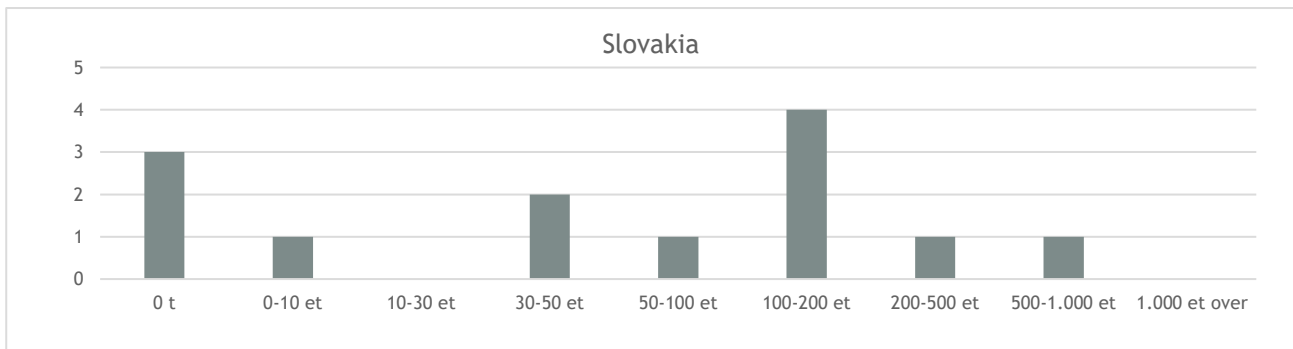
This proportion represents at least 1 330 000 tonnes of goods traffic between Hungary and Poland; 571 900 tonnes of it went out from the Budapest region and 758 100 tonnes from the Sopron-Burgenland region. Consequently, the received figures represent 43% of the Central-Hungarian region, and 57 % of the West-Hungarian region.



68. Figure Rail transport traffic Hungary - Czech Republic

Source: Own editing

This proportion represents at least 720 010 tonnes of goods traffic between Hungary and Czech Republic; 360 005 tonnes of it went out from the Budapest region and 360 005 tonnes from the Sopron-Burgenland region. Consequently, the received figures represent 50% of the Central-Hungarian region, and 50 % of the West-Hungarian region.

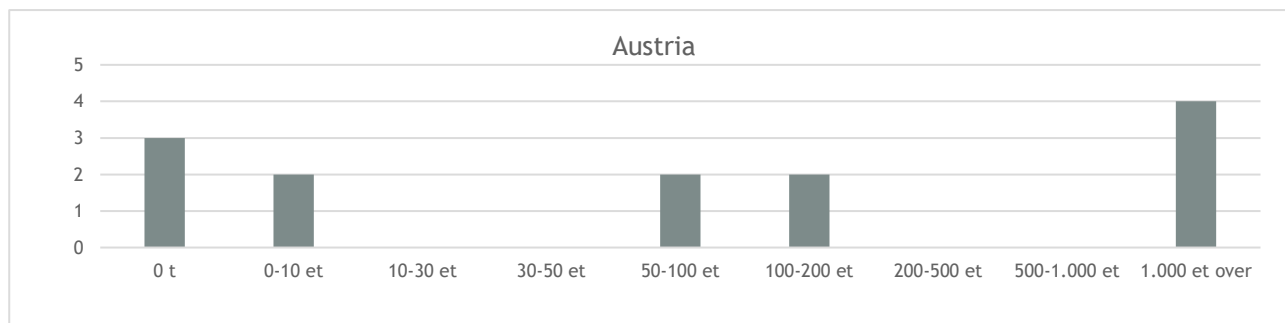


69. Figure Rail transport traffic Hungary - Slovakia

Source: Own editing



This proportion represents at least 2 500 010 tonnes of goods traffic between Hungary and Slovakia; 650 003 tonnes of it went out from the Budapest region and 1 850 007 tonnes from the Sopron-Burgenland region. Consequently, the received figures represent 26% of the Central-Hungarian region, and 74 % of the West-Hungarian region.



70. Figure Rail transport traffic Hungary - Austria

Source: Own editing

This proportion represents at least 4 600 020 tonnes of goods traffic between Hungary and Austria; 3 358 015 tonnes of it went out from the Budapest region and 1 242 005 tonnes from the Sopron-Burgenland region. Consequently, the received figures represent 73% of the Central-Hungarian region, and 27 % of the West-Hungarian region.

#### 1.4.4. Presentation of loading devices

##### Road transport:

The respondent companies have 237 lorries of 3.5 -12 tonnes capacity, and 3,786 vehicles in the category over 12 tonnes. The company which has 150 tow vehicles and 250 trailers used these vehicles for short-haul transports and exchanges at the plant (while one is loading the other one is on the way).

##### Rail transport:

The number of locomotives used by the companies categorized by the main types and accumulated:

- 26 high power diesel locomotive - 609 "Sulzer"
- 8 low power diesel locomotives
- high power electric locomotive - 6 pc Montana, Lema, Phoenix, 24 Vectron, 48 Taurus, 5 Traxx,
- additional electric locomotive: 1 pc Herkules, 1 pc LE5100, 1 pc LE3400,
- additional diesel locomotive: 2 pc CZ 753, 4 pc CZ 740
- Rental equipment:
  - medium power electric locomotives - 2 pc Plehac (242 sor), 24 pc Gigant (V63)

The number of wagons used by the companies categorized by the main types and accumulated:

- 4.773 Eas open
- 134 Zas tanc
- 750 pc Sggmrs container chassis



- 1.100 tipper (Fals, Tams, Tagps)
- 900 flats (Ks, Rgs, Lgs, Shimms)
- 300 Coil Carrier (Habbins)

#### Combi Terminals:

##### GYSEV Cargo Zrt. - Sopron - Combi Terminal facilities

- crane tracks: 6
- holding tracks: 4
- lifting apparatus: 2 gantry cranes (40 t - 45' container, swap body, semi-trailer)
- 1 mobile crane (40 t - 45' container, swap body, semi-trailer)
- storage space: 30 000 m<sup>2</sup>
- container handling (lifting):
  - 72 000 pcs/year
  - storage: 2 000 TEU

##### Mahart Container Center Kft. - Budapest - Combi Terminal facilities

- storage area: 10,4 ha (104.000 m<sup>2</sup>)
- rail sidings: 2×690 m + 3×300 m
- loading quay: 220 m
- container gantry crane: 1 (30 t)
- loaded reachstackers: 6 pc (Kalmar, 45 t)
- empty reachstacker: 3 pc (Kalmar, 10 t)
- terminal tractor: 2 pc Kalmar
- electrical connection: 74 pc
- garage for repair
- dedicated ADR/RID storage place
- dedicated customs inspection and stuffing&stripping places
- container handling (lifting):
  - 175.000 pc/year
  - storage: 5.800 TEU

##### Rail Cargo Terminal-BILK Zrt. - Budapest - Combi Terminal facilities

- storage area: 22,3 ha
- rail sidings: 7×720 m + 2×280 m + 90 m
- rail mounted gantry cranes: 2 pc (Kone 45 t)
- loaded reachstackers: 6 pc (Konecranes, Kalmar 45 t)
- empty reachstackers: 2 pc (Kalmar, 10 t)
- terminal tractor: 1 pc Kalmar
- garage for repair
- electrical connection: refrigeration container
- dedicated ADR/RID storage place
- dedicated customs inspection and stuffing&stripping places
- container handling (lifting):



- 250.000 pc/year
- storage: 6.900 TEU

#### METRANS Konténer Kft. - Budapest - Combi Terminal facilities

- storage area: 14,0 ha
- rail sidings: 6×650 m + 2×500 m
- rail mounted gantry cranes: 3 pc (45 t)
- loaded reachstackers: 4 pc (45 t)
- empty reachstackers: 1 pc (10 t)
- garage for repair
- dedicated ADR/RID storage place
- electrical connection: refrigeration container
- dedicated customs inspection and stuffing&stripping places
- container handling (lifting):
  - 250.000 pc/year
  - storage: 20.000 TEU

#### Záhony Port Zrt. - Záhony - Combi Terminal facilities

- storage area: 4,0 ha
- rail sidings: 2×530 m normal + 2×530 m wide
- rail mounted gantry cranes: 17 pc (30 t)
- loaded reachstackers: 1 pc (45 t)
- garage for repair
- dedicated ADR/RID storage place
- electrical connection: refrigeration container
- dedicated customs inspection and stuffing&stripping places
- container handling (lifting):
  - 100.000 pc/year
  - storage: 800 TEU

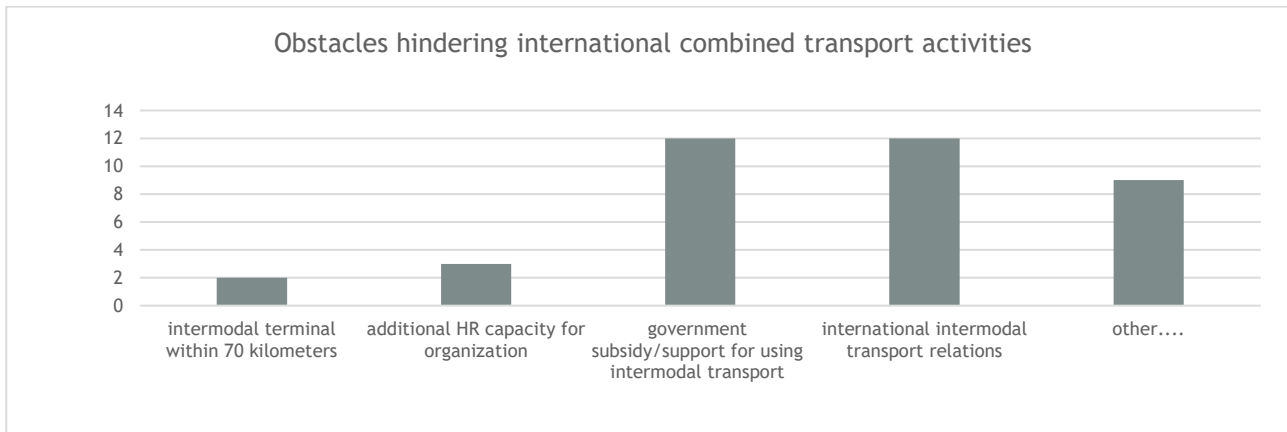
### 1.4.5. Presentation of current technology (workflow and operation), capacity limits

#### Road transport

81 % of the companies do not use combined transport.

The following answers were received to the question „Are there any obstacles that make it difficult to carry out the international transport activities”?





71. Figure Road transport obstacles hindering international combined transport activities

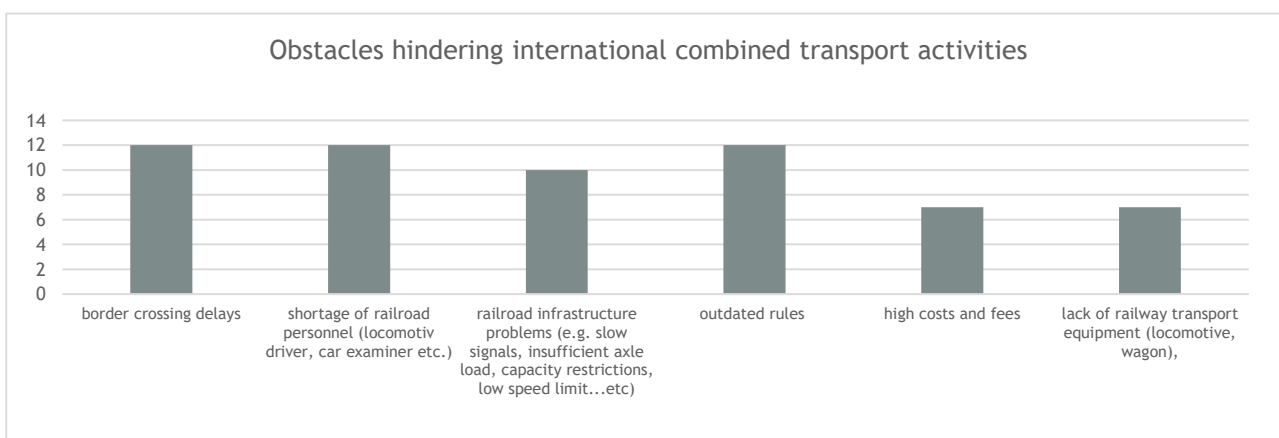
Source: Own editing

Respondents mainly highlighted the lack of public (governmental) stimuli, furthermore the existing combined transport connections do not wholly cover these needs.

As to further conditions they made the following remarks:

- flexibility, precision, as the car industry companies do not tolerate uncertainty and delay,
- value for money service door to door,
- there are not enough parking lots, roadbuilding activities slow down transport,
- extension of road network,
- long lasting reliable service with shorter delivery times,
- lack of labour force, the principals do not need combined transport either, road transport is more convenient and faster; the cost savings of using combined transport do not offset its disadvantages
- on the whole, combined transport is more expensive and slower than road transport,
- mobility package, different legal regulations by each country.

### Rail transport



72. Figure Rail transport obstacles hindering international combined transport activities

Source: Own editing



According to the respondents crossing the borders, railway staff, railway infrastructure and outdated regulatory systems constitute the biggest problems.

33% of the companies do not have combined transport services.

Further remarks on other conditions:

- the regulations are not uniform (protection wagon, change of braking types, etc.)
- lack of interoperability on the borders between the railway and the infrastructure



## 1.5. SWOT analysis

### 1.5.1. SWOT analysis of the system of freight transport

Strengths	Weaknesses
<ol style="list-style-type: none"> <li>1. the presence of intermodal transport nodes - rail, road, water, air;</li> <li>2. 11 railways, the majority of them is electrified;</li> <li>3. many production companies in the region;</li> <li>4. 70 % of the country's logistic potential is cumulated in the analysed region;</li> <li>5. 94 % of the combined transport operates in the analysed region;</li> <li>6. international airport - continuously developing;</li> <li>7. economic development level is above the EU average;</li> <li>8. strong purchasing power - vigorous trade flows.</li> </ol>	<ol style="list-style-type: none"> <li>1. shortcomings in the preparation of projects;</li> <li>2. access to industrial sites by rail is only possible with diesel engines and on run-down tracks;</li> <li>3. lack of human resources - in all sectors;</li> <li>4. limited EU-tender opportunities;</li> <li>5. low proportion of environmentally friendly modes of transport.</li> </ol>
Threats	Opportunities
<ol style="list-style-type: none"> <li>1. in the short term the present infrastructure needs modernisation in many places;</li> <li>2. new developments do not always consider the actually prospective capacities e.g. limited Danube-bridge capacity;</li> <li>3. congested road infrastructure - M0, M1, M3;</li> <li>4. limited regional developments - insufficient free area for development;</li> <li>5. possibility of worldwide economic crisis - EU economy slowing down;</li> <li>6. political risk, local interests;</li> <li>7. transit-country situation.</li> </ol>	<ol style="list-style-type: none"> <li>1. to increase the number of intermodal nodes;</li> <li>2. complex area and industry development;</li> <li>3. logistic and industrial potential in the area;</li> <li>4. extension of client range considering logistic companies;</li> <li>5. development of transport infrastructure</li> <li>6. digitalization.</li> </ol>



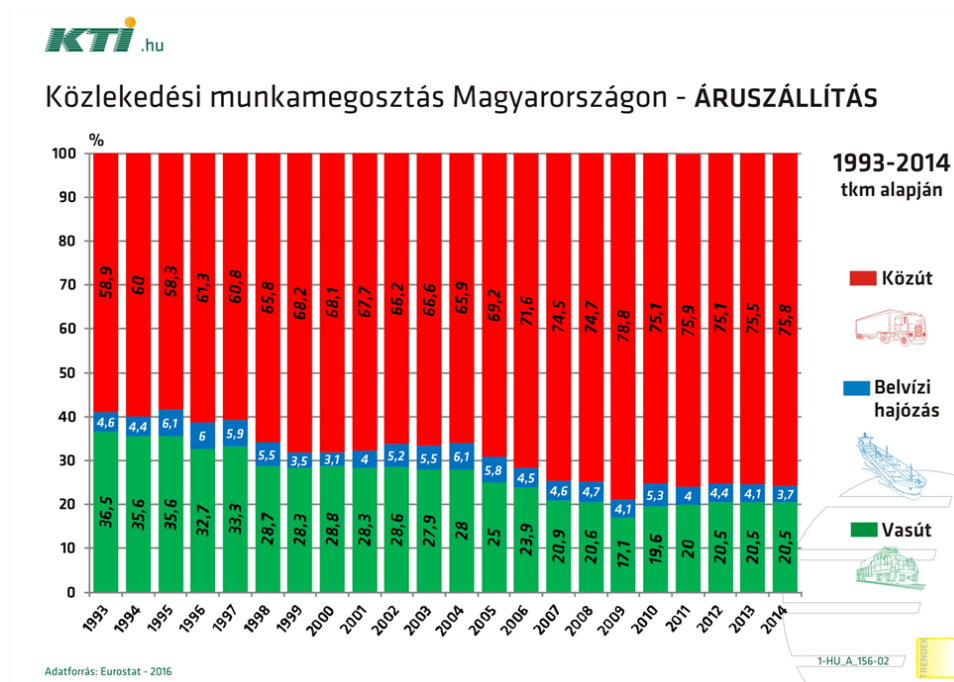
### 1.5.2. SWOT analysis of the framework conditions for the pilot action

Strengths	Weaknesses
<ol style="list-style-type: none"> <li>1. traffic node - rail, road, water;</li> <li>2. well-developed infrastructure;</li> <li>3. significant road, rail and water traffic;</li> <li>4. expert management background - with development strategy;</li> <li>5. strong international connections for through-goods trains;</li> <li>6. loading facilities/possibilities independently of weather conditions;</li> <li>7. smaller environmental impact - green certification for new buildings;</li> <li>8. rehabilitation of brownfield sites.</li> </ol>	<ol style="list-style-type: none"> <li>1. Impaired condition of the railway link to the port;</li> <li>2. outside road link goes through a densely populated area;</li> <li>3. a part of the inside infrastructure is old- they need to be replaced;</li> <li>4. lack of advance planning by freight forwarders and poor management of congestions.</li> </ol>
Threats	Opportunities
<ol style="list-style-type: none"> <li>1. conflict points with the inhabitants of the area;</li> <li>2. frequent traffic jams in the streets nearby;</li> <li>3. problems with the present check-in system;</li> <li>4. testing can take place on less busy gates - representativeness.</li> </ol>	<ol style="list-style-type: none"> <li>1. logistic concentration;</li> <li>2. diversity of markets for logistic companies,</li> <li>3. free development capacities - management is open-minded;</li> <li>4. traceability, transparent information structure;</li> <li>5. shortening the time spent within the port area;</li> <li>6. pilot action can be extended to both rail and water transport;</li> <li>7. pilot action can be adapted to other logistic service centres;</li> <li>8. no solution on the market for such type and size intermodal logistic centres.</li> </ol>



## 2. ANALYSIS OF FREIGHT TRENDS (TIME RANGE 2030 / 2050)

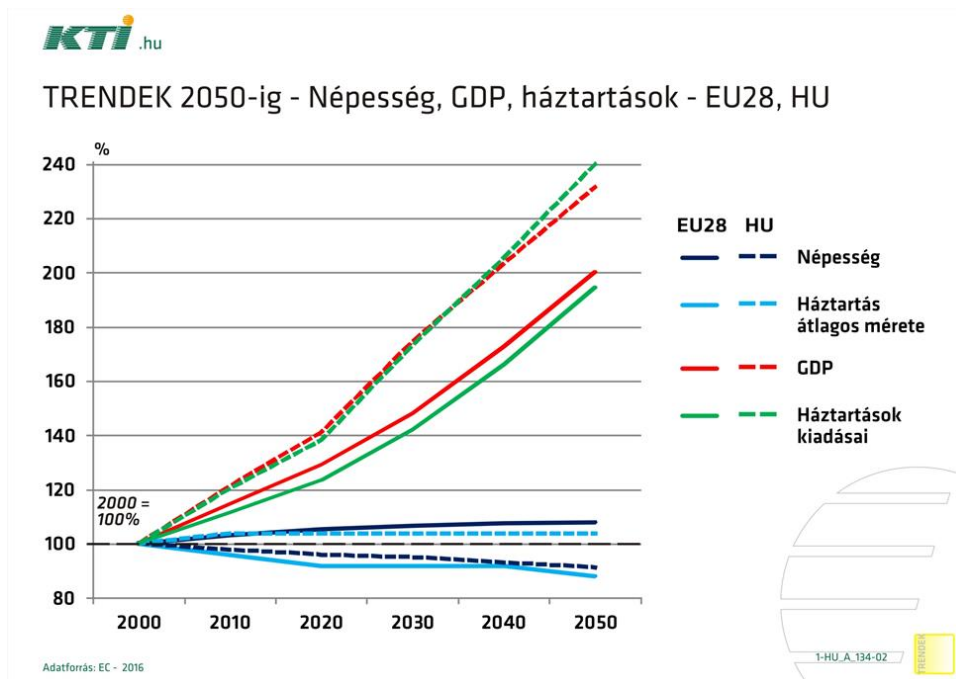
Nowadays, freight is mostly carried by road (figure 73.). Trends show that over the next 10 to 30 years, GDP will grow above the European average, leading to an increase in transport volume. Increased traffic is also generating the increasing the energy demand of the transport sector, most of all road transport and, as a result, CO2 emissions from transport. Reducing these processes is one of the dedicated goals of the CORCAP project: promoting environmentally friendly freight transport.



