CORRIDOR CAPITALISATION PLAN

for the Budapest Region

D.T3.2.7

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Prepared by

Acronym	Name of CORCAP partners
FBL	Freeport of Budapest Logistics
KTI	KTI Institute for Transport Sciences Non-profit Ltd.

TABLE OF CONTENTS

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

LIST OF FIGURES

LIST OF TABLES

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

1. INTRODUCTION

The CORCAP project aims to steer freight transport along the Orient/ East-Med (OEM) TEN-T corridor towards an efficient and environmentally friendly direction. Through a wide range of infrastructure investments, the project attempts to exploit the untapped potential of the OEM transport corridor. The Dresden-Prague section connecting Central and South-East Europe is a crucial bottleneck regarding freight transport in Central Europe. In order to eliminate the obstacles and improve connectivity between German seaports and South-Eastern destinations – in particular, the Czech Republic, Slovakia, Austria and Hungary - the above section needs to be upgraded and extended by a new railway line.

The new Dresden-Prague line will not only create new opportunities for efficient and sustainable freight transport but improve the multimodal accessibility of Central European regions. The planning process of the new railway line is expected to be finalised by 2023. The construction of the new railway line contributes to the CORCAP project's objective to shift freight traffic from the roads to water and railway, resulting in less adverse environmental impacts.

The project's third thematic work package (WPT3) includes the elaboration of strategies and action plans exploiting potentials of the OEM corridor for regional development. The outputs of the work package will serve as a tool for strategy building in OEM corridor regions (O.T3.1) specifying the joint methodology of strategy development, the Corridor Capitalisation Plans addressing local, regional and transnational challenges for efficient and environmentally friendly freight transport (O.T3.2) and a transnational strategy summarising the conclusions and recommendations from Corridor Capitalisation Plans (O.T3.3). The outputs will contribute to the enhancement of corridor functionality through improved coordination between transport and spatial planning and to the strengthening of logistics locations.

The tool for strategy building in OEM corridor regions defines the methodological framework for the implementation of the third work package. The strategy-building tool supports and guides the elaboration of the Corridor Capitalisation Plans and the transnational corridor capitalisation strategy and intends to exploit the potentials of the OEM corridor regarding freight transport and regional development. The strategy prepared by the Saxon State Ministry of the Interior (Lead Partner) has to summarise the recommendations from Corridor Capitalisation Plans, demonstrate the benefits of a well-functioning TEN-T corridor and outline the needs for coordinated action in the field of transport and spatial planning.

Corridor Capitalisation Plans are innovative tools potentially relevant to all TEN-T corridors. The plans are developed in order to facilitate the interaction of regional development and transport infrastructure development in the participating regions. Corridor Capitalisation Plans are developed for the Free State of Saxony, Ústí Region, South Moravian Region, Bratislava Region, Győr-Moson-Sopron and Burgenland Region and Budapest Region.

Inception reports were elaborated by the responsible partners, addressing the following issues for all Corridor Capitalisation Plans:

- Aims of the Corridor Capitalisation Plan;
- Policies (plans, strategies), stakeholders (decision-makers) and catchment areas addressed;
- Process of elaboration, methods and ways of involvement of stakeholders;
- Draft structure, planned elements;
- Annexes.

Each Corridor Capitalisation Plan consists of a precise, well-developed core document (the "plan"), which is obvious and easily understandable. Evidence and justification of declarations contained in the plan must be attached in annexes. At last, the plans are relevant for the decision makers, and the annexes are useful for experts and advisors supporting the decision makers.

Currently, the existing practice of corridor development focuses mainly on infrastructure standards and the technical environment of the infrastructure system, following the principles of sectoral planning. The approach followed by the project goes beyond this practice, as it aims to develop integrated strategies focusing on the interaction between regional development and transport infrastructure development, taking into account the operational requirements of multimodal logistics sites and transport services as well. Through the improvement of the connectivity of intermodal hubs and inland ports and the investigation of innovative intermodal services, tangible benefits will be delivered for more efficient freight transport solutions.

According to the CORCAP project's Application Form, a Corridor Capitalisation Plan shall be elaborated for the Budapest Region - based on the results and findings of the Regional analysis of challenges and needs for the Budapest Region (D.T1.2.7) and the output of Decision-support tool specifying and prioritising pilot actions for multimodal freight transport complementing OEM corridor development (O.T1.2). The below document has been prepared for this purpose by the Freeport of Budapest Logistics and KTI Institute for Transport Sciences.

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2. TERRITORIAL SITUATION ASSESSMENT

2.1. Results and findings of regional analyses

As regards freight transport, international traffic plays a key role. However, inefficiently implemented and coordinated freight transport and logistics have direct impact not only on product prices and security of supply but also on the functioning of the economy as a whole (e.g., raising the price of products), on the population and also on the environment (noise and air pollution, climate change).

Although the CORCAP project focuses on waterborne freight transport developments as well, the emphasis is rather on railway. In order to make European railway transport competitive and to create a single European railway area; significant investments, such as expansion of the capacity and modernisation of the European rail network are needed. Competitiveness of international freight transport needs to be able to benefit from a high-quality and sufficiently financed railway infrastructure, which should be conducted in a manner consistent with the Trans-European Transport Network (TEN-T) and/or the European Railway Traffic Management System (ERTMS) corridors. The integration of international rail freight corridors into the existing TEN-T and ERTMS corridors must be realised, having regard to the EU rules and regulations relating to freight corridors.

Congestion at bottlenecks is a typical problem regarding the internal market for rail services. The technical, administrative and legal barriers that still impeding access to national rail markets need to be removed. In order to eliminate the obstacles and to boost European freight traffic, having regard to the EU transport and environmental policy objectives, a joint European action, particularly cooperation (co-modality) between the various modes of transport (multimodal transport) would be crucial. Through its transport policy, the European Union aims to transform the uncoordinated network of European roads, railways, inland waterways, seaports, airports, and rail-road terminals into an integrated network extending to all Member States. The establishment of this network requires the preparation and implementation of a number of projects aiming the removal of the existing bottlenecks, bridging the missing links and improving interoperability between different modes of transport and regional and national transport infrastructures. From an environmental and human health point of view, projects aimed at reducing noise of freight trains should be encouraged, even if they do not have a direct economic efficiency impact but their external benefits are huge.

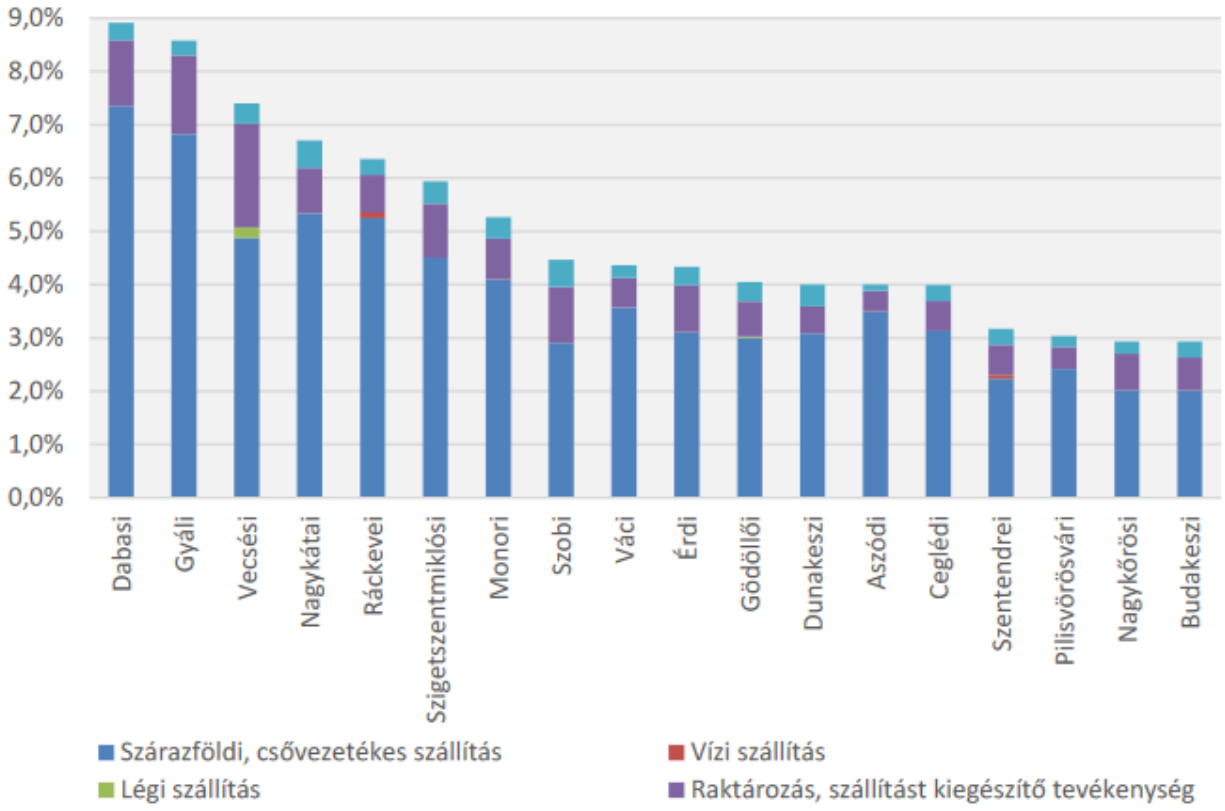
Through different financial mechanisms, the EU supports or co-finances the development of a two-layer structure including a comprehensive and a core network.

The comprehensive Regional Analysis of Challenges and Needs deliverable (D.T1.2.7) for the Orient-East Mediterranean (OEM) corridor regarding the Budapest area has already been elaborated in 2019. Since then, a year of the pandemic has passed and the new planning documents for regional development plans are currently being discussed, as part of the public consultation process of the EU programming and budget period of 2021-2027.

As shown in Figure 6 in the Annex, Pest (NUTS3) County is divided into 18 micro-regions (LAU1) characterised by the different numbers of inhabitants and challenges related to the population. The county is characterised by a dynamic micro-region ring around the city of Budapest and an outer, mainly rural zone including the area of the river Ipoly/Ipel by Hungarian-Slovakian border, in the Northern and Central part of Szob micro-region.

Pest County has designated Aszód in the East and Ráckeve and Dabas micro-regions in the South as additional preferential subregions. Parts of these micro-regions together with 3 South-Eastern micro-regions can be considered as areas with a special development focus, especially with regard to their rural municipalities and settlements. The map of the preferential micro-regions is shown in Figure 7 in the Annex.

When focusing on freight transport and logistics activities measured by the share of all enterprises in each micro-region, it can be stated that the relative weight of freight transport is higher in most of the preferential micro-regions, as their further economic sectors are less developed. Some of the moderately dynamic areas with favourable logistics locations along the Southern section of M0 motorway have high transport activity weight, as for instance Gyál and Vecsés micro-region (Annex: 8. Figure - Pest County and its special economic centres and economic and innovation zones). It is important to highlight that the international airport of Hungary is located in Vecsés. It has to be noted that the lowest transport related enterprises share Budakeszi micro-region is also characterised by high logistics activity concentration, especially around Budaörs and Biatorbágy, however, their overall economic power is that high that their relative share has to decrease. As for the peripherical Nagykőrös area, the region is more functionally attracted to Kecskemét, centre of the neighbouring county Bács-Kiskun.



1. Figure Share of transport related (Blue - terrestrial all modes, Green - air transport, red - Inland Waterways, purple logistics and warehouses) enterprises from all the enterprises of Pest County's micro-regions in % in 2019

Source: Pest County Regional Development Plan 2021-2027 - consultation version
http://www.pestmegye.hu/images/2021/Megyei_teruletfejlesztesi_program/Pest_Megyei_Teruletfejlesztesi_Program_2021-2027_egyeztetesi_dokumentacio_2021.04.pdf

Although, Pest county covers only 7,4 % of the territory of Hungary, one-third of the Hungarian population and nearly half of the national GDP production is concentrated in the Budapest Functional Urban Area of which includes ca. 1,2 million inhabitants from the total ca. 1,3 million inhabitants of Pest County. Of which the legally designated 81 settlements of Budapest Agglomeration area in Pest County is home to ca. 800.000

citizens. In order to obtain most of the economic concentration, specific economic zones for high-tech industries innovation and logistics have been designated, especially around the Southern ring-road. The economic centres and economic and innovation zones and centres are shown in Figure 8 in the Annex. The map does not demonstrate the area of Göd which is an essential economic area as well, due to the ongoing Samsung originated industrial developments.

Budapest is the centre of Pest County like other metropolises has been hit hard by the absence of tourism and had to impose lockdown measures in passenger traffic in order to control the pandemic. Furthermore, teleworking has also changed the travel habits and patterns characteristics in the region. Currently, it is not yet predictable how long the impacts of the modal shifts will be observable and to what extent will the daily and weekly commuting be typical once the intensity of the pandemic decreases.

In terms of freight flows, the impacts of the pandemic have also restructured the traffic flows, since the traditional air cargo loads such as belly cargo had disappeared with the sharp reduction of commercial passenger air services due to lockdowns and border closures.

Part of freight traffic has shifted to rail freight, causing congestion and new bottlenecks along the traditional China-Europe railway corridors which were originally built for other purposes but exists for more than a century mostly along the different branches of Trans-Siberian Railway. The partly existing Central and Southern Eurasian Railway Corridors are still in a developing phase with limited capacity only compared to the route via Russia. In Europe, decline to 95% in long-distance passenger train services due to the coronavirus caused pandemic did not automatically result in fewer trains, since, as in the Budapest region, the number of rail freight trains has increased.

The parallel preparing new territorial development plans maintained the previously announced need for new transversal infrastructure elements both in road and rail transport, in order to decrease the radial lines congestion and bypassing the bottleneck sections in and around Budapest. On the map (Annex: Figure 9) the blue signs mark the external connection, while the red arrows show the spatially missing (rail)road connections of Central Hungary. The planned Northwest-South East and Southwest-Northeast main transit corridors are planned to be built at the Southern edge of the area. The planned infrastructure elements to be built in the coming programming periods until 2040 are shown on the valid Master Plan of Hungary (Annex: 10. Figure Extract from the planned transport network of Hungary (Surrounding area of Budapest)).

Surrounding area means the ring of peri-urban settlements around the city and it differs from the meaning of ’agglomeration’.

The South-Eastern M4 motorway has been in service since February 2020 but the outlined infrastructure developments are still in the planning and consultation phases. The earlier planned Western section of M0 motorway leading through the environmentally sensitive area of Buda Hills is supposed to replace by the M100 highway, between Esztergom and Bicske junctions of the M1 motorway. Further modifications and the connection of sections are being planned around the M10 motorway, in the North-West and several important connection sections also in the inner peripheries of Nagykáta micro-region in the South-East of the county.

High-speed railway alignments are shown on the map (Annex: 11. Figure Extract from the planned transport network of Budapest); the line towards Pécs is likely to be merged by the Western line in Pest County, however, no final decision has yet been made, as planning is still in progress. The so-called “V0” freight railway line planned to bypass the capital to the south in order to disencumber the city (see Figure 2), is also shown on the map, marked on its current planning alignment by the red railway line in the South. Focusing on the Central Budapest area, the planned relocation of Kelebia railway line to Ferencváros freight station (line marked in red on Figure 10.) and the planned passenger railway tunnel between South and West railway terminals are also observable. As expected, the tunnel passing through the Danube will provide capacity for freight services on the Southern ring railway currently under construction. The Freeport area

is planned to be served by the future Galvani bridge from the North, the Budafoki and the renewed Gubacsi bridge which will provide an upgraded railway connection too from the South.

2. Figure "V0" railway line

Source: https://hu.wikipedia.org/wiki/V0_vas%C3%BAtvonal, 'V0' is marked with red. More information is available here: https://www.fomterv.hu/en/node/443

The mentioned measures complemented with further interventions and investment plans are further detailed in Chapters 3 and 4.