73. Figure Modal split of freight transport 1993-2014

Source: KTI

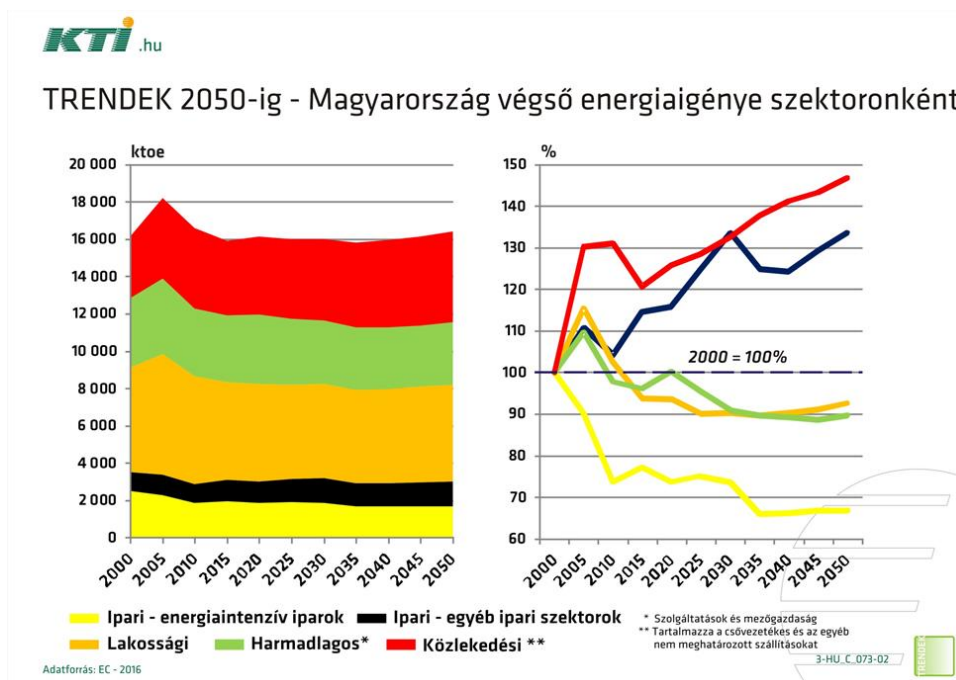
The following figures represent Hungarian and EU trends of population, size of households, outcomes of households and the GDP (figure 74.), the energy needs (figure 75. & 76.), productions of greenhouse gases (figure 77.) and CO2 production (figure 78.).



74. Figure Trend to 2050.

Source: KTI

The trend shows that we expect a GDP growth (red) which results the growth of the household's outcome (green). The population will be stagnated (purple), but the size of the households will a bit decrease (cyan).

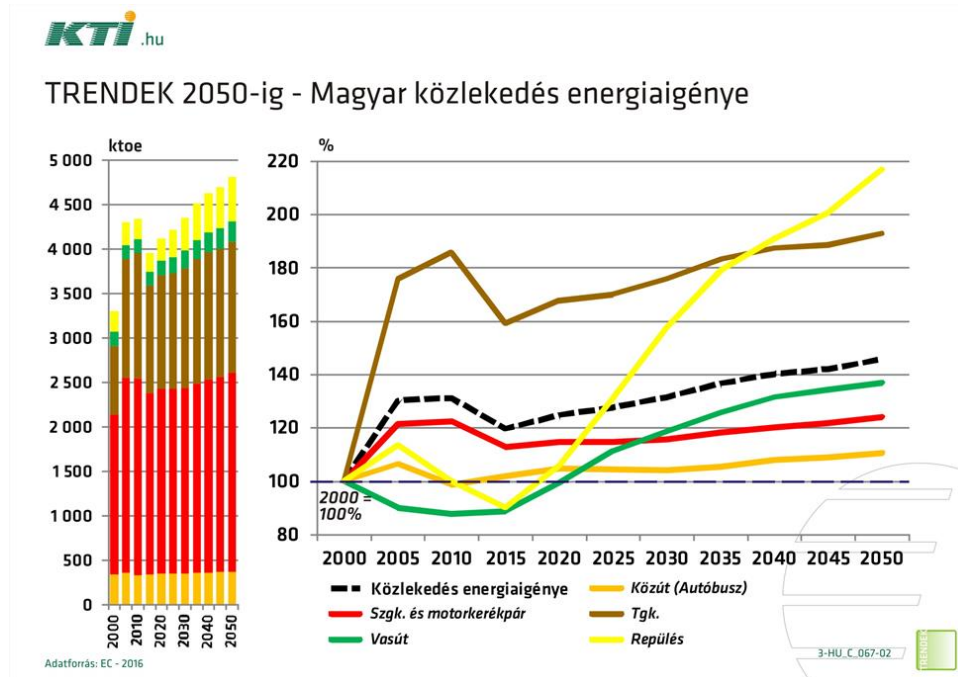




75. Figure Energy needs in Hungary by sectors until 2050

Source: KTI

This trend shows that the energy need of the transport sector will increase most (red). That is why it is important to find environmentally friendly transport modes.

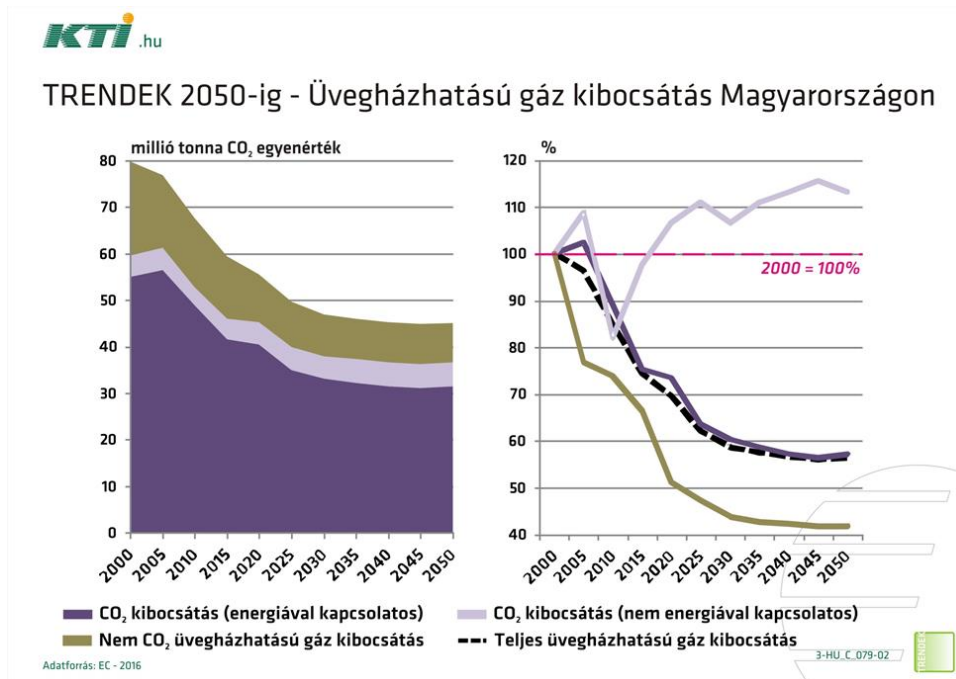


76. Figure Energy needs of the Hungarian transport sector by modes until 2050

Source: KTI

The energy need of the Hungarian transport sector also grows. In most demand the air (yellow), then road-freight (brown), rail (green), private cars (red), buses (orange). Black is an average need.

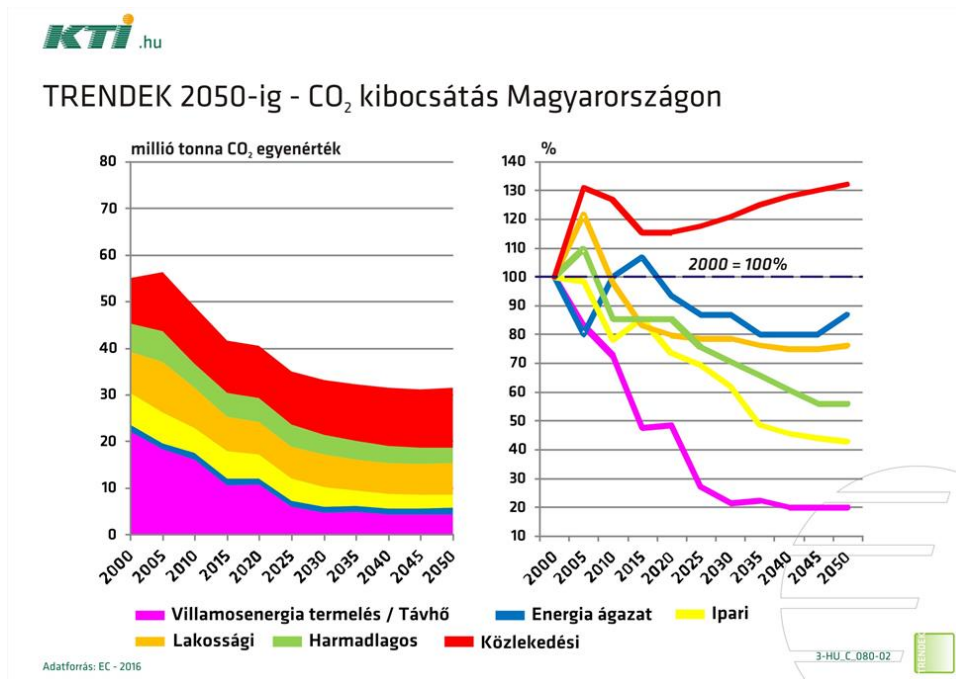




77. Figure Trend of greenhouse gases production

Source: KTI

The greenhouse gases production will in total decrease (black). CO<sub>2</sub> outcome in relation with energy will also decrease (purple), but CO<sub>2</sub> outcome which is not related with energy will increase (rose).



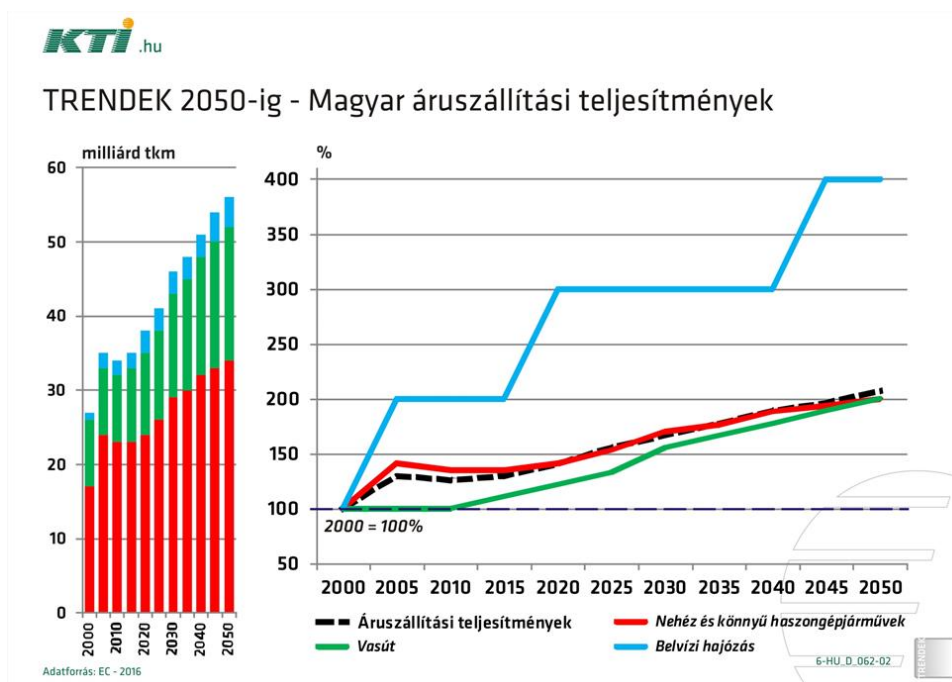
78. Figure CO<sub>2</sub> production

Source: KTI



The CO2 outcome will increase most in the transport sector (red). In the other sectors (energy (blue), industry (yellow), private (orange), lightning, heating (rose), tertiary (green)) the CO2 outcome will decrease.

According to the trends ([www.kti.hu/trendek/aruszallitas-logisztika](http://www.kti.hu/trendek/aruszallitas-logisztika)) published by Institute of Transport Science, the domestic public road and railroad transportation sector will double its performance measured at millennium by 2050. Significant growth is also forecasted in the field of inland waterway transportation (figure 79.).



79. Figure Production of the Hungarian transport modes

Source: KTI

### Road

The growth of road transport is in correlation with the trend in freight performance: slow but steady growth is expected.

### Rail

The volume index of rail transport is increasing, mainly due to the development of rail freight corridors. If the volume of single carriages is growing by appropriate incentives, this may help to reduce the road volume index rate.

### Waterway trend:

The following commodities are likely to be potential opportunities in the growth of the waterway transportation in the future<sup>1</sup>:

<sup>1</sup> Source: National Transport Strategy - Analysis of the state



- Biofuels, which should be produced in biofuel factories that are located in the port;
- Recycle of waste and the dangerous goods;
- Vehicles and oversized agricultural vehicles;
- Containers (either empty);
- Transportation of big sized, undivided cargos, transformers, wind turbines;
- Any goods which can be transported by sea ships (it takes 85% of world trade)

Based on European market research, the following long-term trends are expected in the inland waterway market<sup>2</sup>.

- Oil and coal demand in the European Union is expected to decrease in the long term, due to decarbonisation in the energy sector, saving measures in energy demand, and in particular the shift from oil and coal to renewables;
- Limited growth is foreseen for the output of agricultural products;
- Iron and steel production is expected to stagnate in Europe in the long term, although the development is more positive in certain countries (e.g. Germany);
- The construction activity and the chemical production is expected to increase very sharply;
- Other growing segments will be e.g. biomass segment, the urban waterway and container transport.

## 2.1. Possible directions of developments

The directions of developments are determined by the documents in sub-chapter 3.2. The relevance to the CORCAP is also there pointed out. Other directions:

- Establishment of an equivalent financing system between the modes of transport e.g. state incentives
- Creating a sustainable regulatory environment
- Development of human resources (labour shortage)
- Reliable service with shorter delivery time
- Generating additional demand
- Reducing environmental impact

## 2.2. Possible new connections

Possible directions for **road** and **rail**:

- East: Turkey, Bosnia, North-Macedonia
- South: Greek ports.

The oriental direction is an open question because of the possible EU membership of the states, the southern direction depends on the shipping from China.

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<sup>2</sup> Source: CCNR Inland Navigation in Europe - Market Observation - Annual report 2018. <https://www.inland-navigation-market.org/en>

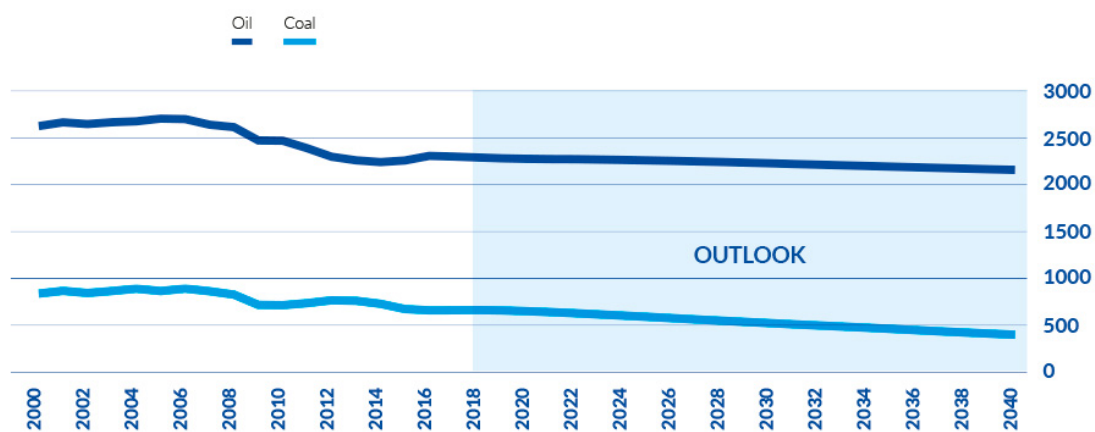


## Long-term trends by waterways

Based on European market research, the following long-term trends are expected in the inland waterway market <sup>3</sup>.

- Oil and coal demand in the European Union is expected to decrease in the long term, due to decarbonisation in the energy sector, saving measures in energy demand, and in particular the shift from oil and coal to renewables;
- Limited growth is foreseen for the output of agricultural products;
- Iron and steel production is expected to stagnate in Europe in the long term, although the development is more positive in certain countries (e.g. Germany);
- The construction activity and the chemical production is expected to increase very sharply;
- Other growing segments will be e.g. biomass segment, the urban waterway and container transport.