According to the findings of various analysed regional development plans, such as the Budapest Transport Development Strategy 2014-2030 / Balázs Mór Plan, the Budapest 2030 Long-term Urban Development Concept, the Budapest Rail Node Study, and the Corridor Capitalisation Plan attempts to address the following issues:

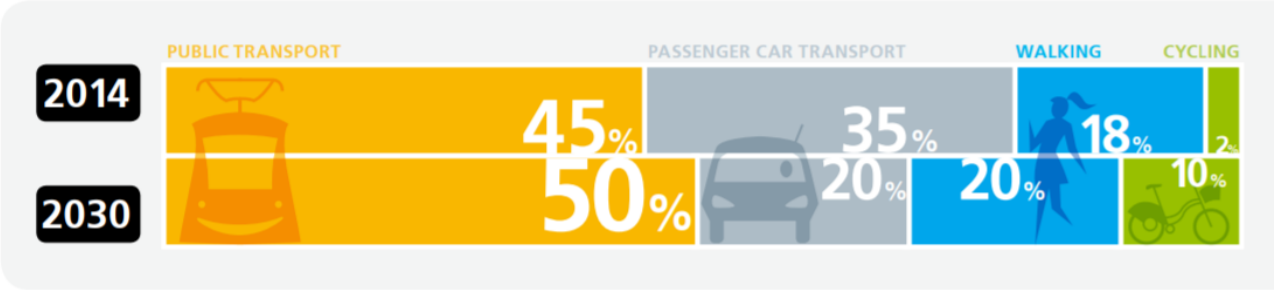
1. Accrued development of regional and transportation development concepts

Traditionally, regional development plans concern primarily economic and social issues and environmental challenges are discussed subsequently. Development plans regarding transport are elaborated by experts from the transport sector and focus on transport routes and corridors, considering the surrounding environment and society only as secondary circumstances.

Establishing communication and lasting cooperation between stakeholders and mutual involvement in the elaboration processes of various development concepts might help overcome the obstacles outlined.

2. Excessive dominance of road passenger and freight transport

According to statistics of 2011, the volume of road freight transport in Hungary was five times as large (34.340 million tons/km) as of rail transport (source: Balázs Mór Plan), meanwhile, the volume of waterborne transport was even lower. The modal split of passenger transport within Budapest in 2014 has been the following:



3. Figure Modal split of Budapest with current and estimated values

Source: Balázs Mór Plan

According to the pictogram above, passenger transport is dominated by public transport and passenger cars, so the aim is to reduce the number of passenger cars in order to increase public, pedestrian and bicycle transport within the capital.

In order to meet the CO2 reduction target by 2050, the volume of road transport of passengers and freight must be significantly reduced. All future projects must take this into consideration and shall make their contribution to the cause.

3. Lack of communication between the key stakeholders of various transport sectors

When discussing future plans related to transport corridors, logistics and transport sectors have a significant number of stakeholders need to be involved.

The central government is responsible for spatial planning and controls the majority of the transport networks within the country.

The local government of Budapest is part-owner of various transport networks and the Centre for Budapest Transport (BKK) responsible for public transport in Budapest as well.

The National Transport Authority responsible for authorisation of transport plans has been integrated into the Ministry for Innovation and Technology. NIF Ltd. (National Infrastructure Development agency owned by the state) is responsible for the implementation of big transport investments. Network rail MÁV and its passenger operator company MÁV-START are the state owned incumbent national railway company, however, there are further private freight companies operating freight railway services. Following the 2-step merge of approx. 20 companies running regional/suburban and long-distance bus lines since 2019 Volánbusz is the sole operator with only 4 minor private companies allowed to run specific minor services. Since 2020 Volánbusz is organisationally integrated to the incumbent Hungarian State Railway (MÁV) group. As far as logistics companies are concerned, they are mostly privately owned.

However, stakeholders from all sectors of transport have little opportunity to share their thoughts and start brainstorming with each other.

4. Unintegrated local, regional, national development concepts

Development concepts elaborated at different administrative levels are not always consistent with one other. In order to exploit development opportunities better, all political or personal hostility shall be put aside, and experts should be encouraged to work together. Experts responsible for smaller administrative territories shall be involved in higher level development plans as well, in order to create commitment on lower levels. This approach shall result in jointly elaborated, aligned development plans.

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

2.2. General and specific aims

The main general aim is to support the creation of liveable, attractive, sustainable and at the same time economically efficient living and enterprising environment in Budapest area. This aim is in line with the European Green Deal, to create a climate neutral Europe in the coming decades and reach the goal set by 2050.

The specific aims of the Corridor Capitalisation Plan of the Budapest region:

1.	Exploit the untapped potential of the OEM corridor (improving efficiency of existing logistics facilities, business opportunities and creating a better intermodal node in the Budapest region).
2.	Facilitate modal shift from road to rail and waterborne transport, thus strengthening the share of environmentally friendly freight transport methods.
3.	Resolve the existing bottlenecks of the railway network by upgrading or substituting connecting track and shunting yards for Budapest bound traffic
4.	Incentives for the existing and the planned by-pass railway sections to facilitate the macro-regional traffic flow.
5.	Satisfying the logistic demand for the local supply of the Budapest region and for the growing passenger train service.
6.	Strengthening cooperation among the stakeholders concerned for the implementation of accurately timed and harmonised improvement actions.

2.3. Time horizon

The elaboration of the Corridor Capitalisation Plan is perfectly timed, as Hungarian national strategic documents are slightly outdated. The “Situation Analysis of the National Transport Strategy” is dated 2014, based mainly on data from 2010, “Budapest Long-term Urban Development Concept 2030” and the “Pest County Territorial Development Concept” have been issued in 2013. Existing strategic documents must be revised, and their contents discussed and updated with the involved stakeholders through a mediation process. Strategies for the next planning period are still under development or recently completed.

As explained above, schedule of planned projects for the time being can only be identified in general terms, based on the existing national strategic documents, and the milestones defined by EU strategic documents.

Our aim is to support the European Green Deal, to create a climate neutral Europe in the coming decades and reach the goal set by 2050. As intermediate milestones (2030,2040) are taken into account, implementation processes of transport infrastructure investments usually take 10-15 years.

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

3. CHALLENGES IDENTIFIED

To identify the strategic planning challenges in the Budapest Region of the OEM corridor two professional workshops have been organised with a small group of committed academics. This was preceded by an introductory and kick-off workshop, and at the end a final workshop closed the series of events.

The consultations took place in the virtual space, and the participants were key players involved in the transport and logistics sectors in the Budapest region. On the first thematic event, the aim was to initiate a dialogue with the participants to receive important, professional feedback which can contribute to the identification of the main bottlenecks or challenges related to the Budapest region. The OPERA method has been used to allow all participants equal participation in the process.

During the workshop, we wanted to receive the participants' professional views and comments regarding the following issue: "In your opinion, what are the key transport development issues to be addressed by the OEM corridor that are affecting the capital and the region?"

At the beginning the participants had 5 minutes to write down their suggestions on the issue raised. Then the participants were divided into groups of 2-3 people, where they had the opportunity to share and discuss their ideas together. Their task was to create 3-4 joint proposals.

The most important transport development problems specific to the Budapest region were identified and fixed on the board. Thereafter, the participants had to vote on 2-2 proposals they consider to be the most important. The proposals without votes were removed from the board (but taken into account in later stages. No suggestions were left out during the planning process). The participants had to sort the proposals under the column headings then add titles to the columns.

Several proposals have been renamed, merged or regrouped with the consensus of the participants.

At the end of the workshop the following categories have been identified as the main challenges of the Budapest region focusing only on rail freight transport:

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

1. Table Main challenges of the Budapest region focusing on rail freight transport

Source: Own editing

Surrounding area (A)[1]	Interoperability of a functional urban area (I)	Railway Infrastructure Developments (R)	Management and development of marshalling yards and areas related to railway technology (M)	Raising awareness of different stakeholder groups (RA)	Financing issues (F)
Surrounding area traffic and costs (6)	Interoperability on the Danube (4)	Planned and proportionate development of railway (4)	Revision of the marshalling yard systems of the country (1)	Awareness-raising and sustainability (2)	Encouraging and financing investments and operation (3)
	Alternative crossing options (ferry, bike) on the Danube	Creating interoperability between the lines 1 and 150 (2)	Management of transit train storage (buffering capacity) in the wider environment of Budapest (1)	Coherence between regional and urban developments	
			Development of cargo handling facilities (1)		

The regrouping has given rise to another column – the category of 'Financing issues' – where the proposal for encouraging and financing investments and the operation has been classified. The other categories were entitled to 'Surrounding area', 'Interoperability of a functional urban area', 'Railway infrastructure developments', 'Management and development of marshalling yards and areas related to railway technology' and 'Raising awareness of different stakeholder groups.'

In the next workshop, we continued to work with these identified group of challenges. We tried to find relevant packages of measures that could offer a solution to the problems.

[1] Agglomeration was changed to 'Surrounding area' along suggestions arrived during the finalisation phase of present document. Since the abbreviation 'A' was used during the workshops and in the tables, the abbreviation was left unchanged, but the name changed to 'Surrounding area' as it is better reflecting to the covered territory.

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

4. DEVELOPMENT GOALS

The third (second thematic) workshop aimed at grouping the existing project ideas and suggested development goals to find solutions for the identified challenges of the former workshop. As a start, the colleagues of KTI introduced all the railway and waterway development projects described in the national and regional development strategies (especially in Budapest Rail Node Study 'BRNS') foreseen to be implemented in the coming two decades in the Budapest region. The project ideas have been grouped around the identified challenges of the former workshop (this is also indicated by colours in the figure below).

Some of the project ideas are to be replaced with each other depending on which action plan will be implemented. Therefore, in order to make the relationship between the individual intervention options visible, a relationship matrix was compiled with the help of academics.

Premise it should be noted that the Southern Railway Bridge and the connected lines/stations are perhaps the biggest bottleneck of the Budapest- and Hungarian railway network, first of all in short and middle time development. Here there is a superposition of the passenger transport and the fright transport. The solution of this problem is a priority when examining the context of development options.

However, it is also important to point out that bottlenecks can only occur where there is some opportunity for traffic. Queuing occurs where the opportunity is, but not necessarily where the issue should be resolved, because if there is nothing there today, no one will be queuing there. Thus, in addition to the examination of bottlenecks, potentially not yet problematic sites should also be examined when compiling intervention scenarios.

Finally, it has to be highlighted that the measures and findings of the BRNS were taken into account not only during the third workshop, but by the finalisation of present document. For these purposes, we controlled if the aims together are really able to cover the answers to the challenges. This is shown in the table below.

CHALLENGES **AIMS** .	Improvements of the circumstances of the surrounding area (A)	Interoperability of a functional urban area (I)	Railway infrastructure developments (R)	Management and development of marshalling yards and areas related to railway technology (M)	Raising awareness of different stakeholder groups (RA)	Financing issues (F)
Achieve better intermodal node facility	X	X	X	X		
Facilitate modal shift from road to rail and waterborne transport		X	X	X		
Upgrading or substituting			X	X		

connecting track and shunting yards for Budapest bound traffic						
Improving the existing and constructing the planned by-pass railway sections			X			
Satisfying the logistic demand for the local rail freight and for the passenger traffic	X	X	X			
Strengthening cooperation among the stakeholders	X	X		X	X	X

Based on all the above mentioned, the development goals are summarised as follows:

Facilitate the development of an environmentally sustainable and liveable urban environment that is supported by an efficient economic structure based on the co-modality supported by productive modal-shift solutions in order to minimalize externalities and maximise societal and environmental benefits. It is important to note that none of the above-stated goals can be achieved without the human-driven administrative function factor namely the strong cooperation among the stakeholders of different sectors and companies.

As a next step, we controlled if the 25 planned actions coming from Budapest Rail Node Strategy, together are really able to cover the answers on the challenges and if they cover all the aims.

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

2. Table Matrix showing interdependencies between planned actions and challenges

Source: Own editing

Challenges / **Planned actions**	Agglomeration traffic and costs	Gubacsi bridge renovation	Conversion of Corvin-node	Direct access to the Southern railway bridge from line 150	Investments to improve freight traffic to bypass Budapest (main elements of V0)	Improving the navigability of the Danube, planning	Improving the navigability of the Danube, construction	Inner circular railway short-term developments - DÖVH	Inner circular railway long-term developments - DÖVH	External circular railway developments	Linking the railway line 150 and the HÉV in Pesterzsébet	Construction of Soroksári út - Soroksár 2. track	Ferencváros – Kelenföld increase in capacity	Ferencváros station short-term developments	Development of the Central Traffic Operation System	New railway tunnel between Southern and Western railway terminals (~~DNA~~)	Increasing the capacity of Kelenföld station for freight trains	Kelenföld station and surrounding area - providing capacity for trains passing through	Strengthening the role of rail in serving Budapest (City logistics)	Expanding the traction power supply system for growing traffic	Capacity developments required in the Ferencváros area	Establishment of a new trimodal logistics centre in or close to the capital	Awareness-raising and sustainability	Creation of cooperation and competition	Development of a study on the philosophy of financing (encouraging and financing investments and the operation)
Surrounding area [Improvements of the circumstances of] (A)	X			X							X													X	
Interoperability of a functional urban area (I)	X		X	X	X		X	X	X	X	X					X		X	X			X		X	
Railway Infrastructure Developments (R)	X	X	X	X	X			X	X	X	X	X	X	X		X	X	X	X	X	X	X		X	
Management and development of marshalling yards and areas related to railway technology (M)																			X		X				
Raising awareness of different stakeholder groups (RA)																			X				X	X	
Financing issues (F)																									X

3. Table Matrix showing interdependencies between planned actions and aims

Source: Own editing

Aims / Planned actions	Agglomeration traffic and costs	Gubacsi bridge renovation	Conversion of Corvin-node	Direct access to the Southern railway bridge from line 150	Investments to improve freight traffic to bypass Budapest (main elements of V0)	Improving the navigability of the Danube, planning	Improving the navigability of the Danube, construction	Inner circular railway short-term developments - DÖVH	Inner circular railway long-term developments - DÖVH	External circular railway decvelopments	Linking the railway line 150 and the HÉV in Pesterzsébet	Construction of Soroksári út - Soroksár 2. track	Ferencváros – Kelenföld increase in capacity	Ferencváros station short-term developments	Development of the Central Traffic Operation System	New railway tunnel between Southern and Western railway terminals (~~DNA~~)	Increasing the capacity of Kelenföld station for freight trains	Kelenföld station and surrounding area - providing capacity for trains passing through	Strengthening the role of rail in serving Budapest (City logistics)	Expanding the traction power supply system for growing traffic	Capacity developments required in the Ferencváros area	Establishment of a new trimodal logistics centre in or close to the capital	Awareness-raising and sustainability	Creation of cooperation and competition	Development of a study on the philosophy of financing (encouraging and financing investments and the operation)
Achieve better intermodal node facility							**X**	**X**	**X**		**X**			**X**	**X**		**X**	**X**		**X**	**X**	**X**			
Facilitate modal shift from road to rail and waterborne transport		X					X								X				X			X	X	X	
Upgrading or substituting connecting track and shunting yards for Budapest bound traffic		X	X	X				X	X	X		X	X			X					X	X			
Improving the existing and constructing the planned by-pass railway sections			X		X																	X			X
Satisfying the logistic demand for the local rail freight and for the passenger traffic		X						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Strengthening cooperation among the stakeholders	X					(X)	(X)				X				X	X			X			X			

4. Table Matrix showing interdependencies between suggested interventions.

Source: Own editing

Planned actions	Agglomeration traffic and costs	Gubacsi bridge renovation	Conversion of Corvin-node	Direct access to the Southern railway bridge from line 150	Investments to improve freight traffic to bypass Budapest (main elements of V0)	Improving the navigability of the Danube	-planning	-construction	Inner circular railway short-term developments - DÖVH	Inner circular railway long-term developments - DÖVH	External circular railway decvelopments	Linking the railway line 150 and the HÉV in Pesterzsébet	Construction of Soroksári út - Soroksár 2. track	Ferencváros – Kelenföld increase in capacity	Ferencváros station short-term developments	Development of the Central Traffic Operation System	New railway tunnel between Southern and Western railway terminals (DNA)	Increasing the capacity of Kelenföld station for freight trains	Kelenföld station and surrounding area - providing capacity for trains passing through	Strengthening the role of rail in serving Budapest (City logistics)	Expanding the traction power supply system for growing traffic	Capacity developments required in the Ferencváros area	Establishment of a new trimodal logistics centre in or close to the capital	Awareness-raising and sustainability	Creation of cooperation and competition	Development of a study on the philosophy of financing (encouraging and financing investments and the operation)
Agglomeration traffic and costs																										
Gubacsi bridge renovation																										
Conversion of Corvin-node																										
Direct access to the Southern railway bridge from line 150					R				D	D		R	R													
Investments to improve freight traffic to bypass Budapest (main elements of V0)				R																						
Improving the navigability of the Danube																										
-planning																										
-construction																										
Inner circular railway short-term developments - DÖVH	S																									
Inner circular railway long-term developments - DÖVH																										
External circular railway decvelopments		D																								
Linking the railway line 150 and the HÉV in Pesterzsébet	D												R													
Construction of Soroksári út - Soroksár 2. track				D								R														
Ferencváros – Kelenföld increase in capacity														S												
Ferencváros station short-term developments															S											
Development of the Central Traffic Operation System																										
New railway tunnel between Southern and Western railway terminals (DNA)	S																									
Increasing the capacity of Kelenföld station for freight trains														D												
Kelenföld station and surrounding area - providing capacity for trains passing through																										
Strengthening the role of rail in serving Budapest (City logistics)																										
Expanding the traction power supply system for growing traffic																										
Capacity developments required in the Ferencváros area																										
Establishment of a new trimodal logistics centre in or close to the capital																										
Awareness-raising and sustainability																										
Creation of cooperation and competition																										
Development of a study on the philosophy of financing (encouraging and financing investments and the operation)																										

The table above displays the interdependencies between some of the project ideas based on the following three categories:

“R” means replaceable and includes the Direct access to the Southern railway bridge from line 150 (Kelebia-Belgrade) via Ferencváros freight yards which would moderately decrease the need for V0 freight by-pass line construction and also would replace partly the need for second track construction between the current terminus of the second track just South of Soroksári út station till the future new junction point of the Freeport (Szabadkikötő) industrial branch line and the newly built deviation section of line 150 towards Ferencváros shunting yard in the area of Határ út/Gubacsi út crossroads.