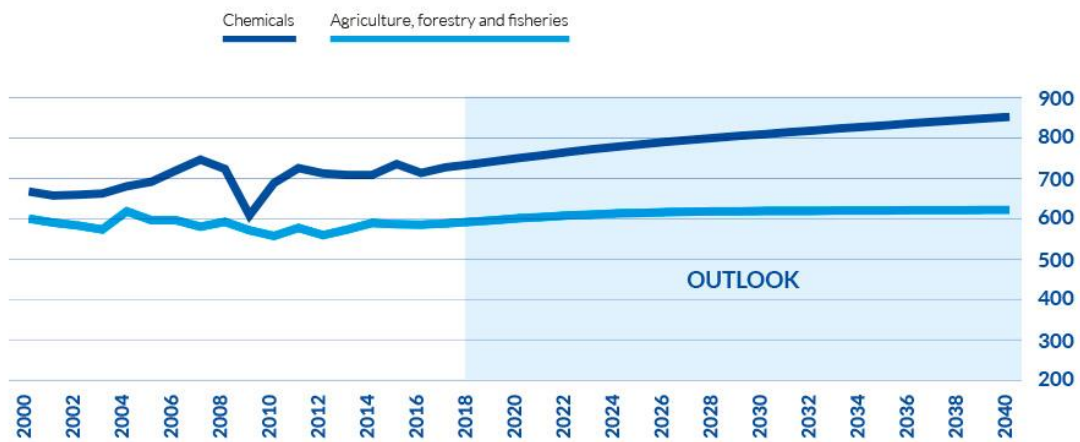
These trends are shown on the Figures below.



80. Figure Domestic demand for oil and coal in the EU

Source: <https://www.inland-navigation-market.org/en/>

<sup>3</sup> Source: CCNR Inland Navigation in Europe - Market Observation - Annual report 2018. <https://www.inland-navigation-market.org/en/>



81. Figure Gross real output of chemicals and agricultural products in the EU

Source: <https://www.inland-navigation-market.org/en/>



82. Figure Gross real output of iron and steel and in the construction sector in the EU

Source: <https://www.inland-navigation-market.org/en/>

### 2.3. Terminating links (if any)

There are no plans to end or terminating any connection.



### 3. PRESENTATION OF PLANNED DEVELOPMENTS (SCREENING OF DOCUMENTS)

#### 3.1. Identification and presentation of strategies and documents with relevance for spatial planning and infrastructure planning

In this sub-chapter we identified and examined the strategic materials which are related to the Region of Central Hungarian Region and therefore can have an influence on the CORCAP project as well, they cover transport/logistic areas, or review/analyse some area of development.

Based on the above aspects the following documents have been selected:

1. Intermodal Infrastructure and Capacity Enhancement Project at Csepel Freeport - Planning Phase 2
2. Logistics Sector Policy Strategy
3. Analysis of the Hungarian Transport, Forwarding and Logistics Market, and Mapping the Competition Situation and Competitiveness of the Transport Sector and its Subsectors, with Special Concern for Vertically Integrated Companies with International Outlook.
4. Situation Analysis of the National Transport Strategy
5. Budapest 2030 Long-term Urban Development Concept
6. Integrated Transport Development Strategy 2007-2020 - White Book
7. National Port Development Master Plan Strategy
8. Budapest Transport Development Strategy 2014-2030 / BMT
9. Budapest Rail Node Study (BRNS)
10. DRS 2019 Implementation - Implementation of EU macro-regional strategies
11. Development of a rail track connection between Kelenföld and Ferencváros stations - Technical Study
12. Current issues in transport development
13. Pest County Territorial Development Concept Study - volume I.
14. Pest County Area Development Concept Proposal Phase - Volume II.



### 3.2. Analysis of contents of identified strategies and documents

#### Summary: 1. Intermodal Infrastructure and Capacity Enhancement Project at Csepel Freeport - Planning Phase 2

Author of the document	MAHART-Freeport Ltd.					
Title of the document	Intermodal Infrastructure and Capacity Enhancement Project at Csepel Freeport - Planning Phase 2					
Date and place of publication/creation	2018					
Language of the document	Hungarian					
Category	Output of international projects		x			
	EU publications and strategies					
	Strategies and plans of EU countries					
	Scientific articles and publications					
	Legislation					
Topic / Subject / Keyword	watery artefacts		state aid		ocean shipping	
	watery regulation		port services	x	bulk goods	
	inland waterway transport	x	water corridor /TEN-T		container terminal	
	logistics		financing		container	
	intermodal transport		Danube	x	oversize goods	
	sustainable transport		Rhine		RO-RO	
	port infrastructure	x	Main		SKV	
	port security	x	employment		multimodal transportation system	x
	loading technology		inland navigation		legislation	
	warehouse technology		transport cost		exceptional weather	





	IT	climate change	passenger transport
Online availability	<a href="http://www.mahartfreeport.hu/images/projektek/IKOP-2.1.0-15-2018-00049/PROJEKToSSZEFOGLALo_INFRA2.pdf">http://www.mahartfreeport.hu/images/projektek/IKOP-2.1.0-15-2018-00049/PROJEKToSSZEFOGLALo_INFRA2.pdf</a>		

**Summary:**

In November 2014, with the support of the European Union and the Hungarian State, a total budget of HUF 3,500 million was launched in the Budapest Freeport project. The project will include the construction of a new vertical and sloping shore wall, a new shoreline track and a capacity-increasing railway track. The new embankments and dredging will allow continuous port reception for larger vessels, as well as provide a safe mobile exit for port ship traffic. This document presents plans for 2<sup>nd</sup> Phase of the development. The aim of this plans is to increase intermodality in the integrated development and interconnection of the port's internal transport modes (road, rail, water). By strengthening the logistics function and increasing the port-logistics capacity freight volume can be increased, in accordance with the domestic and EU legislation's harmonized requirements. At this phase, waterway, rail and road network developments will be carried out, as will further strengthening and restoration of certain sections of the shore wall and increased coastline protection. Utility infrastructure is also being developed. Offshore work will allow at the Southeast corner of Commercial Basin No 12 to land with watercrafts and to make transit tracks accessible. In the context of railway development, obsolete tracks will be completely rebuilt to ensure increased rail traffic. Road development not only involves the replacement of obsolete coatings, but also the construction of new sections that includes also the construction of a separate sewer system and the routing of traffic and GIS cables. The fibre-optic backbone network of the port was developed in a star-point system as part of the public utility development with the modernization of the public utility network. The installation of license plate recognition system such as traffic and management information system increase the reliable operation.

**Relevance of this document to CORCAP project:**

- documents including the water transport sector development in Hungary
- the Hungarian port's ability to develop to serve



## Summary: 2. Logistics Sector Policy Strategy

Author of the document	Iparfejlesztési Közalapítvány			
Title of the document	Logistics Sector Policy Strategy			
Date and place of publication/creation	Budapest, August 16 <sup>th</sup> 2013			
Language of the document	Hungarian			
Category	Output of international projects		x	
	EU publications and strategies			
	Strategies and plans of EU countries			
	Scientific articles and publications			
	Legislation			
Topic / Subject / Keyword	watery artefacts		state aid	ocean shipping
	watery regulation		port services	bulk goods
	inland waterway transport	x	water corridor /TEN-T	container terminal
	logistics		financing	container
	intermodal transport	x	Danube	x oversize goods
	sustainable transport	x	Rhine	RO-RO
	port infrastructure		Main	SKV
	port security		employment	x multimodal transportation system
	loading technology		inland navigation	x legislation
	warehouse technology		transport cost	exceptional weather
	IT		climate change	passenger transport
Online availability	<a href="http://www.logsped.hu/logstrat_2013.pdf">http://www.logsped.hu/logstrat_2013.pdf</a>			



### **Summary:**

The aim of the preparation the Logistics Sector Policy Strategy 2014-20 is to establish a strategic plan accepted by the Government and the industry, in line with the related strategies and international expectations, to manage logistics according to its economic weight. Strategic pillars aim to achieve specific goals; promotion of networking and cooperation in the sector; development of logistically relevant administrative services; modernization of education; support for logistics R & D & I, support for logistics infrastructure development and ensure sustainability of operations.

Professional and business federation organizations were also involved in the strategy-making process, as well the National Tax and Customs Board plays an important role in the implementation of the strategy in the field of simplification of customs regulations, and IFKA Industrial Development Non-profit Ltd with professional background materials, monitoring and research activities such as professional training programs for the sector. It is crucial to improve services and background activities, such as infrastructure transport networks, as a significant quantity of logistics traffic crosses borders therefore to improve competitiveness IT developments can make a significant contribution, but human resources and specialist training are essential, too. Cooperation and joint lobbying at EU level with neighbouring countries are emphasized to promote cross-border development and complementary competencies and to reap the benefits of joint development. Despite its central geographical position in terms of quality, Hungary is lagging far behind the EU average; however, the implementation of the strategic plan could significantly improve Hungary's competitiveness.

### **Relevance of this document to CORCAP project:**

- documents including the all logistics sector development in Hungary
- development of logistics capacities, elimination of bottlenecks



**Summary: 3. Analysis of the Hungarian Transport, Forwarding and Logistics Market, and Mapping the Competition Situation and Competitiveness of the Transport Sector and its Subsectors, with Special Concern for Vertically Integrated Companies with International Outlook**

Author of the document	Bank Dénes, Bíró Péter, Kopik Tamás, Dr Losoncz Miklós, Dr Molnár László, Munkácsy Anna, Szenczy Dániel, Udvardi Attila				
Title of the document	Analysis of the Hungarian Transport, Forwarding and Logistics Market, and Mapping the Competition Situation and Competitiveness of the Transport Sector and its Subsectors, with Special Concern for Vertically Integrated Companies with International Outlook				
Date and place of publication/creation	2010				
Language of the document	Hungarian				
Category	Output of international projects				
	EU publications and strategies				
	Strategies and plans of EU countries				
	Scientific articles and publications		x		
	Legislation				
Topic / Subject / Keyword	waterway artefacts		state aid		ocean shipping
	waterway regulation		port services		bulk goods
	inland waterway transport		water corridor /TEN-T		container terminal
	logistics	x	financing		container
	intermodal transport		Danube		oversize goods
	sustainable transport		Rhine		RO-RO
	port infrastructure		Main		SKV
	port security		employment		multimodal transportation system
	loading technology		inland navigation		legislation



	warehouse technology		transport cost		exceptional weather
	IT		climate change		passenger transport
Online availability	<a href="http://gvh.hu/data/cms1000660/22_GKI_Tanulm%C3%A1ny.pdf">http://gvh.hu/data/cms1000660/22_GKI_Tanulm%C3%A1ny.pdf</a>				

**Summary:**

Personal interviews were conducted with 23 major carriers, freight forwarders, logistic service providers and business federation’s representatives during a study commissioned by the Hungarian Competition Authority. As part of the empirical research, 300 carriers, freight forwarders and logistics service providers were searched. As the results of the qualitative and quantitative surveys and based on the international outlook it can be stated that customers are increasingly expecting a joint, integrated service from larger companies, which leads to growing of freight-forwarding-logistics services closer, regarding traffic. However, this does not necessarily mean that a single company will carry out all three activities, but rather that the three activities will be carried out by two or three more and more closely linked parties, even in a specific area. Vertically integrated services can bring many benefits to customers and to service companies, too. However, mostly larger companies are capable to provide vertically integrated services, so their competitive advantage over smaller ones can be further strengthened. On the other hand, the ability to provide this complex service is becoming less and less a competitive advantage for larger companies, as more and more of them are able doing so (if not all of them).

**Relevance of this document to CORCAP project:**

- documents including the logistics sector development in Hungary
- development of logistics capacities, elimination of bottlenecks



## Summary: 4 Situation Analysis of the National Transport Strategy

Author of the document	TRANSPORT DEVELOPMENT COORDINATION CENTER			
Title of the document	Situation Analysis of the National Transport Strategy			
Date and place of publication/creation	2014			
Language of the document	Hungarian			
Category	Output of international projects			
	EU publications and strategies			
	Strategies and plans of EU countries		x	
	Scientific articles and publications			
	Legislation			
Topic / Subject / Keyword	watery artefacts		state aid	ocean shipping
	watery regulation		port services	bulk goods
	inland waterway transport		water corridor /TEN-T	container terminal
	logistics		financing	container
	intermodal transport		Danube	oversize goods
	sustainable transport	x	Rhine	RO-RO
	port infrastructure		Main	SKV
	port security		employment	multimodal transportation system
	loading technology		inland navigation	legislation
	warehouse technology		transport cost	exceptional weather
	IT		climate change	passenger transport
Online availability	<a href="http://www.kormany.hu/download/6/3f/51000/01_NKS_Helyzetelemzes.pdf">http://www.kormany.hu/download/6/3f/51000/01_NKS_Helyzetelemzes.pdf</a>			



### Summary:

The purpose of this document is to provide a thorough overview of the entire Hungarian transport sector by processing the available and transmitted data.

After presenting general issues - such as the presentation of the global economic and social situation; transport policy of the EU; important characteristics of the transport environment; climate, energy, environmental and sustainability policies of the EU; energy use of the transport sector - the document examines passenger transport and freight transport by subsectors of transport means and presents the infrastructure characteristics (networks). At examining horizontal qualities, it also enters into details of traffic safety, sustainability, intelligent technologies, electronic charging systems, aspects of transport education and research development, and further the competitiveness of domestic transport in comparison to international situation.

It introduces the factors that determine and influence the long-term and social expectations of transport. It covers also financing issues of the transport system.

In conclusion, it formulates conclusions and a vision.

### Relevance of this document to CORCAP project:

- documents including the transport sector development in Hungary
- transport infrastructure development





**Summary: 5. Budapest 2030 Long-term Urban Development Concept**

Author of the document	BUDAPEST MUNICIPALITY GOVERNMENT					
Title of the document	Budapest 2030 Long-term Urban Development Concept					
Date and place of publication/creation	2013					
Language of the document	Hungarian					
Category	Output of international projects					
	EU publications and strategies					
	Strategies and plans of EU countries		x			
	Scientific articles and publications					
	Legislation					
Topic / Subject / Keyword	watery artefacts		state aid		ocean shipping	
	watery regulation		port services		bulk goods	
	inland waterway transport		water corridor /TEN-T		container terminal	
	logistics		financing		container	
	intermodal transport		Danube	x	oversize goods	
	sustainable transport		Rhine		RO-RO	
	port infrastructure		Main		SKV	
	port security		employment		multimodal transportation system	
	loading technology		inland navigation		legislation	
	warehouse technology		transport cost		exceptional weather	
	IT		climate change		passenger transport	
Online availability	<a href="http://infoszab.budapest.hu:8080/GetSPFile.aspx?Attachment=egyebkozetettel/Lists/Hirdetmeny/Attachments/74/Budapest_2030.pdf">http://infoszab.budapest.hu:8080/GetSPFile.aspx?Attachment=egyebkozetettel/Lists/Hirdetmeny/Attachments/74/Budapest_2030.pdf</a>					



	<a href="https://budapest.hu/Documents/V%C3%A1ros%C3%A9p%C3%ADt%C3%A9si%20F%C5%91oszt%C3%A1ly/Budapest2030_HUN_%C3%B6sszefoglal%C3%B3.pdf">https://budapest.hu/Documents/V%C3%A1ros%C3%A9p%C3%ADt%C3%A9si%20F%C5%91oszt%C3%A1ly/Budapest2030_HUN_%C3%B6sszefoglal%C3%B3.pdf</a>
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### Summary:

Budapest's geographic location within Europe offers unique features that can be a key element of the city's future macro-regional role. The London-Budapest-Istanbul-Baghdad (M1-M5) motorway and the Moscow-Kiev-Budapest-Trieste (M3-M7) motorways crosses right in Budapest, which establishes a link between markets of EU Member States and Middle East markets, and between the states of the former Soviet Union and the Adriatic.

The aim of the Municipality of Budapest is to make the city the centre of Central Europe and the south-eastern region of the European Union by taking advantage of its regional position. Therefore, long-term strategy plans' goal is instead of increasing built-up areas to regenerating development of urban areas by keeping the existing structure, redeveloping areas, establishing environmentally friendly supply systems, improving public spaces, and protecting values - the city as a cultural heritage. Developing an organizational system requires the establishment of a financial system, sustainable resource creation, efficient use of EU development resources, defining key areas for development, stimulating investment, developing an entrepreneurial culture and innovative supporting of micro and SMEs.

Budapest can become a strong member of the European city network if it works closely with all partners to capitalize human resources and geographical location, and plays a major role in the West-East / North-South corridors by transfer of culture, innovation, commodities, capital, skilled labor, know-how and expertise. However, this also requires the development of international and national transport links through the purchase of vehicles, the establishment and technical development of the railway network, new railway stations in the capital, and the improvement of the general level of service. The motorway, air and waterways also need to be further developed.

The document sets out the following development objectives:

1. Initiative urban development
2. Partnership - joint planning of the future in the region and nationally
3. Unified Budapest
4. Strengthening the international and European role of Budapest
5. Creating unified environmental conditions
6. Climate protection and efficient energy usage
7. Value-based preservation and development of a unique city character
8. City living with the Danube
9. Efficient and balanced urban structure - compact city
10. Brownfields are target areas for urban development
11. Intelligent Mobility
12. Knowledge-, skills- and green economy-based development



13. Self-sustaining urban management system
14. Preservation and enhancement of cultural diversity
15. Optimization of Human Services
16. Initiation of demanded, flexible housing structure
17. Receptive, supportive and active society

**Relevance of this document to CORCAP project:**

- documents including the urban transport infrastructure and services development in Budapest,
- development to the transport infrastructure,



## Summary: 6. Integrated Transport Development Strategy 2007-2020

Author of the document	Ministry of Economy and Transport			
Title of the document	Integrated Transport Development Strategy 2007-2020 - White Book			
Date and place of publication/creation	2006			
Language of the document	Hungarian			
Category	Output of international projects			
	EU publications and strategies			
	Strategies and plans of EU countries		x	
	Scientific articles and publications			
	Legislation			
Topic / Subject / Keyword	waterway transport		state aid	combined transport
	road transport		transport cost	bulk goods
	rail transport		TEN-T	legislation
	logistics		financing	container
	intermodal transport		High-Speed Rail	employment
	multimodal transportation system		railway infrastructure	IT
	sustainable transport	x	loading technology	Strategic Environmental Assessment (SEA)
	transportation trends		warehouse technology	climate change
	passenger transport		goods transport	
Online availability	<a href="http://www.pestmegye.hu/images/2014/agazati_strategiak/Egyseges_Kozlekedesfejlesztési_Strategia_2007_2020_Feher_konyv.pdf">http://www.pestmegye.hu/images/2014/agazati_strategiak/Egyseges_Kozlekedesfejlesztési_Strategia_2007_2020_Feher_konyv.pdf</a>			



### Summary:

The Integrated Transport Development Strategy (EKFS) is a review of the country's transport policy. Hungarian transport policy documents have already formulated long ago as a highlighted objective - particularly since the EU accession - the promotion and development of environmental-friendly modes of transport (freight and passenger transport).