The full length of the second track construction need belongs to category “D” as “Dependent” since new alignment via Ferencváros shunting yard determines the second track length since it is not needed until the current endpoint South of Soroksári út but only to the deviation junction which should contain also a connection for the suburban HÉV lines of Ráckeve that could allow the planned new bi-mode suburban EMUs (electric multiple units) to change the route to HÉV lines towards downtown areas of Kálvin tér via a new passenger service only tunnel section and not to occupy train path (track capacity) in Ferencváros shunting yards and on the new deviation section. This capacity increase could serve efficiently the freight traffic arriving from the industrial branch line of Csepel, serving Freeport (Szabadkikötő) as well as its connection to Ferencváros. The external urban development added value is the possibility the re-develop the current shunting yards areas of Soroksári út station and virtually the whole is occupied by rail freight related activities in the underutilised small Danube branch riverbank where important education and housing estate developments are under preparation. This would be only possible by another “D” project development which is the ongoing Southern circular (ring) railway line capacity expansion to 3 and partly 4 track sections from 2 current double track between Ferencváros and Kelenföld stations. In Kelenföld a further “D” project which could increase freight capacity would allow this complex intervention process to work without any constraints and bottlenecks. Finally, the ‘Direct access to the Southern railway bridge from line 150’ measure is also dependent on the ‘Investments to improve freight traffic to bypass Budapest’.

All in all, these interventions can be considered as a “Strengthening” (“S”) chain of projects since their added value multiplies (both for freight and passenger market segments) once all the mentioned elements are realised.

Among other things, the development of the inner circle railway and the construction of a new railway tunnel which serve the better and higher level of service of Surrounding area traffic.

After the discussion of the project ideas, they have been ranked into three action plans.

The first scenario assumes an approach based on the ‘Business as Usual’ principle, only supporting the use and patching of the current transport system and the decisions in the current official and valid passed documents.

The second scenario “New Plans from the Budapest Rail Node Strategy” (called during the workshops Deferred Action scenarios (DA)) is based on the newly finished government-based plan on the Budapest Conurbation Rail Strategy.

In the case of the third scenario “Rail Freight Development” (called during the workshops Early Action scenario (EA)), all measures are collected and implemented that are necessary for the service of the local and the corridor-based freight operations”.

These three scenarios are used as models that serve the building of a realistic combination of their items as suggested solution.

There is a gap between table 1 and table 2 because of the difference development projects defined by experts (table 1) and BRNS project (table 2). The proposals of the experts should be examined in a later

phase of the rail developments of Budapest. We believe it is important that the improvements proposed by the experts are implemented alongside the BRNS projects, because only the consistency of the two will create environmentally friendly rail interoperability in the capital.

4.1. Essential measures

Some of the measures are essential to be implemented according to all the scenarios, only the way and extent of their implementation are in question.

1. ***Awareness-raising and sustainability***

Directing carriers towards environmentally conscious and efficient modes of freight transport is not only important for the CORCAP project but also contributes to the achievement of domestic and EU environmental objectives.

2. ***Creation of cooperation and competition***

The importance of cooperation and competition regarding public transport was highlighted by the participants at the second workshop. Competitive tender for multiannual public service provision contracts were deemed important in order to incentivise incumbent operators for cost efficient service provision and all in all to save taxpayer's money for less loss-making operation finance. Concerning the tariff integration process, the full integration approach was supported. This solution would allow charging competitive ticket prices from commuters and other passengers. Both feeder bus and backbone railway modes should be able to use with one ticket without any difference due to the potentially different operator company. Only a standardised modern public transport system can compete with the environmentally (and also for spatial constraints) unsustainable yet highly flexible private car usage.

Below measures were already listed by Action Plan 1 or 2, but their implementation is also highly important:

3. *Surrounding area traffic and costs*

The area expanded in the past few decades in each direction, and it is unfocused what masses flow with which type of infrastructure. The main result of which is that the real cost of commuting is unpaid. In addition, there is a huge need for competition, especially in public transport, as the current structure does not provide an incentive for service providers to develop and increase competitiveness.

4. *Increasing the capacity of Kelenföld station for freight trains*
5. *Development of a study on the philosophy of financing (encouraging and financing investments and the operation)*

The matrix of the project ideas grouped into action plans rated by the academics can serve as a very useful tool when deciding on the implementation schedule of certain project ideas. The following table shows a set of these relationships and groupings.

4.2. Action plan 1 - Business-as-usual scenario (BAU)

The Business-as-usual scenario (BAU) scenario consists of the following measures:

1. **Gubacsi Bridge renovation**

The Gubacsi bridge connects Csepel and South Pest. The double bridge structure has both road and rail tracks. The bridge is in need of rehabilitation mainly because of the poor track conditions, which in some places are a threat to traffic safety. Without any intervention, the continued sustainability of traffic on Csepel Island may soon become impossible.

The renovation is closely linked to the CORCAP project, as the railway line across the bridge connects the Free Port of Budapest and the logistics centres of Csepel to the national rail network, making it a key element of environmentally friendly forms of transport (intermodality). The renovation of the bridge will be accompanied by the renovation of the railway tracks.

2. **Improving the navigability of the Danube between Vének and the southern border**

As a result of the water level of the Danube and the immersion of vessels, the number of navigable days decreased to less than 250. Therefore, the idea contains the improvement of navigability at 31 locations over 52 km but also aims to improve the number of navigable days on the Danube for more than 250 days. Its planning phase is part of the BAU scenario.

3. **Ferencváros – Kelenföld increase in capacity**

This development is closely connected to the improvements by the southern Surrounding area. Since the line developments in the area will cause significant extra traffic, the increase in capacity between Ferencváros and Kelenföld is necessary for making the extra traffic manageable.

4. **Linking the railway line 150 and the HÉV in Pesterzsébet**

If the railway line 150 reached the railway line 1, the connection between the line and the HÉV in Pesterzsébet would be possible. Although this development goal is connected to passenger transport, it strongly affects freight transport. Therefore, it is essential to deal with this investment.

5. **Inner circular railway long-term developments – Southern connecting railway Danube bridge (DÖVH)**

This railway section could be the one of the possible diversion routes for the external circular railway, but this would require the modernisation of the Városliget junction - Kőbánya-Kispest line section. The route serves as a bypass in case the external circular railway would be out of service. For more details see *Inner circular railway short-term developments*.

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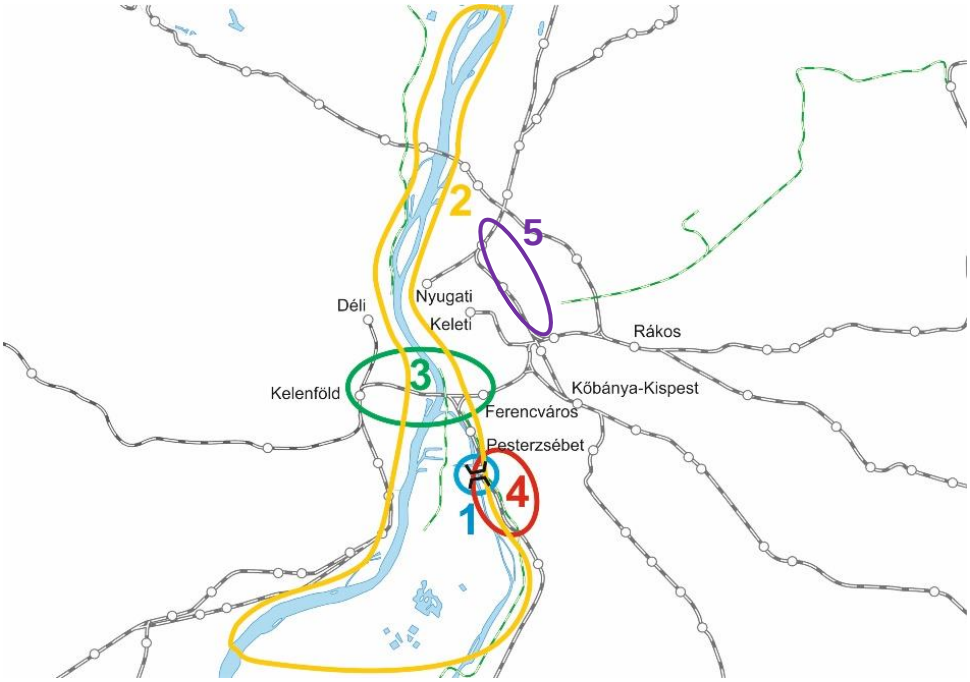
The figure below summarises the measures connected to the Business-as-usual scenario (BAU).



4. Figure Measures connected to Business-as-usual scenario (BAU)

Source: own editing

4.3. Action plan 2 - New Plans from the BRNS (NP)

This plan consists of measures coming from the Budapest Rail Node Strategy. The Strategy was created as a long-term rail passenger traffic development action, but the actions has impact to the rail freight traffic as well, and can be used as the elements as an action plan in this plan. The scenario consists of the following measures from BRNS:

1. **Surrounding area traffic and costs**

During the second workshop, participants drew attention to the improvement of Surrounding area traffic and its costs. The main reason behind this was that in the coming years, the number of passenger and freight trains will increase in the Surrounding area and their maintenance and energy consumption will be more costly and waiting time on the roads will lengthen. This measure is essential to be implemented from the view of rail freight transport.

2. **Gubacsi Bridge renovation** – *see its content in Action Plan 1*

3. **Conversion of Corvin-node**

The Corvin-node, which is crossed by a railway line to the Csepel Freeport is a significant car traffic junction. During rail traffic, the road is closed, and this leads to significant congestion. Apart from that, the CORCAP project aims to reinforce the rail traffic at the free port, which can cause even greater congestion and making life impossible for a populous district of Budapest. In order to reduce road congestion, car and rail traffic in the area must be spatially separated. The construction of a road overpass eliminates congestion and allows rail traffic to operate undisturbed.4. **Improving the navigability of the Danube between Vének and the southern border**

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4. **Improving the navigability of the Danube between Vének and the southern border**

As a result of the water level of the Danube and the immersion of vessels, the number of navigable days decreased to less than 250. Therefore, the idea contains the improvement of navigability at 31 locations over 52 km but also aims to improve the number of navigable days on the Danube for more than 250 days. Under the NP scenario, dredging measures are expected to achieve this goal, in contrast to the previous scenario, where only the planning phase was involved.

5. **Inner circular railway long-term developments – Southern connecting railway Danube bridge (DÖVH)** – *see its content in Action Plan 1*

6. **External circular railway developments**

The circular railway is one of the most important freight traffic routes passing through the capital, but the speed of the line section is low. Due to the increasing proportion of passenger transport, the expansion of capacities has become necessary.

The development plan is already prepared and feasible until 2030. By the development, an already existing railway axis can be involved into the intra-city rail transport, providing new connections. The plan mainly focuses on the construction of stops and their passenger connections.

7. **Construction of Soroksári út - Soroksár 2. track**

The logistics centre, located in the southern part of Budapest, is currently only partially accessible by a single-track railway line. The expected increase of combined transport requires the (re-)construction of the second track in Soroksár station in order to serve the Freeport of Budapest Logistics.

8. **Ferencváros – Kelenföld increase in capacity -** *see its content in Action Plan 1*

9. **Ferencváros station short-term developments**

Ferencváros station is the largest marshalling yard in Hungary and due to the intense utilization of track capacity, the improvement of the conditions of freight tracks has become indispensable. Increasing the tracks would help to overcome the problems of low transit speed and throughput. The maximum speed at the station is 10 km/h. It should be upgraded to minimum 40 km/h.

10. **Increasing the capacity of Kelenföld station for freight trains**

It is necessary for the planned plant of the tunnel axis to have an adequate capacity around Kelenföld station to turn the passenger trains. This could serve two goals: first, to operate as a deposit endpoint; second, with this improvement in case of malfunctions, on suburban lines at least reduced number of trains can be provided. This measure is essential to be implemented for the rail freight transport.

11. **Kelenföld station and surrounding area – providing capacity for trains passing through**

To ensure transit times for both passenger and freight trains and an increase in capacity at the station – in accordance with the previous plan - would be necessary.

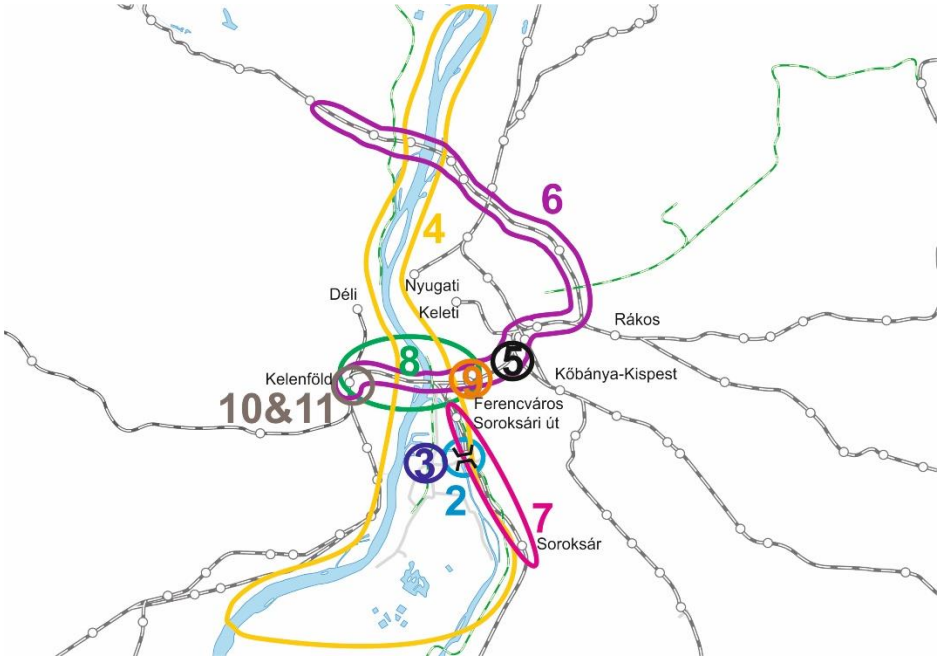
12. **Establishment of a new trimodal logistics centre in or close to the capital**

To meet the growing demand for freight transport and its transfer to rail, the modal shift must be as close as possible to the city. By doing so, given Budapest's central location, to be a centre where rail-road, rail-rail and possibly air-rail and ship-rail transfers can be made.

13. **Development of a study on the philosophy of financing (encouraging and financing investments and the operation)**

The improvement of railway infrastructure requires significant expenditure. Therefore, the identification of available financial solutions is key to the investments. This measure is essential to be implemented from the view of rail freight transport. The key factors are schedule, regulation and national-international level.

The figure below summarises the measures connected to the Deferred Action scenario (DA).



5. Figure Measures connected to New Plans from the BRNS *Source: own editing*

Source: own editing

4.4. Action plan 3 - Rail Freight Development

The Rail Freight Development scenario consists of the following measures:

1. **Surrounding area traffic and costs -** *see its content in Action Plan 2*
2. **Gubacsi Bridge renovation** – *see its content in Action Plan 1*
3. **Conversion of Corvin-node -** *see its content in Action Plan 2*
4. **Direct access to the Southern railway bridge from line 150**

Most of South-East to (North)Western Europe (RFC4) and some of North-East to Southwest Europe rail (RFC6) freight traffic runs over the Southern Railway Bridge. Due to the current layout of the railway line, access to the railway bridge currently is only possible with a change of direction in Ferencváros, which results in extra journey times for trains. Therefore, connecting the railway lines (which means having direct access to the bridge with a delta track) would result in shortening of journey times. Thus, the 'Direct access to the Southern railway bridge from line 150' measure is strongly related to the next measure, the 'Investments to improve freight traffic to bypass Budapest'.

5. **Investments to improve freight traffic to bypass Budapest (main elements of V0)**

The East-West rail traffic currently crosses only the Southern railway bridge, which is heavily congested. There would be a need for a new, high-capacity freight railway bypassing the capital, which could also

contribute to offload the Southern railway bridge. This development can be a scenario in itself. In this case the forwarding the freight trains via Budapest has a completely different way as the passenger trains. It can affect the role of the central marshalling yard as well.

6. **Improving the navigability of the Danube**

As a result of the water level of the Danube and the immersion of vessels, the number of navigable days decreased to less than 250. Therefore, the idea contains the improvement of navigability at 31 locations over 52 km but also aims to improve the number of navigable days on the Danube for more than 250 days. In the frame of EA scenario, the estuary revitalisation plans need to be implemented.

7. **Inner circular railway short-term developments - (DÖVH)**

Budapest's central area rail infrastructure is in a bad condition since all the infrastructure renewal lasted until the first bigger station within the city and not till the 3 main stations. In order to speed up the traffic through the city, the railway lines leading through the city also need to be upgraded, especially the Városliget junction - Kőbánya-Kispest line.

The line section occasionally could serve as a freight bypass for the external circular railway line, if it is out of traffic. The external circular railway line is one of the most important routes for through rail freight traffic in Budapest, providing northbound/southbound trains. The line section has low speed, and an increasing share of passenger trains is planned, so it is necessary to increase speed to ensure sufficient capacity.

8. **Inner circular railway long-term developments - (DÖVH) -** *see its content in Action Plan 2*
9. **External circular railway developments -** *see its content in Action Plan 2*
10. **Construction of Soroksári út - Soroksár 2. track -** *see its content in Action Plan 2*
11. **Ferencváros - Kelenföld increase in capacity -** *see its content in Action Plan 1*
12. **Ferencváros station short-term developments -** *see its content in Action Plan 2*
13. **Improving central traffic management**

Improving the operational management of rail traffic will allow a faster and more accurate response to problems, so that any capacity bottlenecks will be less time-consuming, and the rail traffic will be restored in a shorter time. This is a positive development to reduce delays.

This project includes the building of the new rail-communication system to be able to connect to ERTMS. The up-to-date communication system will ensure interoperability for the national and European railway companies, contributing to improving the competitiveness, efficiency and safety of the Hungarian railway network.

14. **New cross-Danube railway tunnel between Southern and Western railway terminals**

The development is mainly for passenger transport, but its importance extends to rail transport throughout the country. The construction of the new tunnel is expected to lead to a significant increase in passenger rail traffic in Budapest. This will lead to an increase in the number of passenger trains. More passenger trains will run on the city's railway lines, which will have an impact on freight trains. The conditions for freight train traffic in case of building the new tunnel will also need to be examined, included and excluded V0. The implementation study is still in progress, so the exact route may still differ from what is currently indicated.

15. **Increasing the capacity of Kelenföld station for freight trains -** *see its content in Action Plan 2*

16. **Kelenföld station and surrounding area – providing capacity for trains passing through -** *see its content in Action Plan 2*

17. **Strengthening the role of rail in serving Budapest (City logistics)**

Budapest has several railway stations with loading facilities. These should be used to ensure that urban road freight transport is effectively limited to the last few kilometres, and preferably with low (or even zero) emission vehicles. This means improving City logistics.

18. **Expanding the traction power supply system for growing traffic**

Increasing train traffic on the Budapest rail network requires the densification of the electrical feed-in points to ensure a higher energy demand on the system.

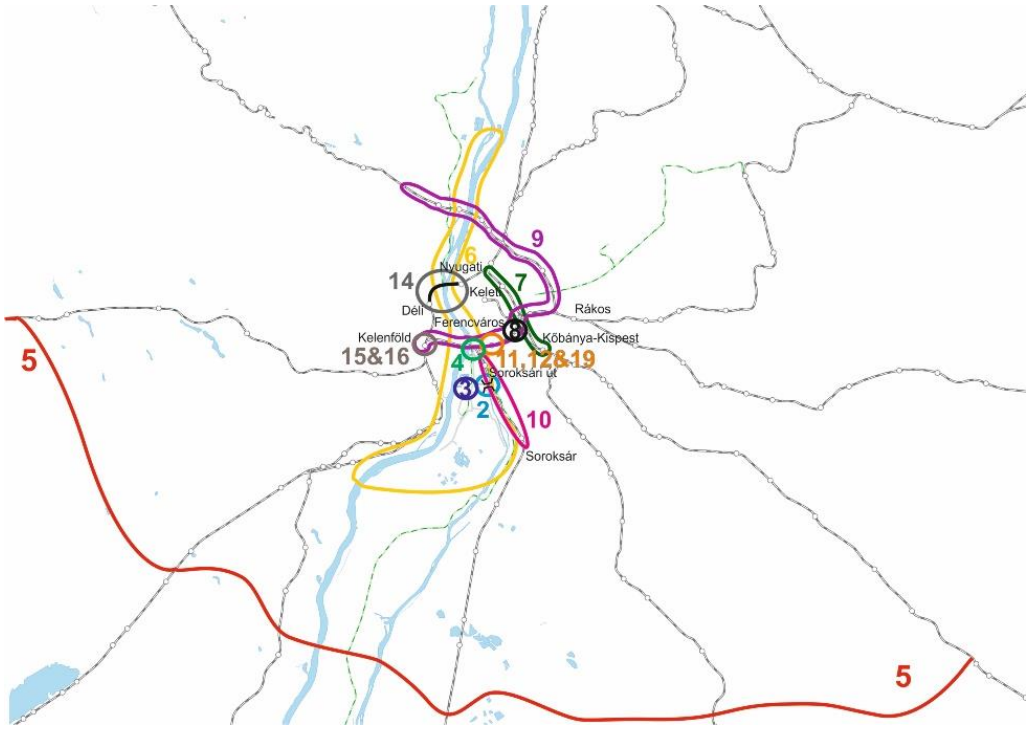
19. **Capacity developments required in the Ferencváros area**

The is in a central location, both in the short and long run, and there are several branches. Although other plans already mentioned some developments connected to the area, further capacity expansions are needed for long-distance traffic.

20. **Establishment of a new trimodal logistics centre in or close to the capital -** *see its content in Action Plan 2*

21. **Development of a study on the philosophy of financing (encouraging and financing investments and the operation) -** *see its content in Action Plan 2*

The figure below summarises the measures connected to the Rail Freight Development.



6. Figure Measures connected to Rail Freight Development

Source: own editing

5. Table Scenarios and related actions

Source: Own editing

Measures		Business-as-usual	Deferred Action	Early Action	Essential
Agglomeration traffic and costs	**A**		x	x	x
Gubacs bridge renovation	**I**	x	x	x	
Conversion of Corvin-node	**I**		x	x	
Direct access to the Southern railway bridge from line 150	**I**			x	
Investments to improve freight traffic to bypass of Budapest (main elements of V0)	**I**			x	
Improving the navigability of the Danube	**I**				
-planning		x			
-construction			x	x	
Inner circular railway short-term developments - DVÖH	**R**			x	
Inner circular railway long-term developments - DVÖH	**R**		x	x	
External circular railway decvelopments	**R**		x	x	
Linking the railway line 150 and the HÉV in Pesterzsébet	**R**	-			
Construction of Soroksári út - Soroksár 2. track	**R**		x	x	
Ferencváros – Kelenföld increase in capacity	**M**	x	x	x	
Ferencváros station short-term developments	**M**		x	x	
Improving central traffic management	**M**			x	
New railway tunnel between South and West railway terminals (DNA)	**M**			x	
Increasing the capacity of Kelenföld station for freight trains	**M**		x	x	x
Kelenföld station and surrounding area - providing capacity for trains passing through	**M**		x	x	
Strengthening the role of rail in serving Budapest (City logistics)	**M**			x	
Expanding the traction power supply system for growing traffic	**M**			x	
Capacity developments required in the Ferencváros area	**M**			x	
Establishment of a new trimodal logistics centre in or close to the capital	**M**		x	x	
Awareness-raising and sustainability	**RA**				x
Creation of cooperation and competition	**RA**				x
Development of a study on the philosophy of financing (encouraging and financing investments and the operation)	**F**		x	x	x

- **A** Surrounding area
- **I** Interoperability of a functional urban area
- **R** Railway infrastructure developments
- **M** Management and development of marshalling yards and areas related to railway technology
- **RA** Raising awareness of different stakeholder groups
- **F** Financing issues

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5. ANNEXES

5.1. Stakeholder involvement

To establish a Corridor Capitalisation Plan that is professionally sound and can be later embraced by all policymakers the appropriate stakeholders needed to be involved for all participants to acknowledge the development process.

A series of four online stakeholder meetings (including two professional workshops) have been organised to provide opportunity for the logistics and railway transport specialist to share their insights and to challenge each other. The first and the final meeting has been organised on a larger scale, to include more participants and to provide broader publicity to the developed Plan.

The first stakeholder meeting took place in March 2021 with the involvement of a wide circle of stakeholders. The aim was to invite key players responsible for transportation and regional development and to let them introduce the most important plans and projects that are to be implemented in the coming years and decades of the Budapest Region. The academic sphere has also been invited to give a professional aspect on environmentally friendly transport modes and key transportation problems of the region.

The aim of the second stakeholder meeting held on 1st April was to identify "the key transport development issues to be addressed by the OEM corridor that are affecting the capital and the region". To have a professional opinion on the most important transportation bottlenecks and logistics problems, participants were invited from the educational sector. The method used for common thinking was the OPERA - enabling all participants to actively share their insights and opinions.

The third workshop (in April 2021) was organised to rank the problems identified by the stakeholders on the second workshop by necessity and importance, and throughout this process to come up with potential scenarios to resolve the detected regional transportation problems. As an end product of the stakeholder involvement and common thinking we have the development goals set for the CCP in the Budapest Region defined by professionals.

The fourth workshop (organised in June 2021) calls for a wider circle of participants to capitalise the identified development goals among the stakeholders and policy makers. As the document includes all planned developments foreseen for the region within a holistic concept it can serve as a justification document supporting project developments. It also shall serve as a decision support tool when there is a necessity among policy makers to rank development ideas by necessity and importance.

2021 November - The final stakeholder meeting shall take place again in a wide circle for the endorsement of the Draft decision for implementation of the Corridor Capitalisation Plan.

The objective is to include the inputs of the players in the revised draft decision planned to be submitted in December 2021.

Relevant stakeholders, depending on policies and levels of administration, are addressed by the Corridor Capitalisation Plan and were invited to the stakeholder workshops.

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6. Table Relevant stakeholders

Source: Own editing

Keep satisfied		*Key players*
1. Customers		1. Ministry for Innovation and Technology 2. Budapest (Capital and Csepel) 3. Budapest Development Centre 4. Association of Hungarian Logistic Service Centres 5. Hungarian Federation of Danube Ports 6. European Federation of Inland Ports
Monitoring		*Keep informed*
1. Universities and scientific centres 2. HUNGRAIL 3. Inhabitants 4. KTI		1. Freight forwarders a. RAILcargo b. Waberers 2. Logistic centres 3. Ports 4. METRANS Container Terminal 5. MÁV Ltd. 6. Centre for Budapest Transport (BKK) 7. Trade press

Level of influence and power: + / -

Level of interest and commitment: - / +

The invited stakeholders participated at a favourable rate on the project events and those present were very active and shared their insights and concerns.

5.1.1. Documentation of the first stakeholder engagement workshop

CORCAP Project - T3 Work Package

Consultation on the elaboration of the OEM corridor development plan with key stakeholders of transport and logistics sectors

Programme

Online platform: GoToMeeting

Date: March 11, 2021

14:30-16:30

14:30-15:00 Presentation of the Corridor Capitalisation Plan and the objectives of the programme

14:30-14:35 Short greeting and introduction

The representative of AXIA Group Ltd. welcomed the participants, briefly described the purpose of the consultation, and introduced the representative of the Freeport of Budapest Logistics (FBL).

14:35-14:40 Opening speech of the representative of the Freeport of Budapest Logistics

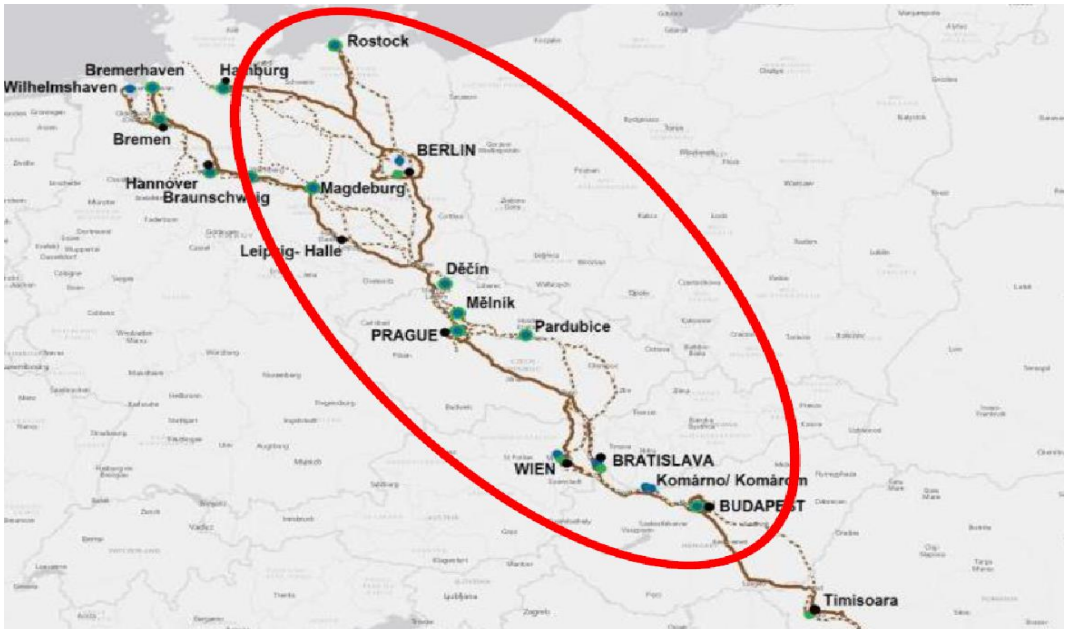
Zsolt Jakó greeted the participants and spoke comprehensively about the current role of the FBL in the project and related developments.

14:40-14:45 Opening speech of Zoltán Schváb (Executive Director, Institute for Transport Sciences)

Zoltán Schváb also welcomed the participants, then he specified the project's objectives and the current research projects of the Institute for Transport Sciences (KTI).