The Strategy states that Hungary will encourage the creation of combined waterway traffic in inland freight transport, complemented by comprehensive logistics services and information systems. The EKFS is likely to confirm that on the VII. Trans-European main network generated by the DMR waterway system the volume of inland waterway freight transport is increasing significantly due to EU expansion. Further traffic increase can be expected by the growth in the East-West trade traffic, as well as Adriatic and Black Sea port developments generated by trade between the EU and China.

The Sustainability Assessment of the EKFS rightly states that maintaining the favourable division of work targets, initiating such processes requires complex transport policy interventions. The prevention of modal split - deterioration between modes of transport - (further strengthening of road transport) can be prevented by preserving the share of environmentally friendly modes of transport, but to ensure this share needs as well important technical, economic, organizational and legislative tasks. Only when these are realized together can the social and environmental negative impacts of transport be mitigated. Increasing the share of rail, water and combined transport is considered environmentally and socially favourable, but the expected impact is low.

### Relevance of this document to CORCAP project:

- documents including the transport infrastructure and services development in Hungary
- transport infrastructure development,



## Summary: 7. National Port Development Master Plan Strategy

Author of the document	Consortium of EX ANTE Consulting Ltd. and MAHART PassNave Ltd.				
Title of the document	National Port Development Master Plan Strategy				
Date and place of publication/creation	Budapest, 2019				
Language of the document	Hungarian				
Category	Output of international projects				
	EU publications and strategies				
	Strategies and plans of EU countries		x		
	Scientific articles and publications				
	Legislation				
Topic / Subject / Keyword	watery artefacts		state aid		ocean shipping
	watery regulation		port services	x	bulk goods
	inland waterway transport	x	water corridor /TEN-T	x	container terminal
	logistics		financing		container
	intermodal transport		Danube	x	oversize goods
	sustainable transport		Rhine		RO-RO
	port infrastructure	x	Main		SKV
	port security		employment		multimodal transportation system
	loading technology		inland navigation	x	legislation
	warehouse technology		transport cost		exceptional weather
IT		climate change	x	passenger transport	
Online availability	<a href="http://www.huport.eu/hu/fooldal/">http://www.huport.eu/hu/fooldal/</a>				



### Summary:

The document is a draft strategy of the National Port Development Master Plan to strengthen Danube freight transport by developing TEN-T port infrastructure. Its objective is to encourage modal shift by increasing the share of inland waterway freight and integrating it in a combined intermodal transport system, generating additional demand by developing a financing system and a sustainable regulatory environment, and developing human resources. The port development master plan comprehensively sets out directions for the development of the Danube port infrastructure and port services, as well as for the entire sector by 2030. Following a comprehensive analysis of the situation, strategic planning fits in with existing facilities and capabilities, contributes to transport development and economic policy goals, and ensures feasibility, effectiveness and economy. In order to increase and handle growing quantities in port traffic an adequate road and rail accessibility is needed, but it is necessary to ensure the navigability of the waterway. Growth can also be boosted by working closely with industries and developing industrial space within the port area. The basic technical and technological modernization of the craft and the digitalisation of information systems is essential for an efficient service. To enable port terminals to be able to connect to a cross-border freight transport system, it is necessary to set up an extensive connection to international port information systems. Sustainable ports can be evolved if the development plan considers the effects of climate change and extreme weather, and not only physical hazards but also economic risks, develops a skilled workforce, and creates effective and long-term waste management regulations. As the entire Hungarian section of the Danube River is part of the TEN-T core network, its priority development is not only in the interest of Hungary but also of the European Community.

### Relevance of this document to CORCAP project:

- documents including the water transport infrastructure and services development in Hungary
- case studies and plans have also been made for the Freeport of Budapest
- promotion of multimodality is also an objective





**Summary: 8. Budapest Transport Development Strategy 2014-2030 / BMT**

Author of the document	Municipality of Budapest			
Title of the document	Budapest Transport Development Strategy 2014-2030 / BMT			
Date and place of publication/creation	2014			
Language of the document	Hungarian			
Category	Output of international projects			
	EU publications and strategies			
	Strategies and plans of EU countries			
	Scientific articles and publications		x	
	Legislation			
Topic / Subject / Keyword	watery artefacts	state aid	ocean shipping	
	watery regulation	port services	bulk goods	
	inland waterway transport	water corridor /TEN-T	container terminal	
	logistics	financing	container	
	intermodal transport	Danube	oversize goods	
	sustainable transport	Rhine	RO-RO	
	port infrastructure	Main	SKV	
	port security	employment	multimodal transportation system	
	loading technology	inland navigation	legislation	
	warehouse technology	transport cost	exceptional weather	
	IT	climate change	passenger transport	x



Online availability	<a href="https://budapest.hu/Documents/V%C3%A1ros%C3%A9p%C3%ADt%C3%A9si%20F%C5%91oszt%C3%A1ly/_Bal%C3%A1zs%20M%C3%B3r%20Terv_ENG.pdf">https://budapest.hu/Documents/V%C3%A1ros%C3%A9p%C3%ADt%C3%A9si%20F%C5%91oszt%C3%A1ly/_Bal%C3%A1zs%20M%C3%B3r%20Terv_ENG.pdf</a>
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**Summary:**

The focus of transport development in Budapest focuses on a liveable environment, reliable public services, cleaner air, and well-maintained green spaces, while achieving good economic performance through appropriate infrastructure. The transport of the capital also has an impact on the agglomeration, so the main aim of the development of the city is to ensure economic sustainability. An important task to achieve this is to identify and serve the needs of mobility and to continuously renew and improve the transport system.

The goals set for the end of the year 2030 include building more connections between the city center with areas beyond the city border with direct lines. Studies have been carried out to integrate suburban lines with urban high-speed rail (metro) and national railways to reduce interchange. The aim is also to reduce the average age of vehicles, thereby creating a fleet of energy efficient, environmentally friendly, modern and reliable types.

Beyond the institutional responsibilities of the transport management, the practice of project development and project management based on strategic planning, aimed at efficient use of resources and the institutional condition for the implementation of the plans.

**Relevance of this document to CORCAP project:**

- documents including the urban transport infrastructure and services development in Budapest
- development to the transport infrastructure



**Summary: 9. Budapest Rail Node Study (BRNS)**

Author of the document	Ministry for Innovation and Technology					
Title of the document	Budapest Rail Node Study (BRNS)					
Date and place of publication/creation	2019					
Language of the document	Hungarian					
Category	Output of international projects					
	EU publications and strategies					
	Strategies and plans of EU countries					
	Scientific articles and publications		x			
	Legislation					
Topic / Subject / Keyword	watery artefacts		state aid		ocean shipping	
	watery regulation		port services		bulk goods	
	inland waterway transport		water corridor /TEN-T		container terminal	
	logistics		financing		container	
	intermodal transport		Danube		oversize goods	
	sustainable transport	x	Rhine		RO-RO	
	port infrastructure		Main		SKV	
	port security		employment		multimodal transportation system	
	loading technology		inland navigation		legislation	
	warehouse technology		transport cost		exceptional weather	
	IT		climate change		passenger transport	x
Online availability	<a href="http://bvs.hu/">http://bvs.hu/</a>					



### **Summary:**

Budapest is a major railway junction on both national and European level, passing through by many European rail freight corridors, as well as significant suburban traffic from suburban passages. As a result, the railway junction is at its limit of throughput and the lack of crossing capacity over the Danube results further problem. Such measures are needed which ease the capacity constraint and increase the quality and efficiency of rail services in Budapest and its suburbs.

Despite the developments already made, the reconstruction of the internal railway network of the capital - the expansion of capacity, the establishment of new railway stations, the relocation of the existing ones - and the harmonization with the transport of the capital are missing. Investigating and developing the possibilities for crossing the Danube by rail is also essential for further development.

The aim of the project is to work out a development strategy that meets the requirements of the railway expansion and operational objectives of Europe, Hungary and Budapest. The Strategy identifies and evaluates potential intervention points and measures that effectively combine various functionalities and ensure the interoperability of the future Budapest railway. In addition, this strategy proposes an operational concept that improves and further strengthens the competitiveness of railways in passenger and freight transport, on urban, national and international level.

### **Relevance of this document to CORCAP project:**

- documents including the railway infrastructure and services development in Budapest



**Summary: 10. DRS 2019 Implementation - Implementation of EU macro-regional strategies**

Author of the document	EUSDR NCs				
Title of the document	DRS 2019 Implementation - Implementation of EU macro-regional strategies				
Date and place of publication/creation	Brussels 29.01.2019				
Language of the document	English				
Category	Output of international projects				
	EU publications and strategies		x		
	Strategies and plans of EU countries				
	Scientific articles and publications				
	Legislation				
Topic / Subject / Keyword	watery artefacts		state aid	ocean shipping	
	watery regulation		port services	bulk goods	
	inland waterway transport		water corridor /TEN-T	container terminal	
	logistics		financing	container	
	intermodal transport		Danube	oversize goods	
	sustainable transport	x	Rhine	RO-RO	
	port infrastructure	x	Main	SKV	
	port security		employment	multimodal transportation system	
	loading technology		inland navigation	legislation	x
	warehouse technology		transport cost	exceptional weather	
IT		climate change	passenger transport		



<p>Online availability</p>	<p><a href="https://danube-region.eu/wp-content/uploads/2019/09/EUSDR_Consolidated-Input-Document_AP-Revision_2019_DSP_v1.pdf">https://danube-region.eu/wp-content/uploads/2019/09/EUSDR_Consolidated-Input-Document_AP-Revision_2019_DSP_v1.pdf</a></p> <p><a href="https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD:2019:006:FIN">https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=SWD:2019:006:FIN</a></p> <p><a href="https://eur-lex.europa.eu/legal-content/HU/TXT/PDF/?uri=CELEX:52013DC0295&amp;from=EN">https://eur-lex.europa.eu/legal-content/HU/TXT/PDF/?uri=CELEX:52013DC0295&amp;from=EN</a></p>
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**Summary:**

The report on the implementation of previously adopted macro-regional strategies, covering 19 EU Member States and 8 non-EU countries, provides an integrated framework for the implementation of common tasks and is an important tool for optimizing the use of existing financial resources.

However, there is a need for further refinement of the strategies contained in the report, which would enhance the coherence between EU and national policies and funding programs. The four main areas of the macro-regional strategy are the Alps, the Baltic Sea region, the Adriatic and Ionian region and the Danube region. All regions work on programs that meet their capabilities and expectations, but preserving environmental resources, public goods is a common priority of all four macro-regional strategies, and its main objective is to improve economic well-being.

Non-EU countries participate on an equal condition level with EU Member States in the elaboration of tasks, the EU Strategy, which greatly facilitates their integration into the EU. Several calls for proposals have been published in the implementation reports of the European Structural and Investment Funds.

Discussions on the future financial and regulatory framework and programs in support of it could strengthen the joint commitment to commonly agreed priorities for macro-regional strategies, optimizing its added value and enabling them to fully exploit their potential. However, to overcome the gap between macro-regional strategies and funding opportunities will indicate further challenges.

The general objective is to improve the connections of infrastructure, systems and people within the Danube region and with the rest of Europe. Its main points are the development of mobility and multimodality, particularly in road, rail and air links, as well as in inland navigation; encouraging the use of sustainable energy - in fields of energy infrastructure, markets and clean energy - and fostering interconnection through culture and tourism.

In financing the focus is on transport, which is essential for other development objectives and is supported by other EU programs such as TEN-T and ERDF. It is important to improve transport based on coordinated and integrated development concepts, coupled with the development and use of appropriate, ecologically sustainable technical solutions, which can enhance the integration of the Danube River as a cost-effective corridor that effectively ensures sustainable regional development and mobility.

The EU is committed to promoting less energy intensive, cleaner and safer modes of transport. Inland waterway transport can play a key role in achieving this objective. Specific programs are needed to fully exploit and increase the market potential for inland navigation.

Improvements in accessibility and connectivity can be achieved by implementing prioritised rail and road projects, by implementing rail freight corridors as part of European rail freight transport, and in particular by building two new bridges on the Danube.



Policies to support the use of renewable energy already exist in the region but need to be further encouraged to reach the target of 20% by 2020 and to improve security of supply.

**Relevance of this document to CORCAP project:**

- documents including the water transport infrastructure and services development in Danube.





**Summary: 11. Development of a rail track connection between Kelenföld and Ferencváros stations - Technical Study**

Author of the document	NIF National Infrastructure Development Co.					
Title of the document	Development of a rail track connection between Kelenföld and Ferencváros stations - Technical Study					
Date and place of publication/creation	28.08.2016					
Language of the document	Hungarian					
Category	Output of international projects					
	EU publications and strategies					
	Strategies and plans of EU countries					
	Scientific articles and publications		x			
	Legislation					
Topic / Subject / Keyword	watery artefacts		state aid		ocean shipping	
	watery regulation		port services		bulk goods	
	inland waterway transport		water corridor /TEN-T		container terminal	
	logistics		financing		container	
	intermodal transport		Danube		oversize goods	
	sustainable transport	x	Rhine		RO-RO	
	port infrastructure		Main		SKV	
	port security		employment		multimodal transportation system	
	loading technology		inland navigation		legislation	
	warehouse technology		transport cost		exceptional weather	
	IT		climate change		passenger transport	



Online availability	offline document
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**Summary:**

The development of the rail-track connection between the Kelenföld and Ferencváros stations contains the development of a three-track link and the preparation of new stops, the development of railway infrastructure and related passenger facilities.

In addition to European and long-distance freight traffic, this line segment plays a key role in international and domestic passenger transport, therefore its development is supported as well by the EU from CEF fund as a project called "Developing the Southern Railway Interconnection Bridge".

In the recent period, the development of the railways was mainly in form of modernization of the national main lines and but did not run over the city limit of Budapest therefore the main objective of the project development is to eliminate bottlenecks in the TEN-T Core Network and to create interoperability of the rail system.

In order to start the development, the needs of the infrastructure must be formulated in concrete terms and by considering the available resources the needed implementation tasks, their scheduling and time needs have to be examined. It is important for the investment that three of the nine main network corridors listed in CEF Code are involved in the Budapest railway line, so it is essential to expand the Budapest Southern Connecting Railway Bridge to 3 tracks, which handles the highest gross tonnage crossing.

**Relevance of this document to CORCAP project:**

- documents including the railway transport infrastructure in Budapest
- elimination of bottlenecks in railway,



## Summary: 12. Current issues in transport development

Author of the document	Dr. László Mosóczi, State Secretary for Transport				
Title of the document	Current issues in transport development				
Date and place of publication/creation	Siófok, 14 <sup>th</sup> May 2019				
Language of the document	Hungarian				
Category	Output of international projects				
	EU publications and strategies				
	Strategies and plans of EU countries				
	Scientific articles and publications		x		
	Legislation				
Topic / Subject / Keyword	watery artefacts		state aid		ocean shipping
	watery regulation		port services		bulk goods
	inland waterway transport	x	water corridor /TEN-T		container terminal
	logistics		financing		container
	intermodal transport		Danube		oversize goods
	sustainable transport		Rhine		RO-RO
	port infrastructure		Main		SKV
	port security		employment		multimodal transportation system
	loading technology		inland navigation		legislation
	warehouse technology		transport cost		exceptional weather
	IT		climate change		passenger transport
Online availability	<a href="http://www.fomterv.hu/mmk/sites/default/files/Siofok-2019/01_mosoczi_laszlo_mmk_kozlfejlkonf_20190514_A.pdf">http://www.fomterv.hu/mmk/sites/default/files/Siofok-2019/01_mosoczi_laszlo_mmk_kozlfejlkonf_20190514_A.pdf</a>				



### **Summary:**

The presentation summarizes completed, ongoing and planned transport development works until 2023.

Main topics are the development of road and railway infrastructure in order to increase the competitiveness of the railway, the establishment of intermodal hubs, the development of water transport and navigability, the construction of airport infrastructure.

Modernization of the railway line is one of the most important issues, in order to ensure the high quality of passenger and freight transport, the construction of modern railway interlocking equipment providing interoperability with the European Union, the construction of additional lines and the preparation of high-speed railways.

The development of waterway transport will be a priority for the realization of projects, such as the development and modernization of port capacity-growing infrastructure and the creation of barrier-free and predictable water transport facilities.

In the framework of the Complex Road Reconstruction Program and the Hungarian Village Program, the reconstruction of side roads and local roads are mentioned, such as bicycle-way developments, which are important factors for the tourism as well.

The material mentions the education and examination system and its vision, innovative solutions for the creation of a railway test track - railway technical inspection centres and a school bus network.

### **Relevance of this document to CORCAP project:**

- increasing transport capacity - rail, road



**Summary: 13. PEST COUNTY TERRITORIAL DEVELOPMENT CONCEPT STUDY - volume I.**

Author of the document	Municipality of Pest County			
Title of the document	PEST COUNTY TERRITORIAL DEVELOPMENT CONCEPT STUDY - volume I.			
Date and place of publication/creation	December 2013			
Language of the document	Hungarian			
Category	Output of international projects			
	EU publications and strategies			
	Strategies and plans of EU countries			
	Scientific articles and publications		x	
	Legislation			
Topic / Subject / Keyword	watery artefacts		state aid	ocean shipping
	watery regulation		port services	bulk goods
	inland waterway transport		water corridor /TEN-T	container terminal
	logistics		financing	container
	intermodal transport		Danube	oversize goods
	sustainable transport	x	Rhine	RO-RO
	port infrastructure		Main	SKV
	port security		employment	multimodal transportation system
	loading technology		inland navigation	legislation
	warehouse technology		transport cost	exceptional weather
IT		climate change	passenger transport	



Online availability	<a href="http://www.pestmegye.hu/images/2014/Teruletfejlesztési_dokumentumok/Koncepcio_megyei/Pest_Megyei_Teruletfejlesztési_Koncepcio_-_I._kotet_helyzetfeltarás.pdf">http://www.pestmegye.hu/images/2014/Teruletfejlesztési_dokumentumok/Koncepcio_megyei/Pest_Megyei_Teruletfejlesztési_Koncepcio_-_I._kotet_helyzetfeltarás.pdf</a>
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#### Summary:

The regional development concept and strategy of Pest County requires proper preparation of the situation assessment, the document summarizes all areas of the region.

As this area gives a very significant share of the county's national economy, further economic growth, the expansion of employment and investment, and strengthening of innovation need to be given high priority in order to be competitive with the Central European and Asian regions.

The presentation of the general economic, agricultural, transport and rural development and communal infrastructure of Pest County predicts the areas in which proposals for the development concept need to be made.

In addition to the economic strength of the county and the concentration of services and industry, it is important to activate sustainable agriculture.

The exploration examines the social environment in terms of population development, the labour market, the situation of education and adult training, social services, which are closely related to the communal structure and its quality.

It analyses the tourism supply of the county and its organizational background, such as the related transport structure and coverage.

It is necessary to develop a harmonious and sustainable social, economic, environmental structure and territorial system that takes into account the current conditions and effectively fits into national and European developments.

#### Relevance of this document to CORCAP project:

- development transport infrastructure in Central Region - volume 1.



**Summary: 16. PEST COUNTY AREA DEVELOPMENT CONCEPT PROPOSAL PHASE - volume II.**

Author of the document	Municipality of Pest County			
Title of the document	PEST COUNTY AREA DEVELOPMENT CONCEPT PROPOSAL PHASE - volume II.			
Date and place of publication/creation	December 2013			
Language of the document	Hungarian			
Category	Output of international projects			
	EU publications and strategies			
	Strategies and plans of EU countries			
	Scientific articles and publications		x	
	Legislation			
Topic / Subject / Keyword	watery artefacts		state aid	ocean shipping
	watery regulation		port services	bulk goods
	inland waterway transport		water corridor /TEN-T	container terminal
	logistics		financing	container
	intermodal transport		Danube	oversize goods
	sustainable transport	x	Rhine	RO-RO
	port infrastructure		Main	SKV
	port security		employment	multimodal transportation system
	loading technology		inland navigation	legislation
	warehouse technology		transport cost	exceptional weather
IT		climate change	passenger transport	
Online availability	<a href="http://www.pestmegye.hu/images/2014/Teruletfejlesztési_dokumentumok/Koncepcio_megyei/Pest_Megyei_Teruletfejlesztési_Koncepcio_-_II._kotet_javaslattevo_fazis.pdf">http://www.pestmegye.hu/images/2014/Teruletfejlesztési_dokumentumok/Koncepcio_megyei/Pest_Megyei_Teruletfejlesztési_Koncepcio_-_II._kotet_javaslattevo_fazis.pdf</a>			





### **Summary:**

The basis of planning for the 2014-20 development cycle, are the documents prepared in accordance with EU requirements (the so-called Partnership Contract and related Operational Programs). The document proposes improvements to the points identified in the situation analysis.

The present spatial development concepts and spatial plans formulate strategic goals for social renewal, boost of economy and the enhancement of its value creating capacity, and the spatial structure, based on the characteristics of the current area.

The horizontal objectives of the county's development are the social cohesion, closing social gap, sustainability, to manage effective climate and energy policy.

In the field of economy, the enhancement of innovative performance, competitiveness, macro-regional logistics functions and value creating ability for it, are to be organized.

In order to improve cooperation with other regions, it is essential to improve the transport connections within the county and with its agglomeration.

The document covers the objectives of energy, water management, public utility and environmental protection development, waste management and the development of the county's ecological spatial structure, long-term conservation of it is crucial for sustainable nature, landscape and tourism.

Among the operational objectives, the document mentions the development of the Danube's international and inland waterways, better use of transport facilities along the Danube and the construction of missing transport links to the Danube, the development of environmentally friendly commercial and touristic shipping, freight transport, making better use of the potential of logistics and related services.

### **Relevance of this document to CORCAP project:**

- development transport infrastructure in Central Region - volume 2.



### 3.3. Presentation of completed and ongoing projects and actions

#### THE EXTENSION OF THE PREPARATION FOR THE DEVELOPMENT OF THE HUNGARIAN TEN-T INLAND WATERWAY<sup>4</sup>

The development of the inland waterway on the Hungarian section of the Danube between Szap-Szob and Szob-southern border of Hungary in the places of intervention identified during the planning process. The project involves the preparation for the development of the inner waterways along the full Hungarian section of the Danube. In its present condition the Danube is unable to provide long-term and reliable transport conditions; in several places' restrictions of depth and/or width have to be considered, which impede the utilisation of the waterway. Beyond fulfilling the obligations deriving from international agreements, another strategic aim is to improve the conditions for navigability in order to increase the role of water transport within the transport sector. (To eliminate bottleneck situations.)

The Danube-Shipping Consortium (members: UTIBER Public Road Investment Company, Viziterv Consult Kft, Budapest University of Technology and Economics) signed a Planning Contract on 15th December 2017 for carrying out the complex planning tasks.

The grant contract for financing the project was signed on 10th April 2018 by NFM (Ministry of National Development), NIF Zrt (National Infrastructure Development Company) and OVF (General Directorate of Water Management).

Project Type	Shipping route development
Affected counties	Budapest county, Bács-Kiskun county, Baranya county, Fejér county, Győr-Moson-Sopron county, Komárom-Esztergom county, Pest county, Tolna county
Affected municipalities	Danube
Phase	Preparation
Source	The investment will be financed by EU and domestic sources, with the support of CEF (European Network Financing Facility).

#### THE PREPARATION OF THE NEW NODE IN THE 26+692 KM SECTION OF THE GÖD, M2 EXPRESS ROAD <sup>5</sup>

The preparation of the authorisation plans for a grade separated node on the 26+692 km section of the M2 express road near Göd incorporating the use of the existing overpass over M2. The envisaged „semi-node” provides a long-term opportunity for exit from Budapest and for entry to Budapest. As part of the grade separation on the node, two roundabout-hubs will also be planned.

Project Type	Roundabout, Multi-level traffic junction
Affected counties	Pest county
Affected municipalities	Göd
Phase	Implementation
Source	The investment is financed by the Hungarian state.

<sup>4</sup> <https://nif.hu/projektek/2016/06/a-magyarorszag-i-ten-t-belvizi-ut-fejleszt-es-elokeszitesenek-kiterjesztese/>

<sup>5</sup> <https://nif.hu/projektek/2019/01/god-m2-gyorsforgalmi-ut-26-692-km-szelvenyben-uj-csomopont-elokeszítése/>



## THE PREPARATION OF THE SECTION BETWEEN THE MAIN ROADS 11-10, NORTHERN SECTOR OF M0 MOTORWAY (PLANNING)<sup>6</sup>

Proceeding with the northern sector of M0 motorway (ring-road) on the section between the main roads 11-10.

The main technical parameters of the section: 2x2 traffic-lane motorway (dual carriageway); Length: 8,041 m; road surface width: 2x10.25 m; Width of inner separating reservation: 3.60m (16.50m before tunnel entrances). Number of nodes: 3. Big engineering structures: Tunnels: 2 (2,020 m, 3,190 m); Viaducts: 2 (582 m, 360 m).

Name of beneficiary: NIF Zrt.

Amount of grant: HUF 1 911 878 000

Expected completion date of the project: 30/11/2020.

Project Type	New trail (2x2 lane)
Affected counties	Budapest county, Pest county
Affected municipalities	Budakalász, Budapest, Pilisborosjenő, Solymár, Üröm
Phase	Preparation
Source	The investment will be financed by EU and the Hungarian state.

## NEW DANUBE BRIDGE (PREPARATION)<sup>7</sup>

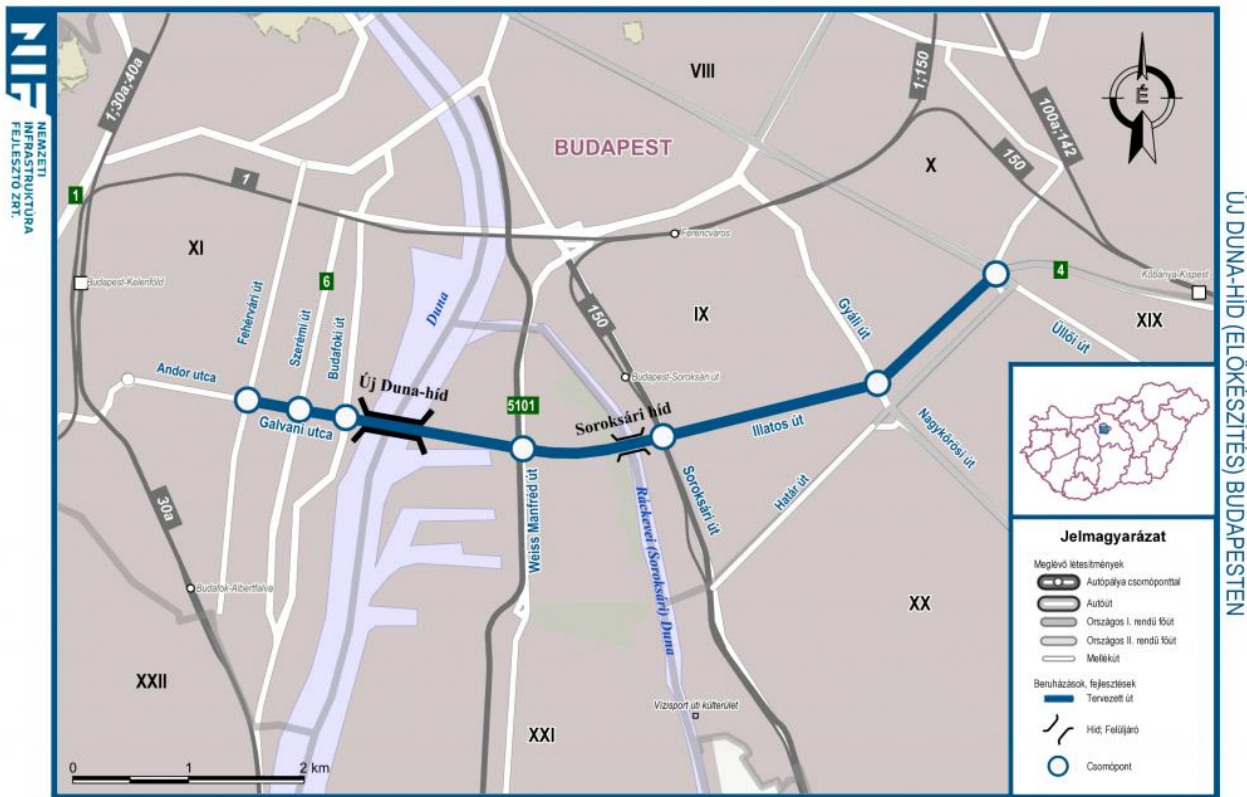
With the construction of the new bridge over the Danube and the connecting road network between the 9th and 11th districts of Budapest, starting out from the node at Fehérvári street through Csepel Island, along Illatos street, up to Üllői street a new route will be built. The project includes the construction of a new Danube bridge with 2x3 lanes along Galvani street- Illatos street, as well as a similar 2x3-lane road over the Soroksári bridge at the junction of the Danube branch at Soroksár, which also includes a bicycle lane and a footpath. The length of the planning section is nearly 7 km, out of which the two bridges and the section between them is 3.6 km long with 2x3 lanes, the remaining 3.85 km is planned for 2x2 lanes.

As the first project element of the preparation project a feasibility study and an environmental impact study will be completed, followed by the collection of an environmental licence. Meanwhile the licencing plans for the road network connecting to the Danube bridge will be drawn up.

Project Type	New bridge - New trail (2x2 lane)
Affected counties	Budapest county
Affected municipalities	Budapest
Phase	Preparation
Source	The investment is financed by the Hungarian state.

<sup>6</sup> <https://nif.hu/projektek/2015/10/tervezesi-szerzodes-az-m0-autout-eszaki-szektor-11-sz-fout-10-sz-fout-kozotti-szakasz-es-csomoponti-elemei-engedelyezesi-es-ajanlati-terveinek-keszítése/>

<sup>7</sup> <https://nif.hu/projektek/2016/08/tervezesi-elokeszites-a-galvani-uti-kozuti-hid-es-kapcsolodo-uthalozat-epitesere-uj-2x3-savos-kozuti-duna-hid-tervezese-a-galvani-ut-illatos-ut-vonalaban/>



83. Figure Location of the new Danube bridge

Source: nif.hu

### PREPARATION OF THE MODERNISATION OF THE KELENFÖLD - FERENCVÁROS RAILWAY SECTION<sup>8</sup>

The aim of the project is to plan a three-track connection and to develop new suburban stations for a 6-km long section of the No.1 railway line between Kelenföld and Ferencváros. This project is part of the so called 'Southern Circuit Railroad' conception. Budapest is the narrowest bottleneck of the TEN-T node of the Hungarian transport system. It is in the axis of three core network corridors: the Mediterranean, the Eastern/East-Mediterranean and the Rhone-Danube corridors.

The Southern railway bridge over the Danube and its connected network of tracks is of key importance in the railway network, both strategically and operatively. The busiest area of MÁV Zrt is the section between Kelenföld and Ferencváros, which is electrified and has at present two tracks, with a permitted speed of 80 km/h and an axle load of 210 kN, therefore it does not meet the conditions for an international intersection. As a consequence, this development is vital on account of the intersection requirements and the narrow bottleneck of the railway section.

<sup>8</sup> <https://nif.hu/projektek/2017/09/kelenfold-es-ferencvaros-allomasok-kozotti-kotottpalyas-kapcsolat-fejlesztese-erdekeben-haromvagyony-kapcsolat-es-uj-elovarosi-megallok-kialakitasa-elokeszites/>



Project Type	Railway - Renovation of two tracks (6000 meters)
Affected counties	Budapest county
Affected municipalities	Budapest
Phase	Planning
Source	The investment is financed by the Hungarian state.

#### **THE EXTENSION OF THE RAJKA - HUNGARIAN BORDER SECTION OF M15 - M1 MOTORWAY <sup>9</sup>**

The development of the 2x1-lane M15 road into a 2x2-lane (dual carriageway) motorway on the section between motorway M1-Rajka-Hungarian border. During the implementation of the project the accessibility of the existing border crossing point has to be carried out as well.

The name of the beneficiary: S+S M15 Consortium (Strabag Építő Kft, Strabag Ag)  
Start of implementation: September 2017.  
Amount of grant: HUF 19 508 777 267  
Scheduled time of completion: March 2020.

Project Type	Road - 2x2-lane (dual carriageway) motorway
Affected counties	Győr-Moson-Sopron county
Affected municipalities	Hegyeshalom, Rajka
Phase	Implementation
Source	The investment will be financed by EU and domestic sources, with the support of CEF (European Network Financing Facility).

#### **MODERNISATION OF THE RAILWAY SECTION HEGYESHALOM - RAJKA**

This railway line belongs to GySEV and operates as a corridor between the Hungarian and Slovakian rail network. This line is a barrier on the CORCAP corridor because of the single track and low speed (80 km/h).

The GYSEV plans to modernise the line, with the maximum speed up to 120 km/h. Because of this the capacity of the section will be almost doubled.

At present it is in the preparatory phase - planning.

#### **NEW BRIDGE ON THE RIVER IPOLY BETWEEN HUNGARY AND SLOVAKIA TO INCREASE TRANSNATIONAL ROAD TRAFFIC**

The reconstruction of the new bridge on the river Ipoly between Hungary (Ipolydamásd) and Slovakia (Halimba) will be in progress in the nearly future. The opening is planned in 2023.

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<sup>9</sup> <https://nif.hu/projektek/2016/07/m15-m1-rajka-orszaghatar-kozotti-szakasz-bovítése/>



## 4. SPATIAL ASPECTS OF NODES IN TRANSNATIONAL TRANSPORT

### 4.1. Needs and requirements for improvement of node functions

Based on the present survey and the earlier documents the following node functions have to be developed:

#### Road transport

- government incentives are vital for the change of transport modes,
- the existing combined transport connections do not fully cover the market needs,
- door to door services that are value for money,
- there are not enough parking places, road construction works slow down traffic
- the extension of the road network,
- lack of labour force, the clients have no need for combined transport as using merely road transport is faster and more convenient, combined transport does not involve enough price advantage to counterbalance its negative aspects
- mobility package, different rules of law by each country,
- the expectations of road haulage companies against railway transportation
  - flexibility, punctuality, as car companies do not tolerate insecurity and delay,
  - long-term reliable services with shorter delivery times,

#### Rail transport

- lack of interoperability on the borders and the infrastructure between the railway lines,
- **the regulations are not harmonized (protection carriage, change of braking modes, etc.),**
- lack of labour force,
- outdated regulation systems,
- railway infrastructure related problems (slow signals, insufficient axle load, capacity limitations, low speed on the tracks, etc.)

#### Combi terminals

- utilisation - over 85%,
- limited extension possibilities,
- serious problems in road and rail transport as a result of concentrated traffic in Budapest

#### Water transport

- correspondent water level
- encourage change of mode
- additional demand generates
- financing system design
- human resources development
- Creating a sustainable regulatory environment
- environmental impact reduction



## 4.2. Process of node development (analysis of the processual dimension)

At present a dialogue and cooperation is going on between the Hungarian logistic profession and the Hungarian government in order to eliminate the above mentioned (and other) problems.

In the first phase the problems, which the profession/sector finds to be the most burning, will be identified, which is then followed by ranking the issues -

1. priority will be given to those issues which can be solved within a short time and produce attractive results (in the majority of the cases this means the modernisation of different outdated regulation systems)
2. the issues needing lengthy planning and preparations and proceeding slowly will go further down on the list (the solution of different infrastructural problems - reconstruction of the Gubacsi-bridge, rebuilding the Corvin-node, finishing the relief road in Csepel, etc.),
3. to improve the efficiency of the authorities and control systems of rail and road traffic.

At present we are in the phase of ranking the issues.

Expected final outcome: end of January 2020.

## 4.3. Networking activities

1. **National Logistic Alliance** initiative was started in 2017 at the initiative of the Association of Hungarian Logistic Service Centres, which is a formation including 11 professional organisations aiming at cooperation, but offers no legal representation. (Magyarországi Logisztikai Szolgáltató Központok Szövetsége - MLSZKSZ, Fuvarozó Vállalkozók Országos Szövetsége - FUVOSZ, Közúti Közlekedési Vállalkozások Szövetsége - KKVSV, Magyar Hajózási Országos Szövetség - MAHOSZ, Magyarországi Dunai Kikötők Szövetsége - MDKSZ, Magyar Szállítmányozók Szövetsége - MSZSZ , Nagyvállalatok Logisztikai Vezetőinek Klubja - NLVK , Magánvállalkozók Nemzeti Fuvarozó Ipartestülete - NiT Hungary, Magyar Vámügyi Szövetség - MVSZ, Magyar Közúti Fuvarozók Egyesülete - MKFE, Magyar Vasúti Egyesület - HUNGRAIL) The purpose of this cooperation is to identify the problematic areas of the logistic sector in Hungary and to offer good solutions, which can significantly increase the logistic competitiveness of the country. The Hungarian Government also addresses their documents which are updated every year.
2. **Logistic Round Table** - the cooperation of logistic professional organisations on a voluntary basis, with the goal to find solutions for professional issues. Member of the cooperation: [Magyarországi Logisztikai Szolgáltató Központok Szövetsége - MLSZKSZ](#), [Magyar Hajózási Országos Szövetség - MAHOSZ](#), [Magyar Szállítmányozók Szövetsége - MSZSZ](#) , [Nagyvállalatok Logisztikai Vezetőinek Klubja - NLVK](#) , [Magyar Vámügyi Szövetség - MVSZ](#), Magyar Logisztikai Egyesület - MLE, Magyar Logisztikai Beszerzési és Készletezési Társaság - MLBKT).
3. **Hungarian Federation of Danube Ports (HFIP)**<sup>10</sup>: It was founded on May 25, 2012 with the aim of providing independent representation of Hungarian ports, collecting and providing professional information for its members, organizing professional days and conferences, implementing coordinated training for the employees of the member organisations and developing general service conditions.