14:45-15:00 Presentation of the CORCAP project and the development concept by Zsanett Brunner (External Project Manager, Freeport of Budapest Logistics)

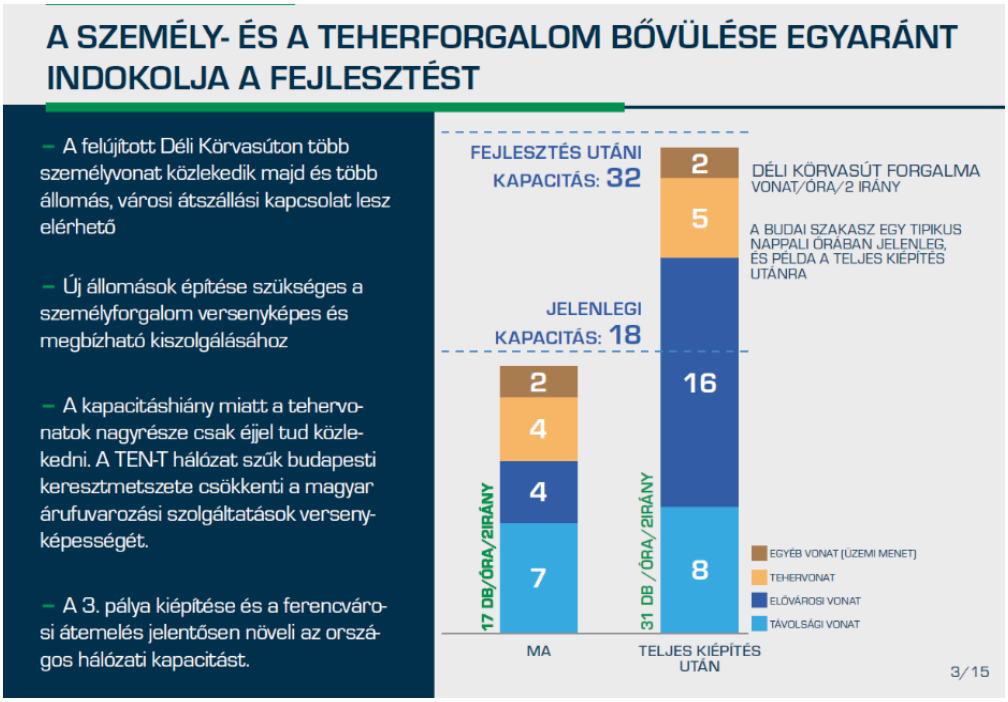
Zsanett Brunner introduced the project and the development concept by listing the countries participating in the project and by presenting the results, the role of the Hungarian project partners (FBL, GYSEV, KTI) and the outlined content of the development plan document.



15:00-16:00 Presentation of related strategic plans and documents

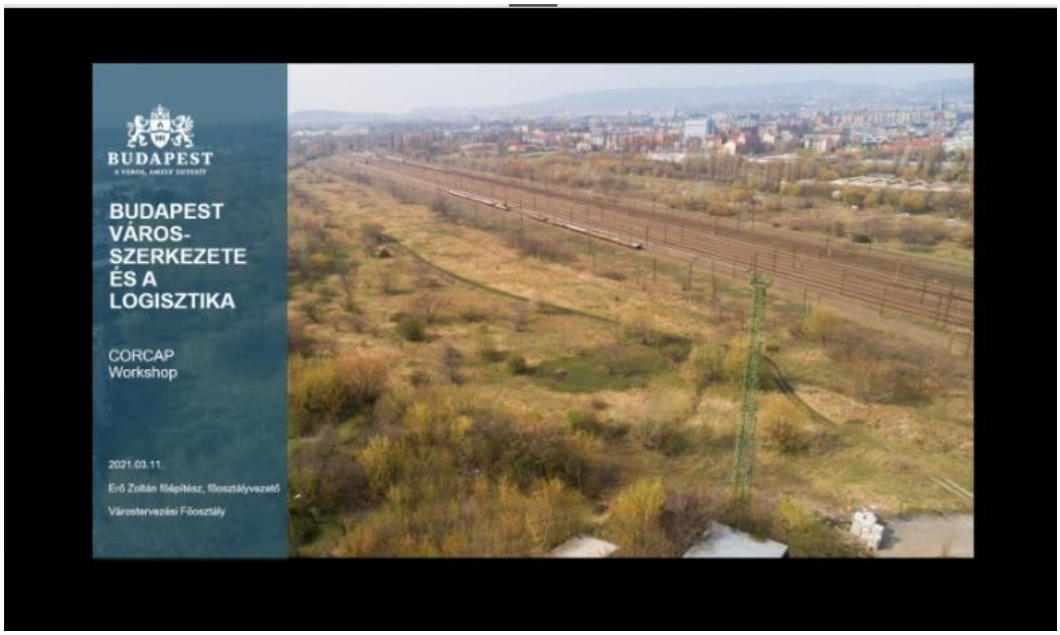
15:00-15:15 Gergely Horn (Railway Development Project Manager, Centre for Budapest Transport) on the Budapest Rail Node Study (hereinafter: Strategy)

In the first place, Gergely Horn presented the financial framework and the expected expenditures of future infrastructure developments in Budapest. Then he explained that the metropolitan modernisation regarding transport is currently one of the country's main bottlenecks. The objectives set in the Strategy - such as reduction of car traffic, expansion of capacity, increase of transport services and introduction of tariff reforms - have also been listed. The excepted results of the implementation of measures included in the Strategy are the reduction of GHG emissions by 2050, the construction of the tunnel between Kelenföld and Nyugati railway stations, the extension of the Southern Circular Railroad and further freight traffic and passenger transport developments.



Short-term measures up to 2030 and long-term measures until 2040 have also been briefly presented.

15:15-15:25 "The city structure of Budapest and logistics" - presentation by Zoltán Erő (Chief Architect, The Mayor's Office of the Municipality of Budapest)

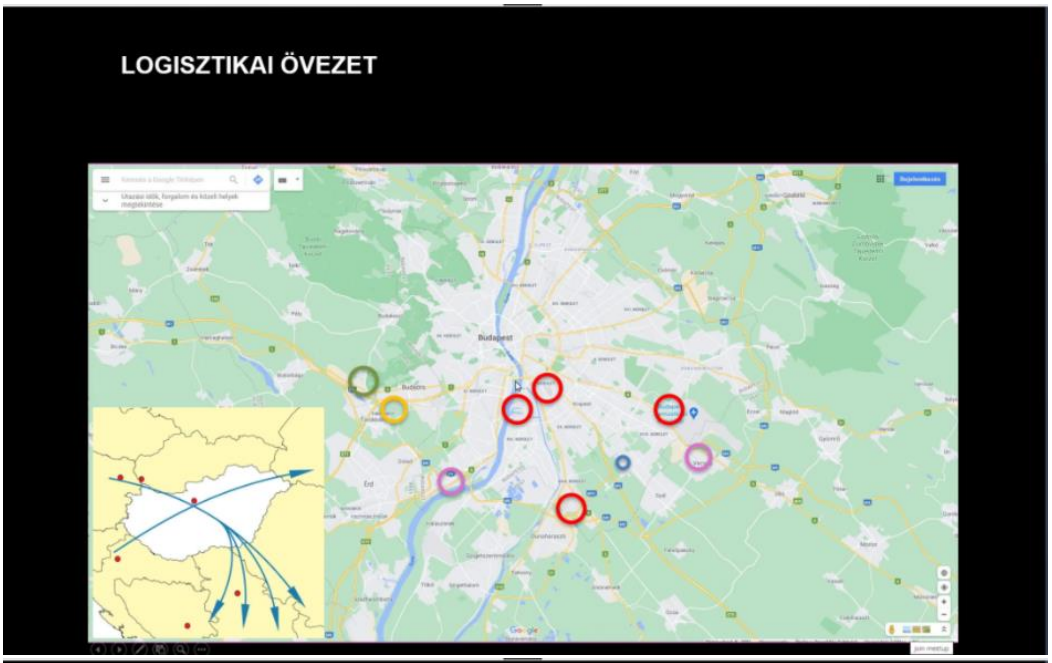


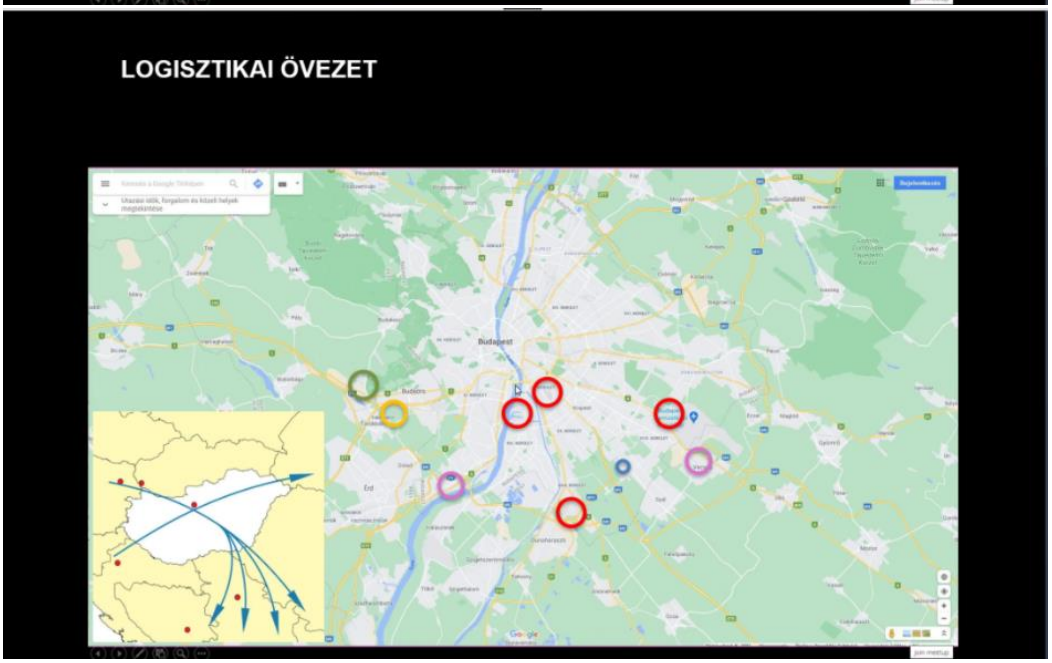
Zoltán Erő concluded that the use of land for logistical purposes has changed a lot in the last 50-100 years. The most significant alterations are:

- The logistical and storage plots, which were previously centrally located have been shifted to the edge of or beyond the city;
- The southern shift of the dominant logistics facilities became typical at both Buda and Pest sides

- Former postal logistics areas from the city centre have been transferred to the National Logistics Centre in Budaörs.

Mr. Chief Architect also expressed that much logistics centres have been set up around large shopping centers. He added, that in terms of land use, the rehabilitation of the former Southern City Gate (Déli Városkapu - Nagyvásártelep) for housing and recreational purposes has great significance as well.





As a result of the reform of the capital's railway network, many industrial and brownfield areas will be re-utilised along the outer Ring Road. Furthermore, in order to reduce the inflow of freight traffic into the capital, the establishment of the so-called rail freight only bypass line (V0) would be essential.

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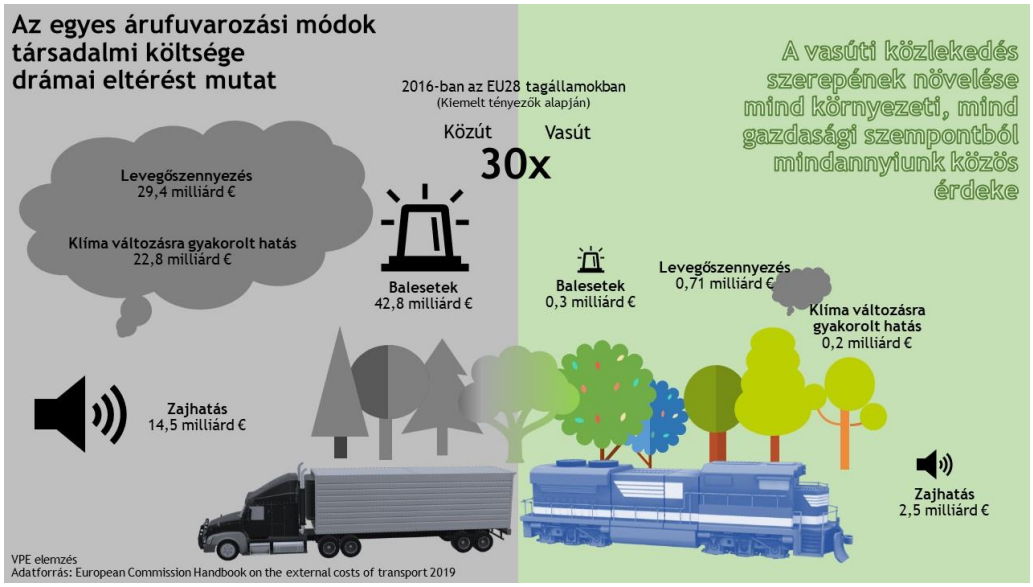
15:25-15:35 "European Union's Green Deal - the greening methods of logistics processes" - presentation by Koppány Ajtony Bíró (Secretary-General, Association of Hungarian Logistic Service Centres - MLSZKSZ)

Koppány Ajtony Bíró presented the main objectives of the European Green Deal, such as:

- investment in environmentally friendly technologies;
- decarbonisation of the energy sector;
- introduction of sustainable means of public transport;
- increase energy efficiency in buildings.

Mr. Secretary-General emphasized the economic and environmental importance of the increase of both passenger and freight railway transport.



15:35-15:45 Dr. Gábor Kovács (Assistant Professor, Budapest University of Technology) on the environmentally friendly modes of freight transport

Dr. Gábor Kovács compared various supply chains and presented the advantages and disadvantages of different forms of transport.

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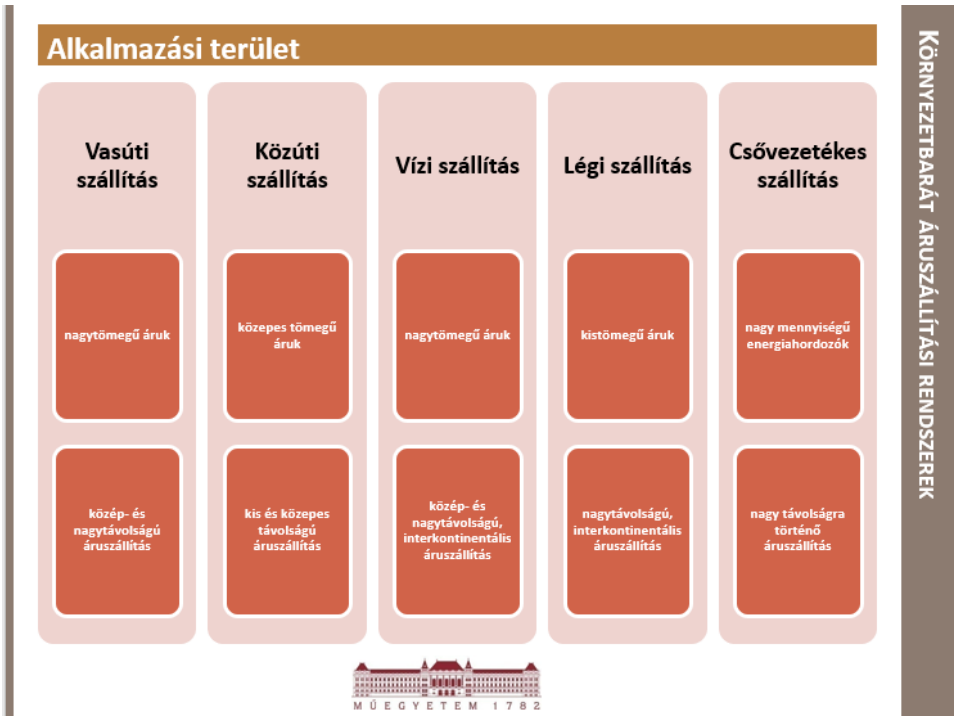
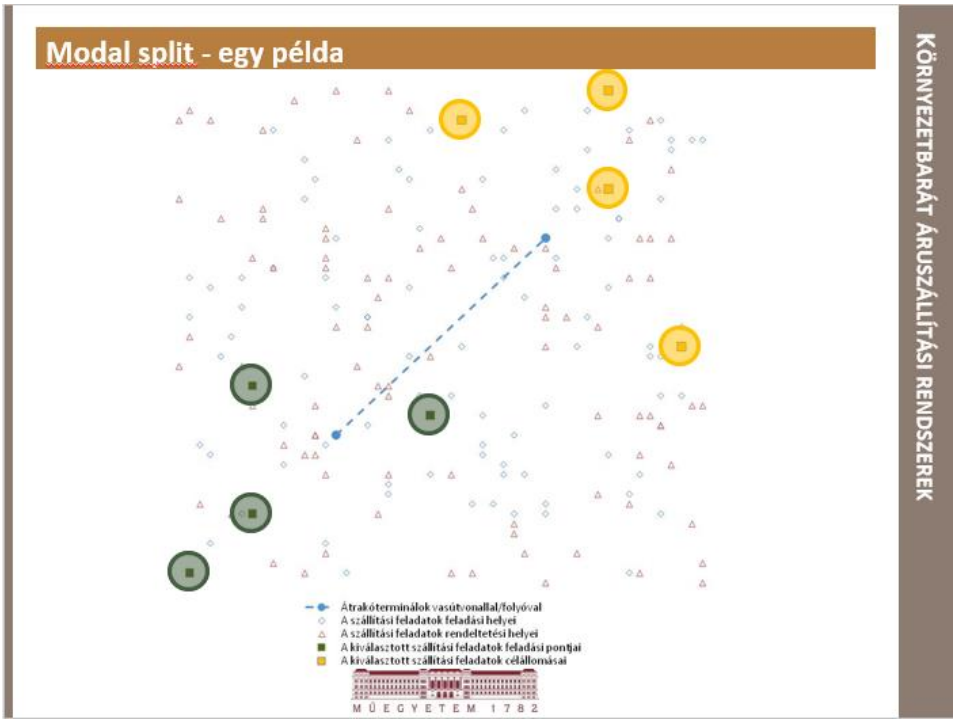


The professor also illustrated on figures the issues related to transport modal shifts.