<sup>10</sup> <https://www.hfip.hu/home/>





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4. **Forum of European Road Safety Research Institutes (FERSI):** It was set up in 1991 with the aim of promoting cooperation between European road safety research institutes. The main purpose of such cooperation is to continue existing joint research work and to start new international ones. Its mission is to identify road safety problems across Europe and to find the most effective solutions to these problems at national and international level.

## 5. PRESENTATION OF NECESSARY ADDITIONAL DEVELOPMENTS

### 5.1. Identification of regional challenges and regional needs

Regional complementary developments are investments that are not closely related to the subject of the project, but when completed may have an impact on the project itself.

Such challenges include:

- Increasing the throughput of Budapest as a railway node: the investment primarily concerns passenger transport, but as a result there is also an opportunity to increase capacity in freight transport
- Speeding up rail freight transport: a general demand, as increasing rail competitiveness is a necessary complement to the developments in CORCAP
- Ensuring the navigability of the Danube for most of the year
- Improvement of accessibility of the Freeport of Budapest
  - railway side (renovation of Gubacs bridge and railway line leading to the port)
  - roadside (rebuild Corvin node, figure 84.)
- Digitalization in the logistic centers (and ports).



84. Figure Corvin node

Source: IHO.hu



## BUDAPEST BYPASS SOUTHERN RAILWAY DEVELOPMENT- VO

A brief introduction of the planned executable tasks with the emphasis on the objective.

The aim of the project is to conduct a preliminary feasibility study that will be the base for the preparation and execution of the given development.

The target groups benefiting from the development:

- Residents of the capital and surroundings
- Everyone internationally concerned whose goods will get to their destinations much faster, reducing cost and time this way.
- Domestic railway passengers because the commuter railway around Budapest will be mostly free from transit freight traffic.

These are the reasons that the passenger and freight transits have to be separated in order to relieve the railway lines, therefore establishing the conditions for reliability and faster transportation.

The aim is fulfilling the STATUTE OF THE EUROPEAN PARLIAMENT AND ADVISORY COMMITTEE about the European railway system providing competitive cargo freight (Brussels 12.11.2008.COM (2008) 852 statute) which has to be increased. It is indicated that railway lines have to be assigned and ensured, which will enable the fast flow of the goods, therefore the rail cargo can be competitive with freight on the motorways. The aim of the VO project is exactly this.

The European parliament urges the formation of cargo freight corridors. Railway freight can only be competitive if the cargo delivery time essentially shortens. In order to fulfil the expectations, passenger transportation and cargo freight have to be on separate railway lines in Hungary. The greatest railway traffic jams and time waste occur around the capital city because of the radial arrangement of the rail system.

Because of the absence of lateral connections, the adverse mechanical status of certain existing segments, and the absence of electrification and diesel vehicles, a freight has to be transported on lines across the southern connector railway bridge and by the new National theatre, instead of using otherwise faster and more cost effective alternative routes. Due to these deficiencies the municipal and suburban area is loaded with additional environmental pollution.

The suggested new railway path - north-south direction - can provide two important objectives. One of them is railway operational: besides it assures connections with higher speed between major rail lines in Pan European corridors, takes loads off from the rail lines leading towards Budapest. This would give free capacities to the development of suburban public transportation. The other objective is area development. There is insufficient number of railway and motorway bridges over the River Danube in Hungary. Crossing the river is very difficult in Hungary all along the river - not taking Romania and Bulgaria into consideration. Therefore, the river acts like a natural barrier between the two sides of the country.

The additional aim of the project is the essential decrease of freight time. Most of the freight trains arrive in or depart from Budapest due to the present infrastructure. They are forced to wait longer periods around the capital due to public transportation demands, and then require time consuming arrangements.

The demand of the passenger transport requirements poses greater difficulties on cargo freight transport which is a fraction of the previous regime's period. Less and less cargo freight can be assigned on important lines, and the time required for field maintenance reduces available field capacity. Some form of realization of the project is an indispensable condition for the upkeep of competitive Hungarian freight forwarding by railway.



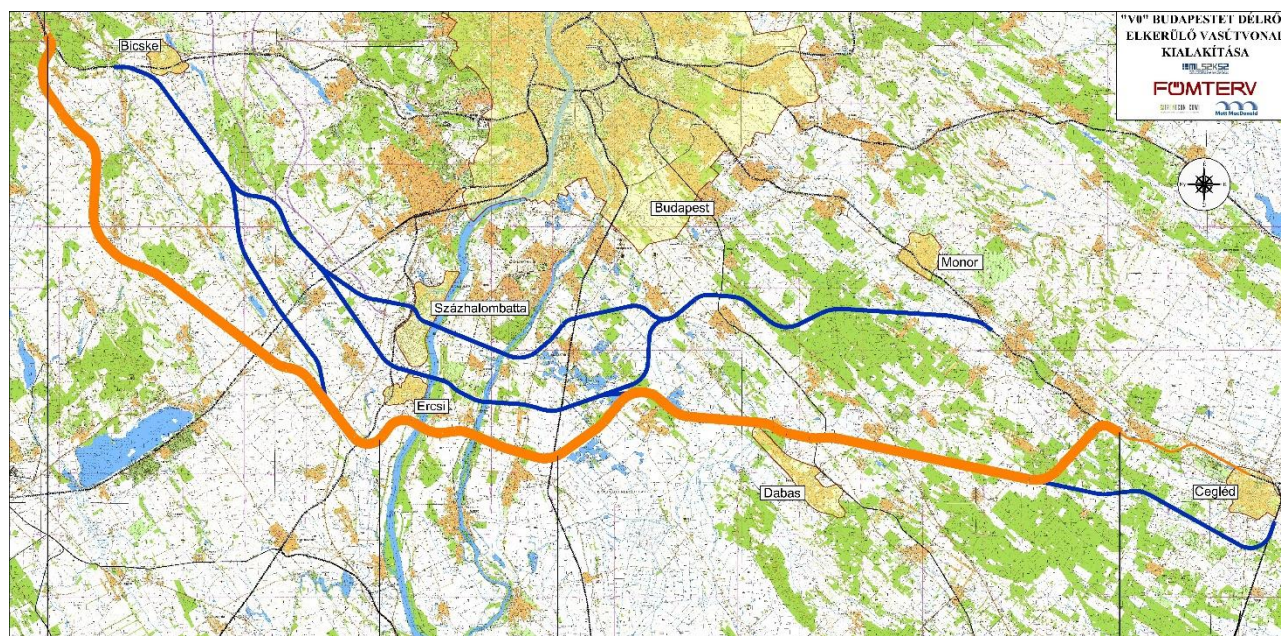
It is desirable to work out different variations to achieve the goal of the project. It is an important factor to define how far the development will be established from the capital. Building the lines closer to Budapest requires shorter railway and reduces cost, but the relief line will be shorter as well and the area's developmental effect of the project. The line placed further from the city will have a greater developmental effect because it will develop areas that have not been supported by railway lines. It is also favourable to the relief of cargo freight congestion, but it will require longer lines and significant rise in cost.

**Major parameters of the sections:**

As part of TEN-T system „V0” construction, there will be a Komárom - Székesfehérvár - Pusztaszabolcs - Dunaújváros - Szalkszentmárton - Szolnok diagonal railway line, bypassing Budapest which will relieve the capital from immense cargo freight congestion that is caused presently by radial arrangements if lines. The network requires the renewal of existing and addition of new lines.

The line between Komárom and Dunaújváros (139 km ) has to be overhauled so it can take 225 kN instead of the presently authorized 210 kN axial loading and the allowable speed has to be increased from 80 km/h to 160 km/h. An additional line has to be constructed as well as an electrical areal line. A line and station security equipment, communication equipment and ETCS have to be installed too.

From Dunaújváros to Szolnok a new 110 km long railway line with 225 kN axial load capacity, and 160 km/h speed limit has to be built with a Danube bridge that contains two tracks and equipped with electrical areal lines, up to date line and station security systems, and as well as communication and ETCS systems.

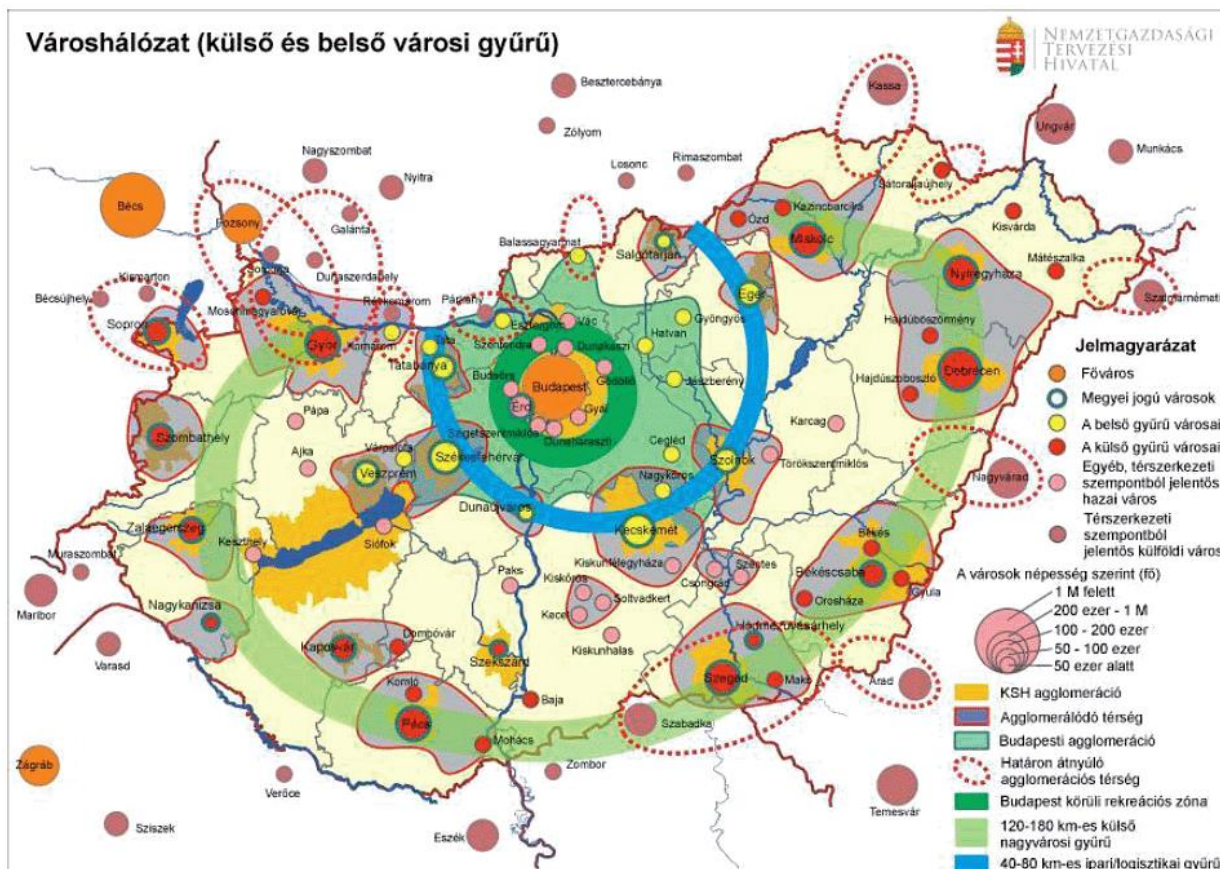


85. Figure. Budapest bypass southern railway development- V0

Source: MLSZKSZ

## 5.2. Maps with possible improvements

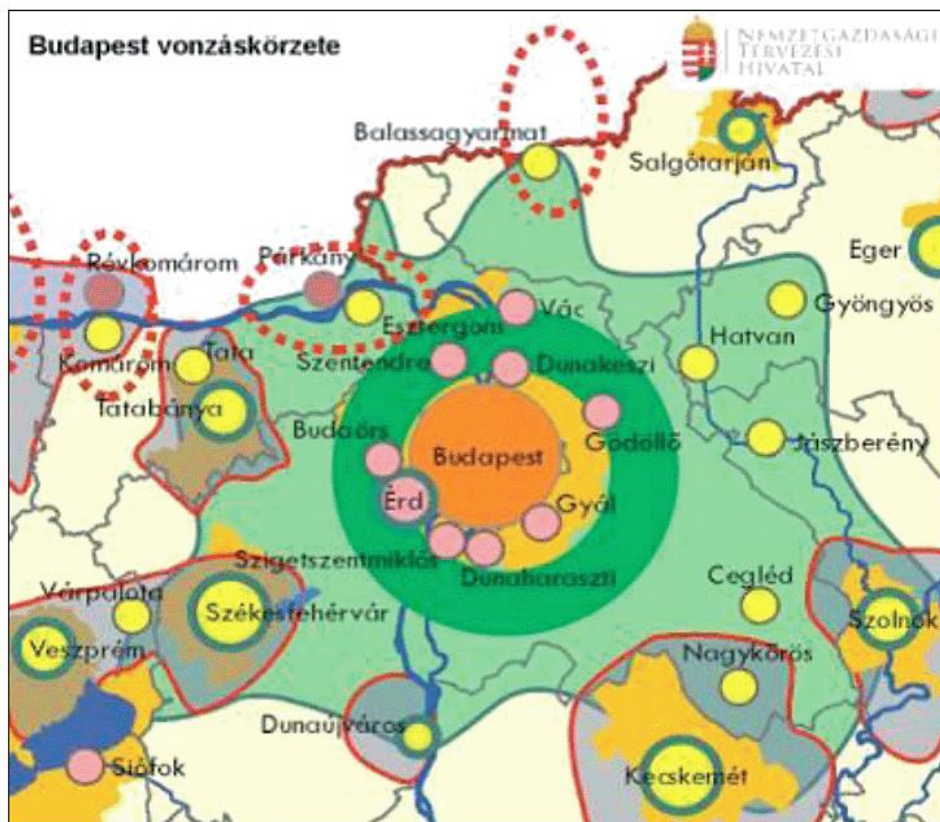
The following maps show the possible improvements in Hungary (figure 86.), in Budapest (figure 87.) per settlement and the possible transport improvements (figure 88.). The maps are taken from the strategic document: National Development 2030.



86. Figure. Possible improvements in Hungary

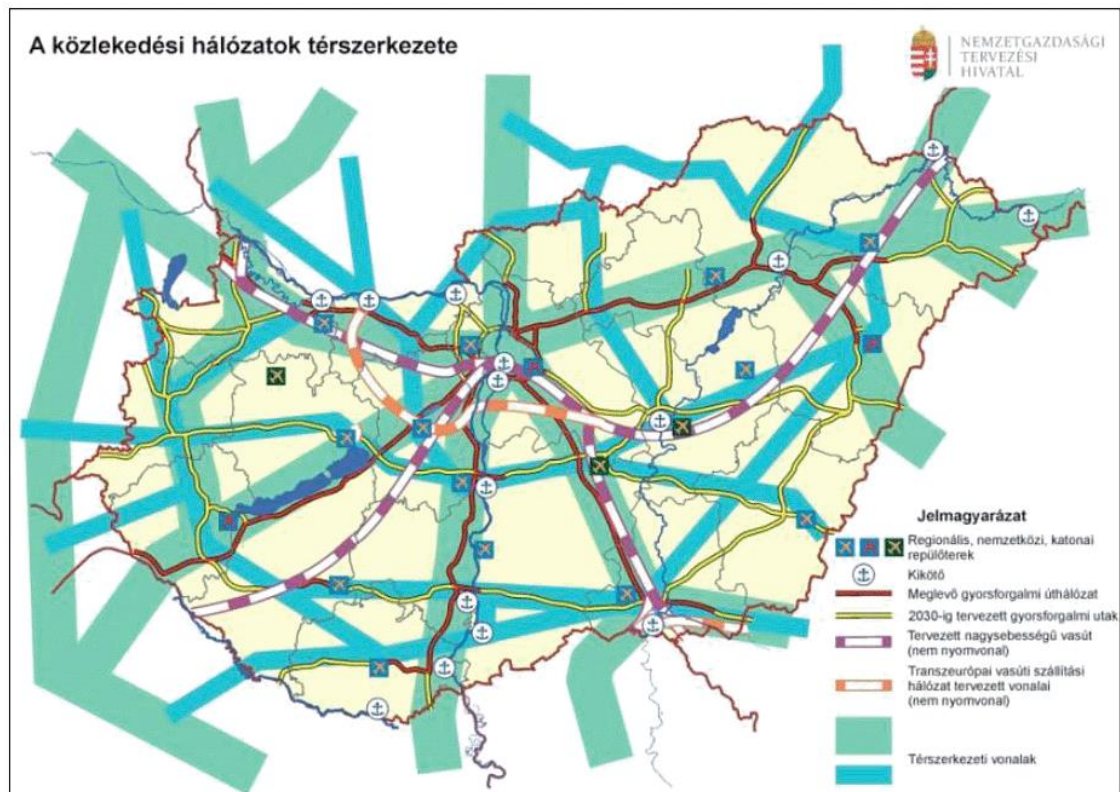
Source: <https://net.jogtar.hu/jogszabaly?docid=a14h0001.ogy&txtreferer=a1600007.nfm>





87. Figure. Possible improvements in the catchment area of Budapest

Source: <https://net.jogtar.hu/jogszabaly?docid=a14h0001.ogy&txtreferer=a1600007.nfm>



88. Figure. Planned transport improvements

Source: <https://net.jogtar.hu/jogszabaly?docid=a14h0001.ogy&txtreferer=a1600007.nfm>

### 5.3. High speed lines for freight trains

Rail freight corridors are already dedicated to facilitating freight trains, currently prioritizing freight trains in the order of trains. In the future, it may be necessary to develop railway lines using only freight trains, which could significantly increase the speed and thus the competitiveness of freight transport. Currently in Hungary, only the Budapest - Hegyeshalom line can be operated at 160 km / h, but there are plans to increase the speed on other lines as well. Such lines:

- Budapest - Kelebia
- Budapest - Szolnok - Békéscsaba - Lőkösháza
- Budapest - Debrecen - Nyíregyháza - Záhony

These railway lines lead to the most significant transport directions towards Serbia, Romania and Ukraine. The introduction of increased speed is subject to build ETCS level II. Freight trains can achieve this speed if both wagons and engines are capable of traveling at this speed and the engines are able to communicate with ETCS. An alternative option, although not a high-speed railway line, could be the construction of the “v0” track bypassing Budapest (see point 5.1).

### 5.4. Presentation of future capacity utilization and modal shift

Combined freight traffic is currently experiencing a 3-6% annual increase in turnover. However, the available capacities also allow a 10% annual increase in traffic. Following the introduction of the state incentive





scheme for combined transport in 2022, the share of combined transport in the freight market cake is expected to reach 20%. This target could be reached by 2030, which is also a governmental expectation.