15:45-16:00 **"How to re-build what we already had and how to improve it?" by Dr. Csaba Orosz (Associate Professor, Budapest University of Technology) and Dóra Bachmann (Master of Sciences in Architecture and Urbanist, Budapest University of Technology)**

Dr. Csaba Orosz referred to the previous good modal shift practices of RoLa and RoRo, the rate of which has fallen drastically (due to tariff changes caused by EU accession). He raised

the issue of railway crossings on the Danube as well, particularly the abolition of the possibility of railway crossing on the bridge of Dunaföldvár.

The tunnel connecting the main railway stations, its budget plan and the possible risks were discussed too, as well as the hindering of the V0 bridge as an alternative for railway development.

16:00-16:30 Conclusions

Due to a slight delay, the time for conclusions have been shortened.

The participants concluded that the plan of V0 was not completely rejected but rather neglected. However, regarding the capital, shifting freight traffic to the V0 would be beneficial. Furthermore, transferring the railway traffic to the V0 instead of the Southern Railway Link would also be favourable, according to the participants.

Capt. Béla Szalma complained about the relevance of water freight in the project. In response, the project owner and the representative of MLSZKSZ stressed that although the waterborne freight is a significant aspect of the project, the present strategy focuses much more on the rail-road modal change.

The representative of Győr-Sopron-Ebenfurth regional railway (GYSEV) drew the attention of the participants to another upcoming railway event of the project as well, a special 740 meters long test train which will be held on 19-20th October.

Ultimately, the organisers announced the next interactive workshop, which will take place on 1 April.

5.1.2. Documentation of the second stakeholder engagement workshop

CORCAP Project - T3 Work Package

Second consultation on the elaboration of the OEM corridor development plan with key stakeholders of transport and logistics sectors

Online platform: Zoom

Date: April 1, 2021

14:30-16:30

On 1 April, the Freeport of Budapest Logistics organized their second workshop related to the development of the Orient/East-Med (OEM) Corridor for the CORCAP project.

One of the main objectives of the CORCAP project is to examine how the OEM transport corridor could be developed on an environmentally friendly and cost-effective way resulting in highly efficient interventions.

The consultation took place in the virtual space, and the participants were the key players involved in the transport and logistics sectors in the Budapest region. On this event, the aim was to initiate a dialogue with the participants to receive important, professional feedback which can contribute to the identification of the main bottlenecks or challenges related to the region. The ultimate goal is the long-term reduction of the burden of the freight transport in the area.

During the workshop, we wanted to receive the participants' professional views and comments regarding the following issue:

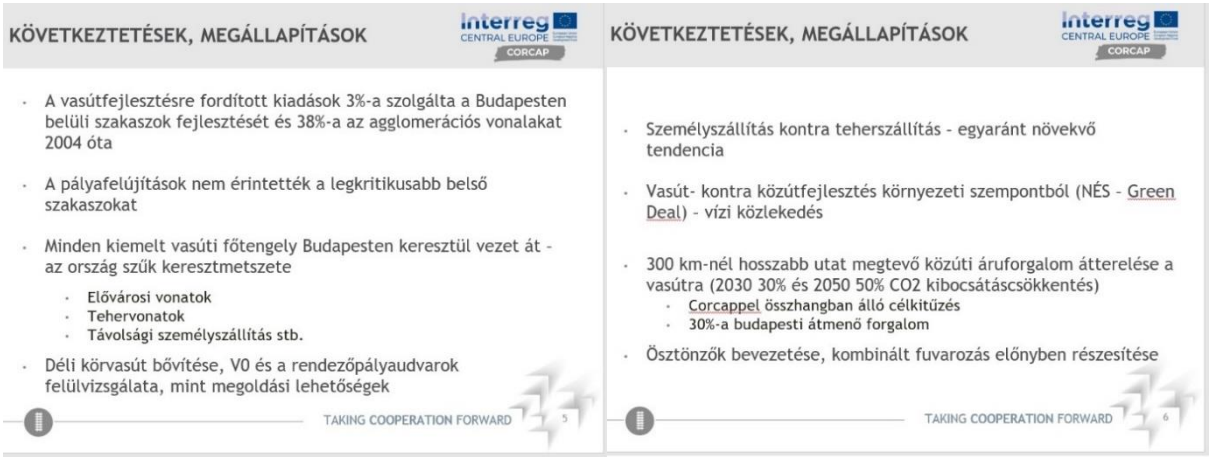
"In your opinion, what are the key transport development issues to be addressed by the OEM corridor that are affecting the capital and the region?"

The participants were involved in the OPERA® co-creation method. The constructive suggestions of the experts contributed greatly to the elaboration of the development plan of the OEM transport corridor.

14:30-14:45 Introduction and presentation of the OPERA method

The moderator of the consultation, dr. Fruzsina Kardoss greeted the participants and asked Zsanett Brunner, the external project manager of Freeport of Budapest Logistics to summarise the main findings and conclusions of the previous workshop held on 11th March.

Zsanett Brunner briefly described the key points of the previous event, where, among others the main objectives of the CORCAP project and the future development plan were presented.



After the summary of conclusions, the moderator presented the OPERA technique. With this method, even in a larger group, each participant can express its opinion.

14:45-15:30 Application of the method

During the presentation of the OPERA technique, the moderator introduced the participants to the online features to be used later. In the test exercise, the attendees had to vote for their favourite mean of transport.

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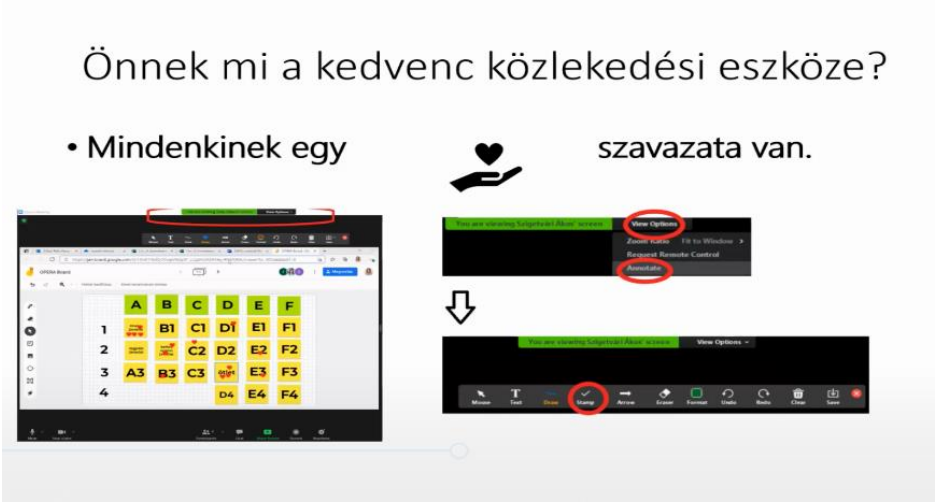

The poll revealed that every participant prefers the rail and waterway transport modes, which are indeed environmentally sound solutions.

Own Thoughts (*O*):

At the beginning the participants brainstormed individually. Every attendee had 5 minutes to write down their suggestions on the issue raised.

Pairs (P):

After overcoming some technical obstacles, the brainstorming continued with the joint discussions. The participants, using the breakout room feature of Zoom were divided into groups of 2-3 people, where they had the opportunity to share and discuss their ideas together. Their ultimate task was to create 3-4 joint proposals.

Explain: (*E*):

At this stage, the groups had to explain their suggestions to the others. The identified challenges were pinned on a virtual board, visible to everyone, using the online Jamboard® platform.

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The first group's proposals included the improvement of Surrounding area traffic and its costs, greater competition regarding public transport and modernisation of the parking fee system.

The second group drew the attention to awareness-raising and sustainability, to issues concerning Surrounding area transport and funding and to the interoperability on the Danube.

The members of the third group emphasised the necessity of interoperability of the railway lines 1 and 150, management of transit train storage (buffering capacity), development of cargo handling facilities and revision of the system of marshalling yards.

The last group highlighted the planned, proportionate development of railway, urban interoperability, location of railway facilities and the issue of equal opportunities.

Ranking (R):

The most important transport development problems specific to the Budapest region were identified and fixed on the board. Thereafter, using the previously practiced online functions, the participants had to vote on 2-2 proposals they consider to be the most important. The proposals without votes were removed from the board.

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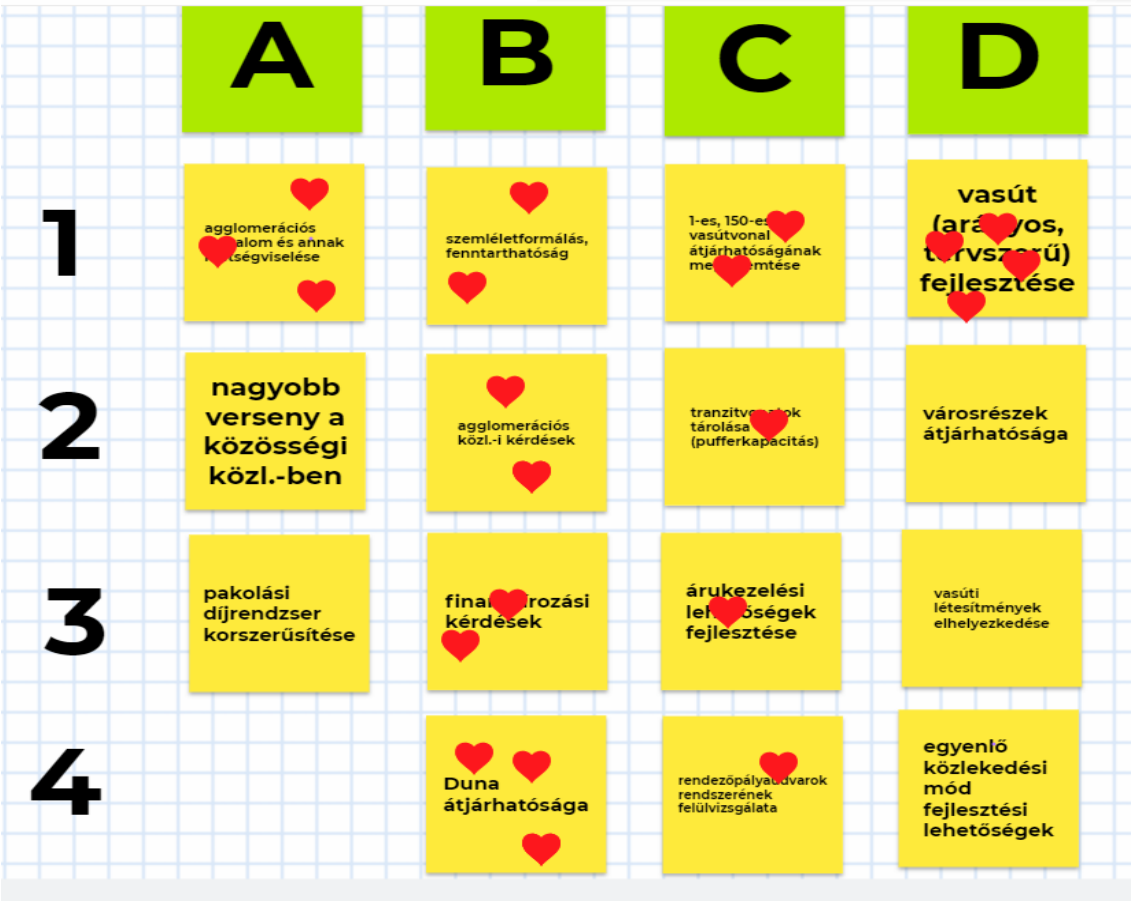
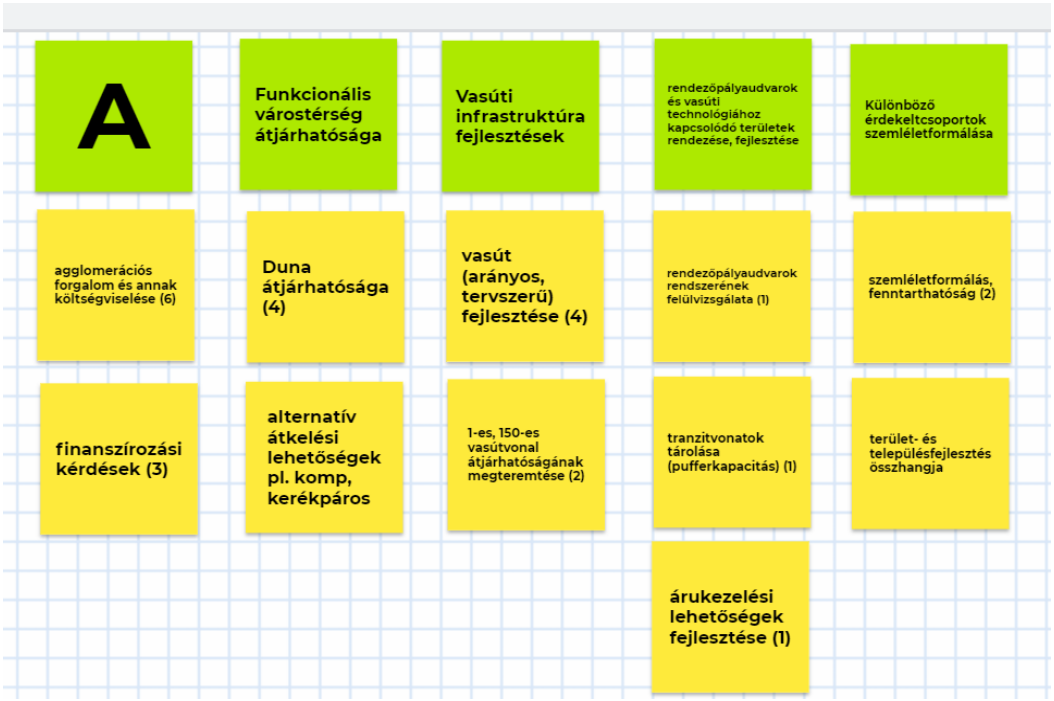


The largest number of votes were cast on the proposal of planned, proportionate development of railway. There were 3-3 votes in favour of the improvement of the Surrounding area traffic and costs and the interoperability of the Danube. The participants considered awareness-raising and sustainability, and the issues concerning Surrounding area transport and funding relevant too, as well as the necessity of interoperability of the railway lines 1 and 150. Management of transit train storage (buffering capacity), development of cargo handling facilities and revision of the system of marshalling yards also received 1-1 votes.

Arrange (*A*):

The ranking section was followed by the grouping process. The participants had to sort the proposals under the column headings then add titles to the columns.



In the framework of the professional brainstorming, several proposals have been renamed, merged or regrouped. The regrouping has given rise to another column – the category of 'Financing issues' – where the proposal for encouraging and financing investments and the operation has been classified. The other categories were entitled to 'Surrounding area', 'Interoperability of a functional urban area', 'Railway infrastructure developments', 'Management and development of marshalling yards and areas related to railway technology' and 'Raising awareness of different stakeholder groups.'