### 5.5. Business model of new lines / developments

The cost of investing in rail networks and combi terminals is high, the rate of return is very low, and there are even cases where a return on investment is not possible. It is not possible to raise private capital for such investments. Therefore, such investments can only be public funded. Operation may be subject to concession.

### 5.6. Improvement of regional and cross-border accessibility (opportunities provided by the rail sector)

Regional railway developments include mainly the above mentioned Budapest railway infrastructure and railway line upgrades.

Hungary has adequate links in the area of international rail traffic, but not all of the available links are in use. This may be administrative (traffic is interrupted) or infrastructural (missing track) barriers. The inclusion of traffic is a transport policy decision, and the rebuilding of tracks is already a financial issue.

From the point of view of CORCAP, the Komárom - Komárno railway crossing should be developed. Although the link already exists, the level of the track is very low, it is necessary to renovate it in the joint investment of the Hungarian and Slovakian states.

### 5.7. Possible chronology of developments

The most important railway investments for the project are the elimination of the bottleneck in Budapest and the reconstruction of the Hegyeshalom - Rajka and Komárom - Komárno line sections.

The first phase of the Budapest developments can be completed by 2030 and the second phase by 2050. The modernization of the Hegyeshalom - Rajka section may be completed by 2025 and the Komárom - Komárno section may be renewed by 2030.

### 5.8. Possible pilot projects

No investment is expected in the short term, so no pilot project can be selected.

## 6. STAKEHOLDER ANALYSIS AND STAKEHOLDER INVOLVEMENT

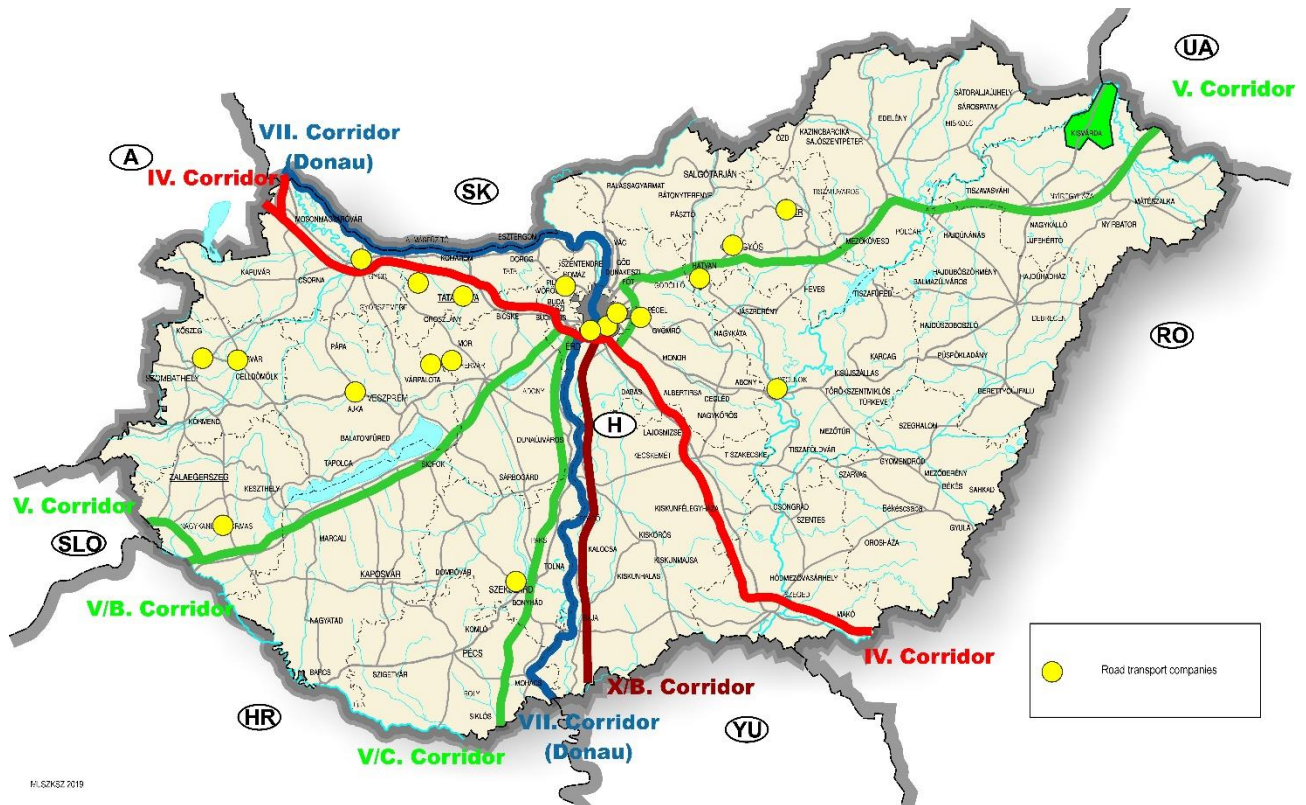
### 6.1. Identification of relevant stakeholders

#### Road transport

The above-mentioned questionnaire was sent out to 36 significant road transport companies, which have their registered domicile and site(s) in the region of Central Hungary (Budapest Region), or in West-Hungary (Sopron-Burgenland region).

The representative survey had been conducted with 36 road transport companies, out of which 19 companies sent back questionnaires that could be evaluated. This results in a performance of 53 %.

1. Alba-Zöchling Kft.  
8000 Székesfehérvár, Holland fasor,
2. INDUSTRIA Kereskedelmi és Fuvarozó Kft.  
7100 Szekszárd, TOTÉV ipartelep 30.
3. K & V Nemzetközi Fuvarozó Kft.  
3200 Gyöngyös, Déli Külhatár u.,
4. Horváth Rudolf Intertransport Kft.  
3000 Hatvan, 3, Robert Bosch út,
5. Raben Trans European Hungary Kft.  
2230 Dunaharaszti, Jedlik Ányos út 31,
6. RBT Europe Kft.  
1054 Budapest, Bajcsy-Zsilinszky út 48,
7. Versteijnen Logistics Kft.  
9600 Sárvár, Ikervári u. 42,
8. G.E.B.E. Kft.  
8000 Székesfehérvár, Amerikai fasor 3,
9. BI-KA LOGISZTIKA Kft.  
5000 Szolnok, Városmajor utca 23,
10. EKOL Logistics Kft.  
1211 Budapest, Szikratávíró u.
11. Galambos Logistic Kft.  
9751 Vép, Kassai u. 73,
12. BÁBOLNA Sped Kft.  
2943 Bábolna, Rákóczi utca 8.,
13. FLOTT-TRANS Szállítmányozó és Fuvarozó Kft.  
3300 Eger, Kistályai út 12.
14. Liegl Internationale Transporte Kft.  
2085 Pilisvörösvár, Ipartelep u. 1,
15. Innovatív Speciál Transport Kft.  
9027 Győr, Vörösfenyő utca 3,
16. LOCARGO Nemzetközi Szállítmányozó és Logisztikai Kft.  
8200 Veszprém, Házgyári út 1.,
17. Kanizsa Sprint Kft.  
8881 Sormás, Ipartelep u.,
18. Waberer's International NyRt.  
1239 Budapest, Nagykőrösi út 351,
19. Trans-Sped Kft.  
2800 Tatabánya, Szarkaláb utca 1.



89. Figure. Road transport companies participated in the survey

Source: Own editing

## Rail transport

The questionnaire mentioned above was sent out to 15 significant railway transport companies, which have their registered domicile and site in the region of Central Hungary (Budapest Region), or in West-Hungary (Sopron-Burgenland region).

During the survey we were hindered by the same obstacle as in the case of road transport, namely that the majority of the companies do not make separate statements, where the transport is broken down by the types of goods according to the region. Therefore, the respondents had to be specifically asked about the types of classification as introduced above. Luckily, the bigger companies could provide us with a classification broken down by region. Consequently, the received figures represent 90% of the Central-Hungarian region, and 8 % of the West-Hungarian region.

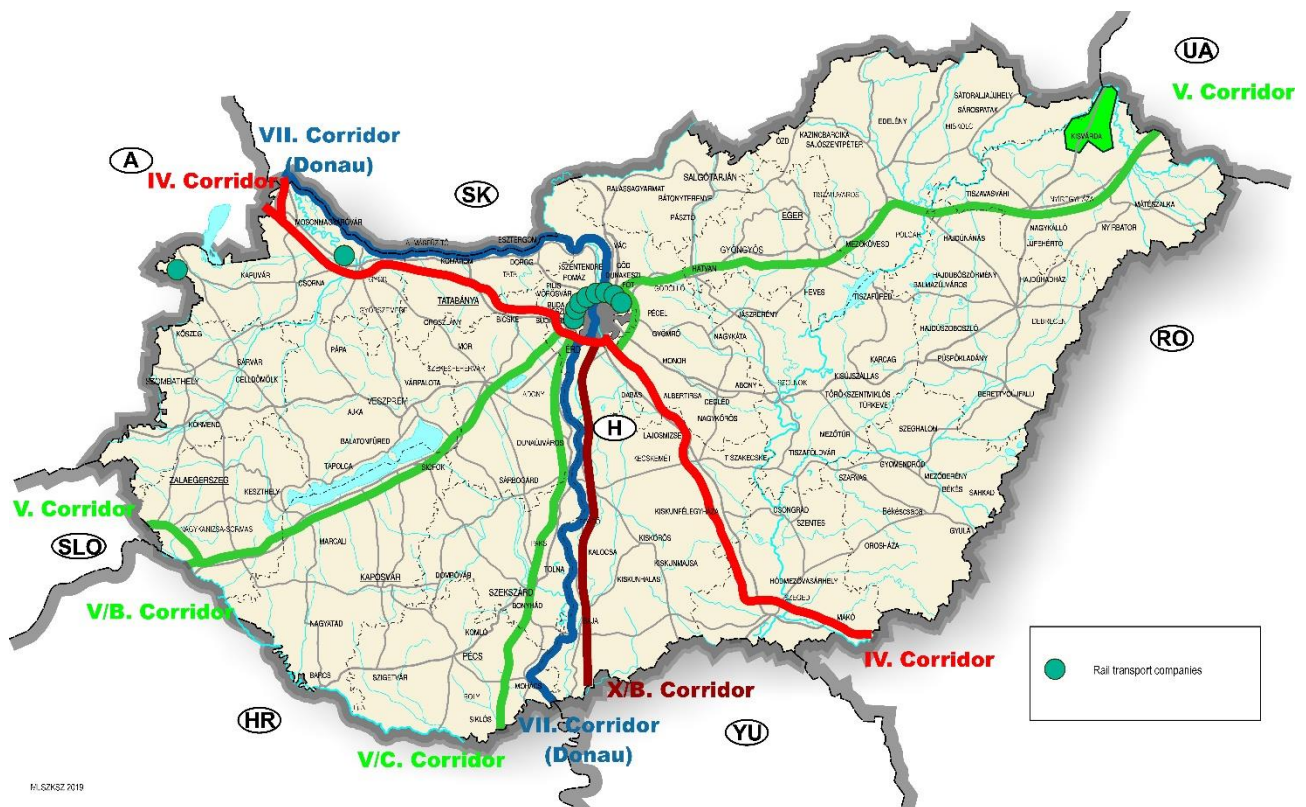
Out of the 15 posted questionnaires 10 were sent back filled in, which shows a participation of 66 %.

- |   |   |
|---|---|
| 1. GYSEV Cargo Zrt.<br>9400 Sopron, Mátyás király u. 19.  | 6. MMV Zrt.<br>1035 Budapest, Kerék u. 80,                |
| 2. Rail Cargo Hungaria Zrt.<br>1133 Budapest, Váci út 92, | 7. Floyd Zrt.<br>1138 Budapest, Madarász Viktor u. 47-49, |



- 3. Rail Cargo Operator - Hungaria Kft.  
1133 Budapest, Váci út 92,
- 4. AWT Rail HU Zrt.  
1134 Budapest, Róbert Károly körút 64,
- 5. LTE Hungária Kft.  
1117 Budapest, Alíz utca 4,

- 8. METRANS Danubia Kft.  
1211 Budapest, Salak utca 1-39.
- 9. PC Cargo Hungária Kft.  
9027 Győr, Hűtőház u. 23,
- 10. VTG Rail Logistics Hungaria Kft.  
1027 Budapest, Henger u.,



90. Figure. Rail transport companies participated in the survey

Source: Own editing

### Combi Terminal

Sopron:

- GYSEV Cargo Zrt. - Combi Terminal
- H - 9400 Sopron, Ipar körút 21.



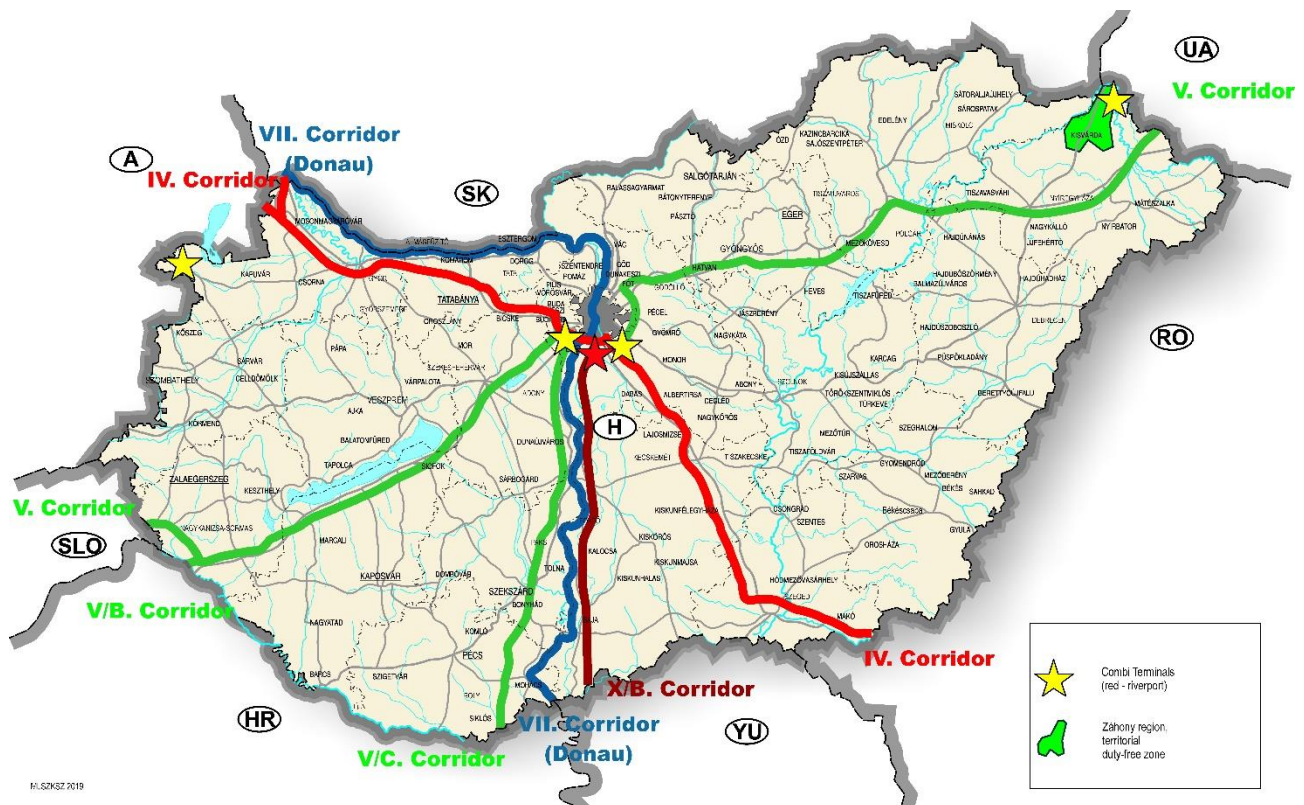


**Budapest:**

1. Mahart Container Center Kft. - Combi Terminal  
 H - 1211 Budapest, Weiss Manfréd út 5-7.
2. Rail Cargo Terminal - BILK Zrt. - Combi Terminal  
 H-1239 Budapest, Európa utca 4.
3. METRANS Konténer Kft. - Combi Terminal  
 H-1211 Budapest, Salak utca 1-39

**Záhony:**

- Záhony-Port Zrt. - Combi Terminal, Dutty free Zone  
 H-4625 Záhony Európa tér 12.



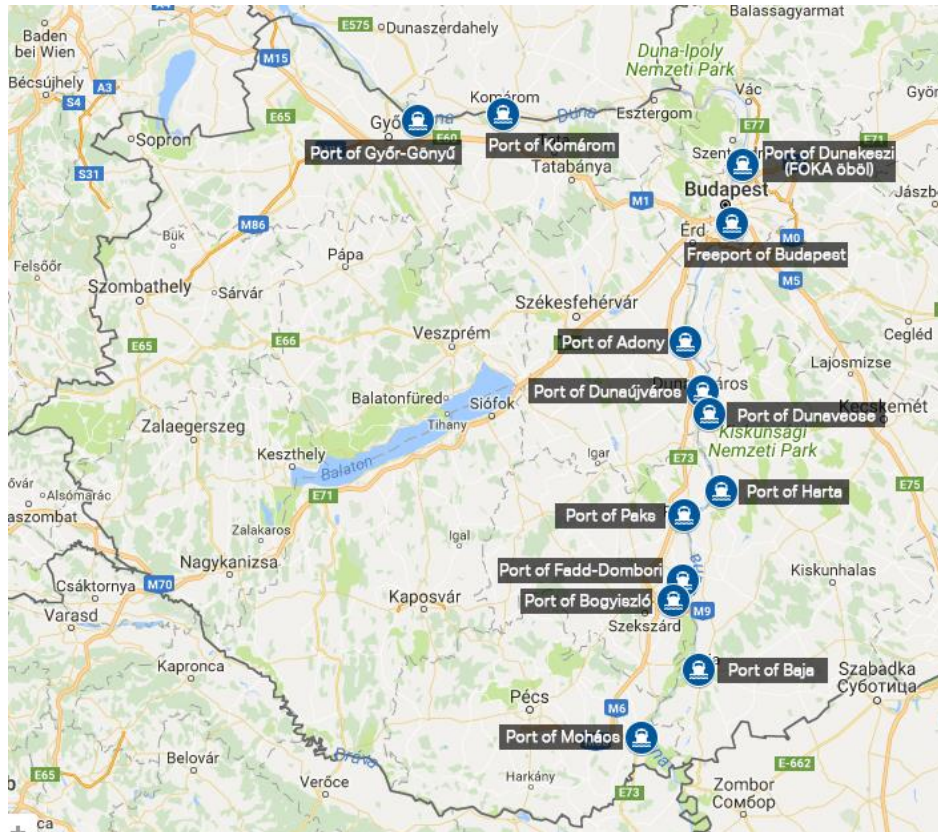
91. Figure. Combi Terminal companies participated in the survey

Source: Own editing



## Waterway transport

The Figure below shows the name and the location of Hungarian ports.