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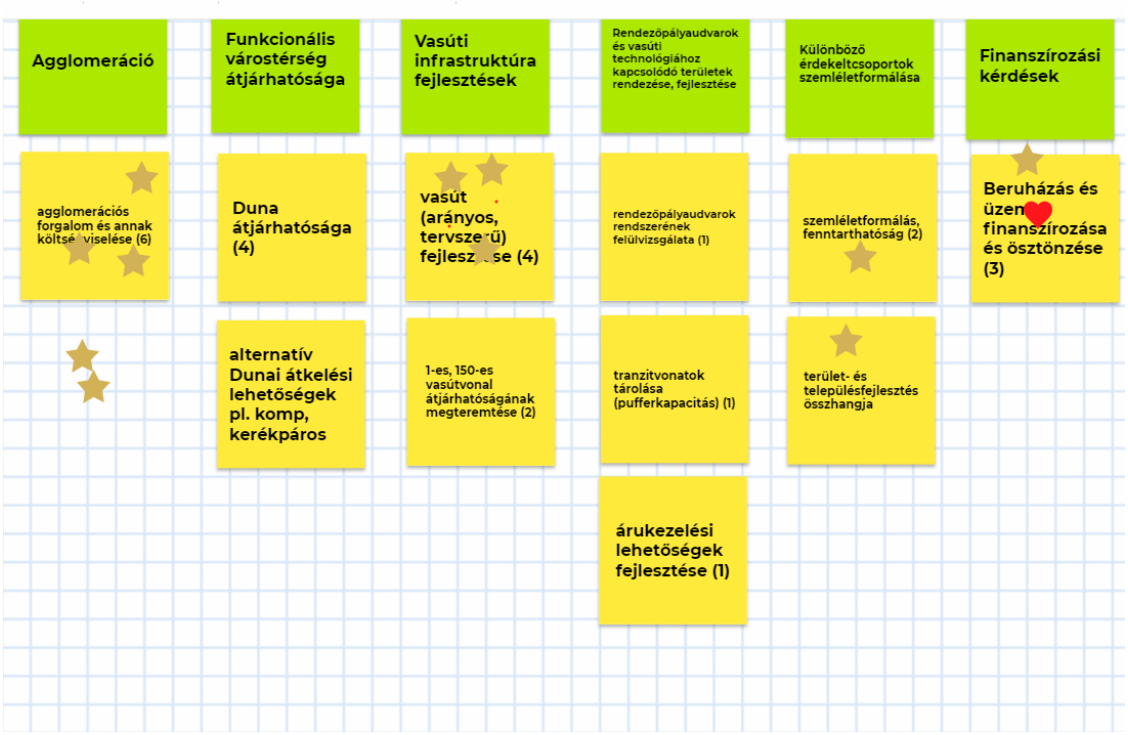
Emergency order:

After identifying the possible connection points between the proposals, the last task was to set up a so-called emergency order. The experts had one vote to select what they considered to be the most urgent problem to be addressed.



The voters found the issues of the Surrounding area traffic and its costs and the railway infrastructure developments the most urgent. Two votes were cast on the proposal for encouraging and financing investments and the operation and 1-1 on the awareness-raising and sustainability and on the coherence between regional and urban development under the previously mentioned category of 'Raising awareness of different stakeholder groups'.

After drawing the final conclusions, the moderator presented the date and invited the participants to the next workshop of 30th April.

5.1.3. Documentation of the third stakeholder engagement workshop

CORCAP project - T3 Work Package

Third consultation on the elaboration of the OEM corridor development plan with key stakeholders of transport and logistics sectors

Online platform: Zoom

Date: April 30, 2021

9:30-11:30

9:30-10:00 Introduction and description of measures previously identified

9:30-9:35 Welcome speech and brief introduction

The representative of Axia Group welcomed the participants to the third workshop related to the CORCAP project, organized by the Freeport of Budapest Logistics. The representative explained that the goal of the consultations is to elaborate a comprehensive development plan, with the assistance of key stakeholders of transport and logistics sectors resulting in an increase in the role of environmentally friendly modes of transport and in long-term reduction of the burden of the freight transport in the Budapest region. On this occasion – focusing on freight traffic – the participant's task was to redefine or complement the main transport challenges previously identified.

9:35-9:40 Presentation by Zsanett Brunner (External Project Manager, Freeport of Budapest Logistics) entitled *"CORCAP – CCP (Corridor Capitalisation Plan) in the Budapest Region*"

The external project manager for Freeport of Budapest Logistics summed up the events of the first two consultations, where the CORCAP project and the related development strategies were presented. With the help of the participants well acquainted with public and freight transport, the main transport development obstacles specific in the region were also grouped and prioritized. The following groups have been formed: 'Surrounding area', 'Interoperability of a functional urban area', 'Railway infrastructure developments', 'Management and development of marshalling yards and areas related to railway technology' and 'Raising awareness of different stakeholder groups' and 'Financing issues'.

9:40-10:00 Description of the measures

Zsolt Lévai (KTI Institute for Transport Sciences) greeted the participants and addressed the main challenges and anomalies regarding transport, in compliance with the Budapest Rail Node Study.

The identified challenges and necessary measures:

1. *Surrounding area traffic and costs:*

In the coming years, the number of trains will increase in the Surrounding area and their maintenance and energy consumption will be more costly and waiting time on the roads will lengthen.

2. *Gubacsi Bridge renovation*

The reconstruction of the railway line is a priority development goal, especially in terms of freight transport, as the line serves the logistics centers and the international freight port of Csepel.

3. *Conversion of Corvin-node*

The Corvin-node, which is crossed by a railway line is a significant car traffic junction. To reduce road congestion, car and rail traffic in the area must be spatially separated.

4. *Direct access to the Southern railway bridge from line 150:*

Access to the railway bridge currently is only possible with a change of direction in Ferencváros but connecting the railway lines would result in shortening of journey times.

5. *Investments to improve freight traffic to bypass Budapest (main elements of V0)*

There would be a need for a new, high-capacity freight railway bypassing the capital, which could also contribute to offload the Southern railway bridge.

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6. *Improving the navigability of the Danube*

As a result of the water level of the Danube and the sinking of ships, the number of navigable days decreased to less than 250.

7. *Inner circular railway developments*

This railway section could be the diversion route for the external circular railway, but this would require the modernisation of the Városliget - Kőbánya-Kispest line section.

8. *External circular railway developments*

The circular railway is one of the most important freight traffic routes passing through the capital, but the speed of the line section is low. Due to the increasing proportion of passenger transport, the expansion of capacities has become necessary.

9. *Linking the railway line 150 and the HÉV in Pesterzsébet*

If the railway line 150 reached the railway line 1, the connection between the line and the HÉV in Pesterzsébet would be possible.

10. *Construction of Soroksári út*

The (re-)construction of the second track in Soroksár station would also be essential since the line is also extremely relevant for the Freeport of Budapest Logistics.

11. *Ferencváros station*

Ferencváros station is the largest station in Hungary and due to the intense utilisation of track capacity, the improvement of the conditions of freight tracks has become indispensable. Increasing the tracks would help to overcome the problems of low transit speed and throughput.

12. *Kelenföld railway station*

To ensure transit times for freight trains, increase in capacity at the station would be necessary.

13. *New railway tunnel between the South and West railway terminals*

The construction of the new tunnel is expected to lead to a significant increase in passenger rail traffic in Budapest. This will lead to an increase in the number of passenger trains. More passenger trains will run on the city's railway lines, which will have an impact on freight trains as well. The implementation study is still in progress, so the exact route may still differ from what is currently indicated. Apart from that, the water flow might have a further impact on the final budget.

14. *Improving central traffic management*

Improving the operational management of rail traffic will allow a faster and more accurate response to problems, so that any capacity bottlenecks will be less time-consuming, and the rail traffic will be restored in a shorter time.

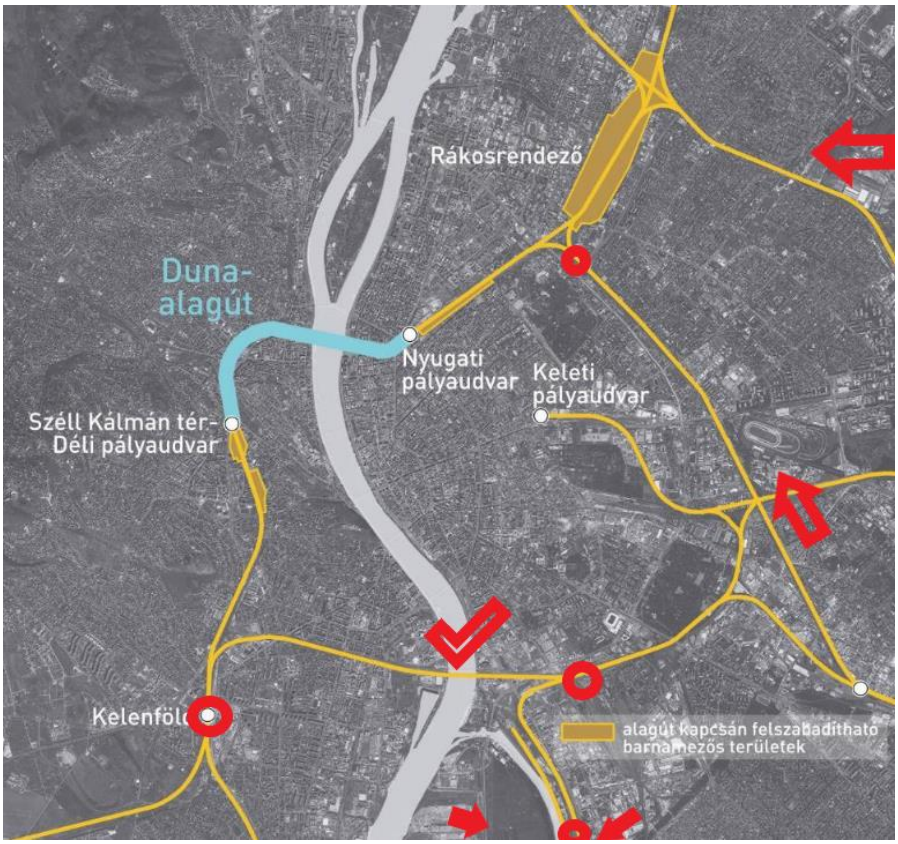
15. *City logistics*

Budapest has several railway stations with loading facilities. These should be used to ensure that urban road freight transport is effectively limited to the last few kilometres, and preferably with low (or even zero) emission vehicles.

16. *Awareness-raising and sustainability*

Directing carriers towards environmentally conscious and efficient modes of freight transport is not only important for the CORCAP project, but also contributes to the achievement of domestic and EU environmental objectives.

Although there are correlations between the measures listed, as the focus of the CORCAP project's corridor development plan is on freight traffic, measures relating passenger transport only are not relevant.



10:00-10:15 Comments and suggestions

After the presentations, there was an opportunity for experts to comment and express their opinion and ideas. As initially no comments were received, a comprehensive table showing the measures has been screened online.

Tamás Fleischer (Hungarian Academy of Sciences) noted; although it is important to explore the most efficient freight solutions within Budapest, directing freight traffic through the capital in itself is not an environmentally friendly solution. He also added that it is not only the railway issue that needs to be kept in mind; but local, regional and national transport, development and railway strategies need to find solutions collectively to the challenges affecting the capital's transport.

The external project manager for Freeport of Budapest Logistics agreed that the challenges need to be faced in a complex way indeed, however on this workshop, the emphasis should be on freight traffic management, in order to bring out the most of it with the principles of sustainability and environmental awareness in mind.

10:15-10:25 The three scenarios

The next step was to expand the list of interventions, for which three different time-bound scenarios were presented. With this method, the participants had to group the challenges previously listed into the columns of the scenarios.

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The final result of the grouping is going to be a professionally accepted, structured regional development concept based on specific measures, which could later even serve as a supporting document for European Union tenders.

The first scenario assumes an approach based on the **'Business as Usual'** principle, supporting the use and patching of the current transport system. The second scenario **"Deferred Action"** is based on long-term thinking and delayed implementation. In case of the third **"Early Action"** scenario, all measures are in advance well planned and are implemented in a proactive manner.

10:25-12:00 Discussion

In this section, the participants had to group all the challenges into scenarios.

János Berényi (KTI Institute for Transport Sciences) claimed that when examining the measures, very serious correlations could be observed and the preparation of a correlation-matrix would be beneficial, as it matters how a particular intervention could affect the other ones. He also pointed out that many important areas of intervention had not even been identified.

Tamás Fleischer stressed that the naming of scenarios strongly influences the choices and recommended the reformulating.

András Ekés (Mobilissimus) emphasized that the differences between the measures are quite sharp as the operational / maintenance actions and major developments are equally included in the table. In his opinion, the triple categorisation was also a bit confusing. He also drew attention to the urgency of developing the external circular railway, as it is an important line for both passenger and freight transport, but instead, most of the measures focus on the southern sections.

The experts agreed that in many cases the emphasis was not placed on the most urgent measures, and they highlighted that many development measures were rudimentary and incomplete. They also incorporated the importance of domestic passenger "Creation of competition (bus and rail) and cooperation" among the measures.

This process was followed by a reformulation and extension of the column headings and the attachment of the measures to the scenarios. Finally, after minor modifications the naming of the three main scenarios remained, but a fourth column was also created, entitled as 'Essential' category.

See '3. Table Scenarios and related actions' for more details.

As a result of the grouping, the participants sorted the measures of 'Gubacs bridge renovation', 'Improving the navigability of the Danube (planning)' and 'Ferencváros-Kelenföld increase in capacity' in the '**Business As Usual**' scenario.

'Surrounding area traffic and costs', 'Gubacs bridge renovation', 'Conversion of Corvin-node', 'Improving the navigability on the Danube (construction)', 'Inner circular railway long-term developments', 'External circular railway developments', 'Construction of Soroksári út -Soroksár 2. track', 'Ferencváros-Kelenföld increase in capacity', 'Ferencváros station short-term developments', 'Increasing the capacity of Kelenföld for freight trains' and 'Kelenföld station and surrounding area - providing capacity for trains passing through' and 'Establishment of a new trimodal logistics centre in or close to the capital' and 'Development of a study on the philosophy of financing (encouraging and financing investments and the operation)' have been included in the '**Deferred Action**' scenario.

All interventions except for 'Improving the navigability on the Danube (planning)', 'Linking the railway line 150 and the HÉV in Pesterzsébet', 'Awareness-raising and sustainability' and 'Creation of cooperation and competition' were included in the category of '**Early Action**' scenario.

'Surrounding area traffic and costs', 'Increasing the capacity of Kelenföld station for freight trains', 'Awareness-raising and sustainability', 'Creation of cooperation and competition' and 'Development of a study on the philosophy of financing (encouraging and financing investments and the operation)' fell within the **'Essential'** category.

Following the additions and prioritisation, the findings were summarised, and the conference organizers expressed their gratitude for the active participation. It was also announced that the closing presentation of the conference series will be held in June and the completed professional material will be shared with all participants.

5.1.4. Documentation of the final stakeholder engagement workshop

CORCAP project - T3 Work Package

Final consultation on the elaboration of the OEM corridor development plan with key stakeholders of transport and logistics sectors

Online platform: Zoom

Date: June 24, 2021

14:30-16:00

14:30-15:55	**Introduction and description of measures previously identified**

14:30-14:35 **Welcome speech and brief introduction**

The representative of Axia Group welcomed the participants to the final workshop related to the CORCAP project, organised by the Freeport of Budapest Logistics. The representative explained that the goal of the consultations is to elaborate a comprehensive development plan, with the assistance of key stakeholders of transport and logistics sectors resulting in an increase in the role of environmentally friendly modes of transport and in long-term reduction of the burden of the freight transport in the Budapest region.

During the previous occasions – focusing on freight traffic –participants had vivid professional discussions whose conclusions were included in the final CORCAP study. The main goal of the closing consultation is to present the final study and ask the representatives for final recommendations.

14:35-14:55 **Presentation by Zsanett Brunner** (External Project Manager, Freeport of Budapest Logistics) entitled *"CORCAP – CCP (Corridor Capitalization Plan) in the Budapest Region*"

The external project manager for Freeport of Budapest Logistics summed up the events of the first three consultations for those who could not attend the previous events. During the previous events, the CORCAP project and the related development strategies were presented, and with the help of the participants well acquainted with public and freight transport, the main transport development obstacles specific in the region were also grouped and prioritised.