92. Figure. Hungarian ports

Source: Own editing based on Google Maps

The tenants of Freeport of Budapest are also among the stakeholders whose names can be found at the following link: <http://www.bszi.hu/ugyfeleink/>



### 6.1.1. For the implementation of pilot actions

Level of influence and power  +  -  -	Keep satisfied	Key players	
	+	1. Ministry for Innovation and Technology 2. Customer	1. MASPED Logistics Ltd. 2. Freight forwarders/road vehicles 3. The Hungarian Federation of Danube Ports
	Monitoring	Keep informed	
	-	1. Similar intermodal logistic centres 2. Other tenants of FBL 3. European Federation of Inland Ports	1. Inland ports 2. Arcelor Mittal 3. MCC Ltd. 4. Ekol Logistics 5. Láng Ltd. 6. Ghibli Ltd.
	-	+	
	Level of interest and commitment		

### 6.1.2. For the elaboration of Corridor Capitalisation Plans

Level of influence and power  +  -  -	Keep satisfied	Key players	
	+	1. Ministry for Innovation and Technology 2. RAILcargo 3. Waberers 4. Customer	1. Association of Hungarian Logistic Service Centres 2. Hungarian Federation of Danube Ports 3. European Federation of Inland Ports 4. METRANS Container Terminal
	Monitoring	Keep informed	
	-	1. HUNGRAIL 2. Inhabitants	1. Freight forwarders 2. Logistic centres 3. Ports 4. MÁV 5. BKK 6. KTI
	-	+	
	Level of interest and commitment		





## 6.2. Description of the approach towards stakeholder involvement during the elaboration of the regional analyse of challenges and needs

The Hungarian Logistics Service Centers Association (MLSZKSZ) plays a key role in the Hungarian logistics sector, establishing and sharing best practices and representing major stakeholders. Members include companies that transport freight by road, rail and water. Most of them operate in the central region of the country, but many are headquartered in Western Hungary. The association regularly prepares and publishes market analyses, surveys, and reports about logistics, transport, freight forwarding and intermodal transport.

Therefore, MLSZKSZ was selected to carry out CORCAP project surveys for road, rail and intermodal transport, among its members and business partners, using the questionnaire prepared by KTI.

Willingness to participate in questionnaire surveys is very low, as companies they lack extra HR resources, and only a few have structured data collection schemes. Therefore, the CORCAP survey uses a multiple-choice online questionnaire with only a few questions, and respondents hardly have to write anything. Participation is encouraged by giving survey rewards for completed and returned questionnaires.

The questionnaire prepared by KTI was sent to 36 road transport companies with headquarters and sites in central Hungary (Budapest region) and Western Hungary (Sopron-Burgenland region). From the 36 road transport companies, 19 returned properly completed questionnaires, which is a 53 percent response rate.

The questionnaire prepared by KTI was sent to 15 rail transport companies with headquarters and sites in central Hungary (Budapest region) and Western Hungary (Sopron-Burgenland region).

### Road transport

81 % of the companies do not use combined transport.

The following answers were received to the question „Are there any obstacles that make it difficult to carry out the international transport activities”?

Respondents mainly highlighted the lack of public (governmental) stimuli, furthermore the existing combined transport connections do not wholly cover these needs.

As to further conditions they made the following remarks:

- flexibility, precision, as the car industry companies do not tolerate uncertainty and delay,
- value for money service door to door,
- there are not enough parking lots, roadbuilding activities slow down transport,
- extension of road network,
- long lasting reliable service with shorter delivery times,
- lack of labour force, the principals do not need combined transport either, road transport is more convenient and faster; the cost savings of using combined transport do not offset its disadvantages
- on the whole, combined transport is more expensive and slower than road transport,
- mobility package, different legal regulations by each country.



## Rail transport

According to the respondents crossing the borders, railway staff, railway infrastructure and outdated regulatory systems constitute the biggest problems.

33% of the companies do not have combined transport services.

Further remarks on other conditions:

- the regulations are not uniform (protection wagon, change of braking types, etc.)
- lack of interoperability on the borders between the railway and the infrastructure

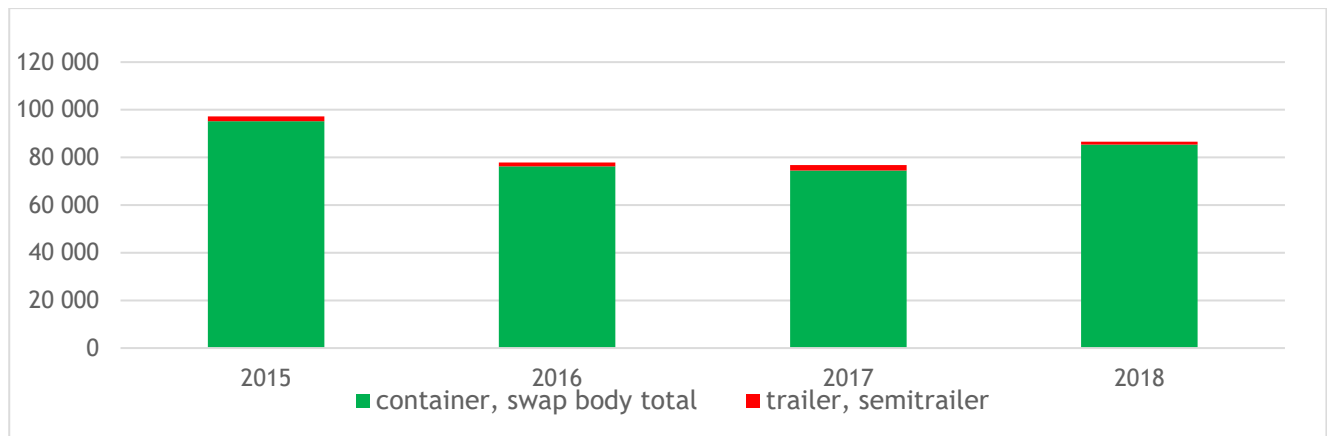


## 7. ANNEXES

### 7.1. Maps

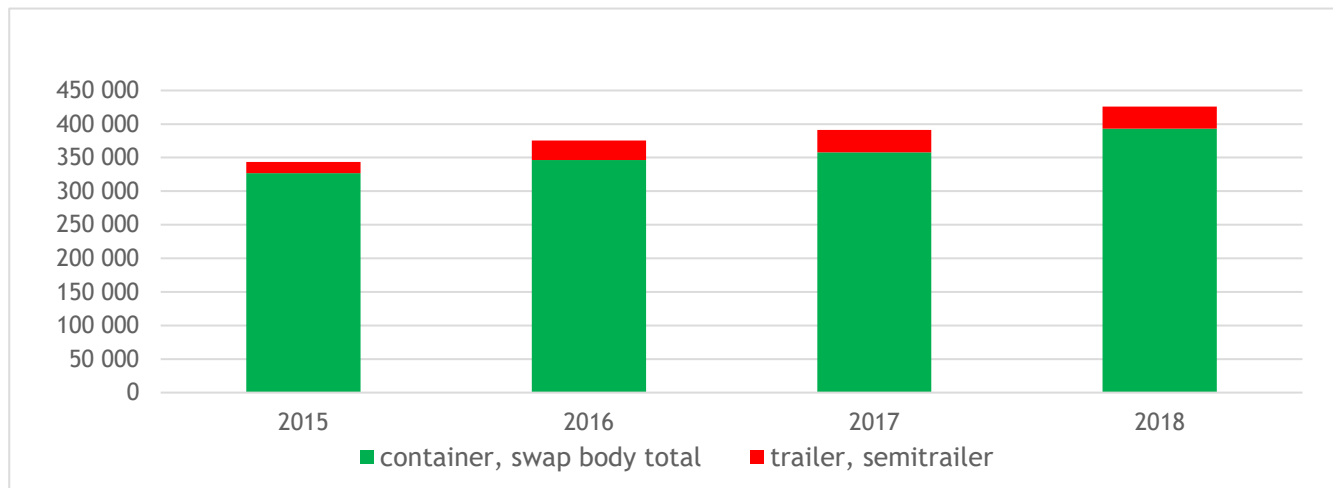
Maps are included as a figure in the text field.

### 7.2. Tables



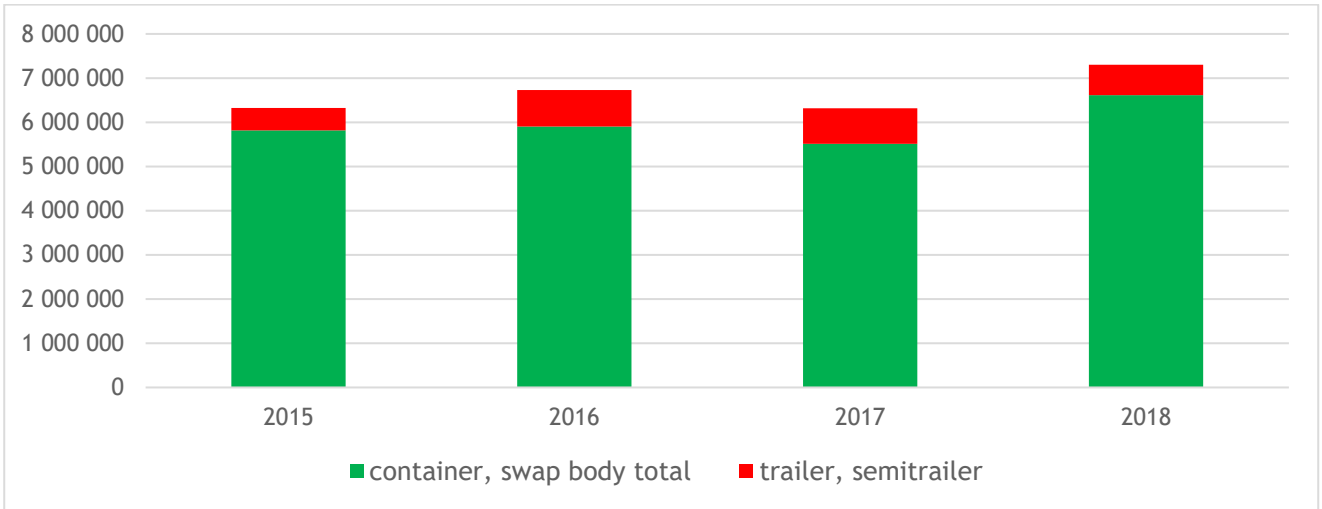
1. Table.Empty transported ITU (piece)

Source: KSH



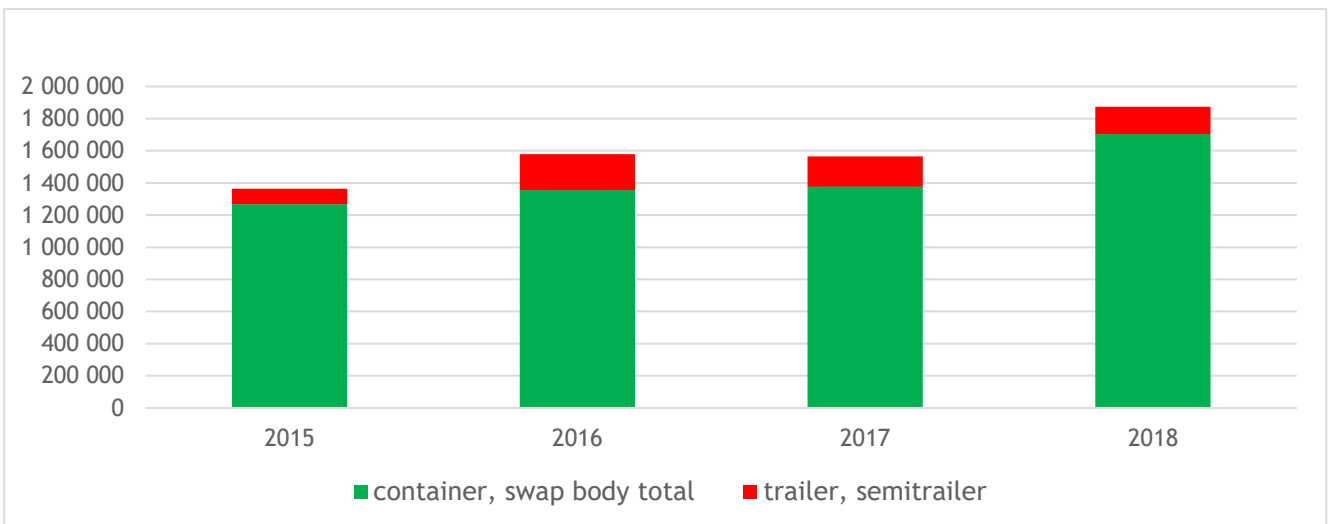
2. Table.Loaded transported ITU (piece)

Source: KSH



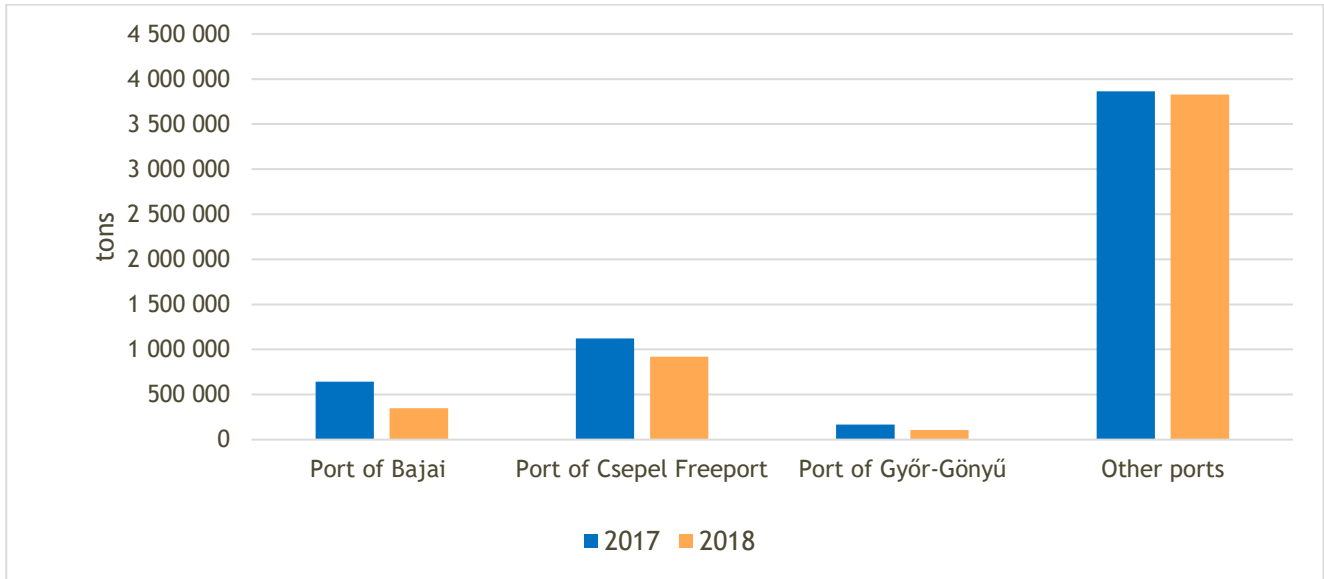
3. Table.Total mass of goods transported (net)

Source: KSH



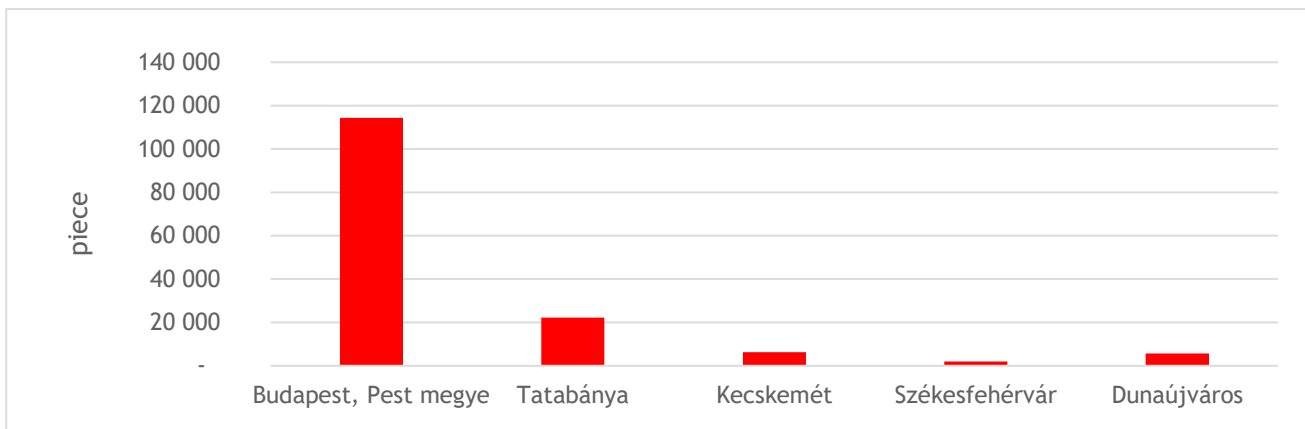
4. Table.Total goods transported tonne/kilometer

Source: KSH



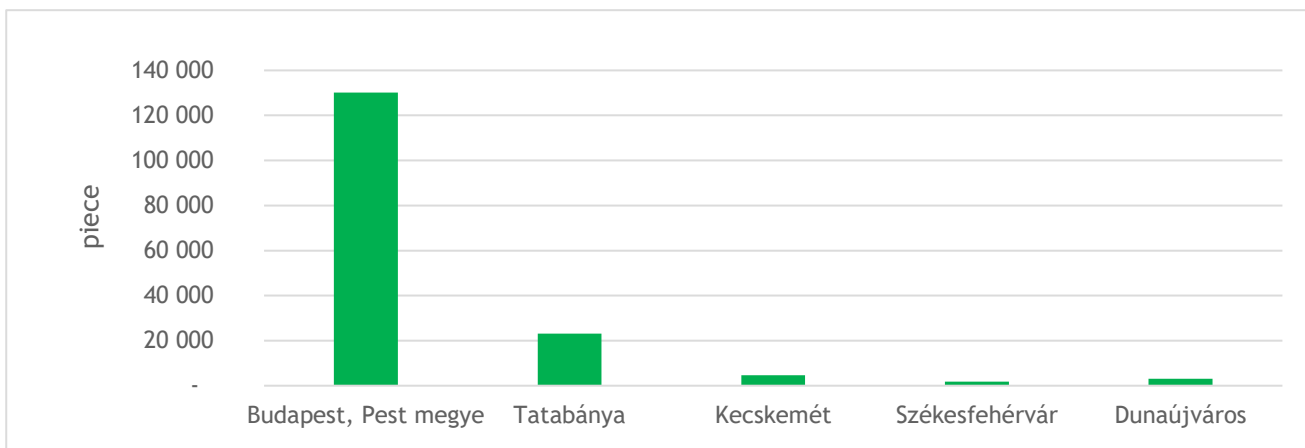
5. Table. Traffic of Hungarian inland ports

Source: KSH



6. Table. Export Traffic (Heavy Duty Vehicle - J4) 2017

Source: NUSZ and MLSZKSZ





7. Table. Import Traffic (Heavy Duty Vehicle - J4) 2017

Source: NUSZ and MLSZKSZ