The final study is well-structured therefore easy-to-search and overview – which was an important aspect for being able to clearly show the results to the international partners and decision makers. Apart from that, it was also important to provide an overview during the

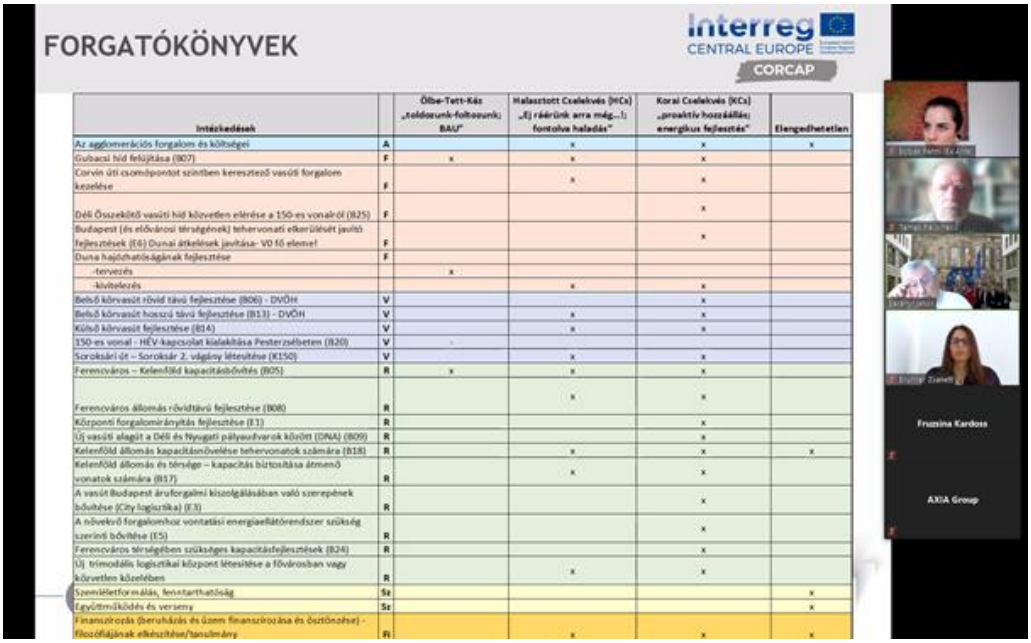
final workshop about what type of projects can be implemented under the CEF and other framework programmes.

14:55-15:50	**Presentations, reflections**

14:55-15:20 **Thoughts by Dr. János Berényi** (Scientific Advisor at the Institute for Transport Sciences (KTI)

Mr. Berényi summarised his opinion on the CORCAP study. The Professor highlighted, that the document is well structured and clearly summarises the different plans and ideas. On the one side, there are measures important on the international scale, but highly politicized, e.g., the navigability of the Danube. On the other side, there are small plans listed, which provides a nice overview.

During the presentation, some of the measures listed in the matrix were also explained.

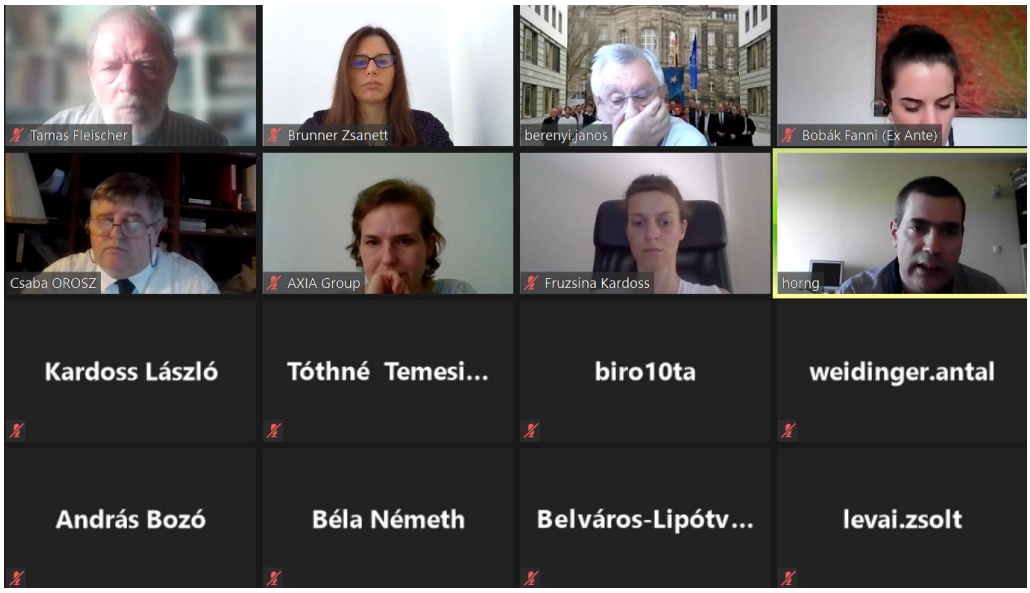


15:20-15:40 **Horn Gergely** (Railway Development Project Manager, Centre for Budapest Transport)

Mr. Horn summarised the development plans of the Centre for Budapest Transport. One of the most important achievements was the accomplishment of the Budapest Rail Node Study (BRNS) in cooperation with Trenecon and the Hungarian Ministry for Innovation and Technology. The strategic and environmental assessment of the BRNS was finalised this year. The final study submitted to the government has a twofold goal: both railway interoperability and the suburban railway are important aspects.

The Southern Circular Railroad was also highlighted since the measure is ready to be implemented. Apart from that Mr. Horn emphasised how important the Gubacsi Bridge situation is for intermobility. However, the modernisation of Ferencváros station was missed out from the development plans, which is a complex, country-level situation, that can be solved only through country-level cooperation.

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



Finally, he emphasised the issue of the railway tunnel. The Centre for Budapest Transport is responsible for the implementation study, but a CEF project was also submitted. In case the idea is granted by the framework programme, the environmental planning and licensing can start.

15:40-15:50 **Fanni Bobák** (Consultant, Ex Ante Ltd.) about CEF and RRF framework programmes

In order to have an overview of the possible further directions when the project ends, Ms. Bobák presented the Connecting Europe Facility (CEF2) and the Recovery and Resilience Facility (RRF). Both framework programmes provide the possibility to grant such measures listed in the matrix (Table 3).

15:50-16:00	**Conclusions, recommendations**

15:50-16:00 After the presentations, there was room for further recommendations from the audience. Mr. Tamás Bíró, representative of MÁV Zrt. (Hungarian State Railways) emphasised the importance of a national freight concept, which could be the extended version of the present Budapest-related CORCAP study. Although there was a government decision already, it has unfortunately been revoked and currently the National Infrastructure Development Corporation has no information on reopening. Participants agreed that such a country-level concept would be a useful next step in the near future.

The organisers pointed out that although the consultation series had come to an end, experts are expected to attend the transnational roundtable meeting of the CORCAP project on 1-2 July.

5.1.5. List of participants

Participant's name	Title and organisation
Aletta Büki	Centre for Budapest Transport
András Bozó	Institute for Transport Sciences

András Ekés	Mobilissimus
András Munkácsy	Institute for Transport Sciences
Dr. Antal Weidinger	Institute for Transport Sciences
Balázs Fejes	Centre for Budapest Transport
Béla Németh	GYSEV Ltd.
Capt. Béla Szalma	Hungarian Federation of Danube Ports
Dr. Csaba Orosz	Budapest University of Technology and Economics - Dept. of Highway and Railway Engineering
Dóra Bachmann	Budapest University of Technology and Economics - Dept. of Highway and Railway Engineering
dr. Fruzsina Kardoss	Ex Ante Consulting Ltd.
Dr. Gábor Kovács	Budapest University of Technology and Economics - Faculty of Transportation Engineering and Vehicle Engineering
Dr. György Tibor Sárközi	Nemzeti Mobilfizetési Ltd.
Erzsébet Szabó-Aranyi	Freeport of Budapest Logistics
Gábor Albert	Institute for Transport Sciences
Dr. Gábor Bohács	Budapest University of Technology and Economics
Gábor Karmos	individual entrepreneur (Hungarian Chamber of Commerce and Industry in Hungary)
Dr. Gábor Szalkai	Eötvös Loránd University - Faculty of Science
Gergely Andó	CARGO Közlekedés Ltd.
Gergely Horn	Centre for Budapest Transport
Gyula Szabó	Reál-Száll Ltd.
Henriett Kormos	Logistics engineer, student at Budapest University of Technology and Economics
István Gál	BI-KA LOGISZTIKA Ltd.
Dr. István Szeri	Institute for Transport Sciences
Dr. János Berényi	Institute for Transport Sciences
János Pekár	MSZSZ
Károly Lederer	Transinvest
Kinga Tóthné Temesi	Institute for Transport Sciences
Koppány Ajtony Bíró	MLSZKSZ

Lajos Hódosi	HUNGRAIL Hungarian Rail Association
Lajos Völgyi	VV Fuvar Ltd.
Dr. László Kardoss	OKEAN Mérnöki Tanácsadó Ltd.
László Sándor Kerényi	Centre for Budapest Transport
Márk Háry	GYSEV Ltd.
Mátyás Obreczán	Budapest Development Centre
Norina Szander	Institute for Transport Sciences
Ottó Cseh	Freeport of Budapest Logistics
Patrik Tóth	Institute for Transport Sciences
Péter Farkass	Belváros-Lipótváros Városfejlesztő Ltd.
Péter Felföldi	NKE National University of Public Service
Sándor Tóth	Belváros-Lipótváros Városfejlesztő Ltd.
Tamás Bíró	Hungarian State Railways (MÁV Zrt)
Tamás Fleischer	Hungarian Academy of Sciences
Tamás Halmos	Centre for Budapest Transport
Tekla Szűcs	Mayor's Office of the Municipality of Budapest
Tibor Schulek	Centre for Budapest Transport
Tünde Hajnal	Centre for Budapest Transport
Vilmos Oszter	Institute for Transport Sciences
Zoltán Erdős	Mayor's Office of the Municipality of Budapest
Zoltán Erő	Mayor's Office of the Municipality of Budapest
Zoltán Schváb	Institute for Transport Sciences
Zsanett Brunner	Freeport of Budapest Logistics
Zsolt Jakó	Freeport of Budapest Logistics
Zsolt Lévai	Institute for Transport Sciences

5.2. List and summary of regional, national and transnational development documents

Extract of relevant national, regional and transnational programmes

Regional strategic documents	
Name of document	**Budapest 2030 Long-term Urban Development Concept**
Access	Budapest2030_HUN_összefoglaló.pdf Budapest2030_ENG_full.pdf
Planning period	2014-2030
Summary	Development plan to transform Budapest into a liveable, sustainable city with equal social opportunities.
Key words	sustainable and smart mobility, urban transport, energy efficient modes for **passenger transport** (pedestrian and cycling), development of infrastructure and services, smart management of land and resources, brownfield areas, environmentally friendly supply system
Summary and objectives	The Urban Development Concept introduces 17 objectives reflecting on three theoretical principles: • liveability, • sustainability, and • social equality. The long-term development ideas contribute to the transformation of Budapest, which will be achieved through development of urban areas, establishment of environmentally friendly supply systems, improvement of public spaces and protection of values. Related measures include elimination of network deficits, spatial extension of functional urban areas and pedestrian surfaces, development of bicycle traffic and individual passenger vehicle traffic, re-distribution of public areas, utilisation of unused brownfield areas of the city, development of traditional railway transport and establishment of high-speed railway connections and port development for international passengers and goods. Regarding the **railway transport**, the aim is to improve passenger transport, through removal of transportation bottlenecks affecting railway areas, resolving isolation of marginalized areas and increasing rail transport coverage. Coexistence with the Danube offers special opportunities; however still mostly untapped. In terms of **waterborne transport**, the objectives include the better use of the Danube as a waterway, infrastructural development to expand the areas along the Danube, improvement of quality of services, establishment of new intermodal freight port centres and connection of waterborne transport with other land transport modes.
Name of document	**Budapest Transport Development Strategy 2014-2030 / Balázs Mór Plan (BMT)**
Access	Balázs Mór Terv_ENG.pdf (budapest.hu)
Planning period	2014-2030
Key words	transport infrastructure and services development, **dynamic public transport services (bus network and tram services)**, attractive and competitive capital, liveable and healthy urban environment, economic sustainability

Summary and objectives	The Plan focuses on creating a liveable environment in Budapest with reliable public services and well-maintained green spaces, while achieving a favourable, sustainable economic growth. The strategy is in line with the guidelines laid down in the White Paper issued by the European Commission in 2011 and contains complex, strategic, and operational objectives set up to 2030. The Municipality of Budapest aims at continuous improvement and renewal of the public services. As regards transport development; among others efficient public services and infrastructure, reduction of emissions, attractive vehicles, more and better connection between the city centre and the Surrounding area are in the foreground. To reduce pollution, priority should be given to **environmentally friendly modes of transport** (rail and water). Measures for **waterborne freight**, such as the extension of the waterborne transport network through the construction of new piers and waterway routes and infrastructural developments, improvement of conditions of pedestrian access, integration of riverboat services into urban and regional public transport, modernisation of the fleet and the maintenance services of waterborne transport are also included in the strategy. According to the Plan the **freight transport access regulation system is inadequate and outdated**, and it is essential to improve the control process by introducing intelligent technology-based systems. The BMT emphasizes the **importance of logistics centres** as well, which attract considerable traffic and should be set up at the intersection of high-capacity networks of several modes of transport. Their connection possibilities largely depend on their geographical location and currently only the Csepel Free Port is used for cargo traffic on the European transport corridor of the Danube, hence **waterborne freight transportation connections need to be enhanced** in the border area of Budapest and Érd.
Name of document	**Pest County Regional Development Concept - Analysis of the Situation**
Access	Pest_Megyei_Teruletfejlesztesi_Koncepcio_-_I._kotet_helyzetfeltaras.pdf
Planning period	2013
Key words	A comprehensive situation analysis of Pest County, including the description of the characteristics and territorial features of the county, and identification of areas requiring intervention.
Summary and objectives	The aim is to develop a harmonious and sustainable social, economic, environmental structure and territorial system in Pest County that considers the current conditions and effectively fits into national and European developments. The regional development concept of Pest County examines all areas and sectors of the region. The document presents among others the general economic, touristic, agricultural, rural development, transport and social environmental characteristics of Pest County and identifies the areas in need of development. To prevail in the Central European and Asian regions Hungary should place great emphasis on economic and infrastructural development through the convergence of underdeveloped municipalities, the reduction the excessive capital-centricity and the reinforcement of integral regional relations. Regarding Surrounding area public transport, **improvement of road infrastructure and railway services** and **integration of transport networks** would be indispensable. A key objective

	of the concept is the significant reduction of road passenger traffic by 2030 through **conversion to rail transport**. The document highlights the untapped **potential of the Danu**be; Europe's most important international waterway, where passenger traffic is insignificant and freight transport is characterized by logistical shortcomings.
Name of document	**Pest County Regional Development Concept Proposal Phase**
Access	Pest_Megyei_Teruletfejlesztesi_Koncepcio_-_II._kotet_javaslattevo_fazis.pdf
Planning period	2014-2020
Key words	social cohesion, closing social gap, sustainability, better transport connections withing the county, effective climate and energy policy, innovative economic performance, **regional development**
Summary and objectives	The Pest County Area Development Concept, in addition to positioning Pest county, outlines the future vision of the county and contains the related development goals. The overall goals of the concept include: • social renewal along the improvement of social and public security, • the dynamisation of the economy and • the development and balance of the spatial structure, making it more sustainable. Key strategic objectives of the document are the • implementation of the Pest County Danube Strategy and • the complex development of the Homokhátság. The development goals intend to strengthen the **hub role of the metropolitan centre** and to connect the air, road, and water port channels. The concept emphasizes the **important role of air, road and water ports**, as international gateways for trade of the county and reveals that the **interconnection of the channels would be a great advantage** for Pest county. Among the operational objectives, the document highlights the necessity of **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 river**. It also emphasizes the need to boost environmentally friendly trade and tourist shipping, to develop freight transport and to make better use of the potential of logistics and related services.
Name of document	**Budapest Rail Node Study (BRNS)**
Access	https://budapestvasut2040.hu/english/ Microsoft Word - BRN_strategia_v13_20210112 (budapestvasut2040.hu)
Planning period	2020-2040
Key words	The Strategy identifies and evaluates potential intervention points and measures for the comprehensive development of the Budapest Surrounding area railway network
Summary and objectives	Budapest plays a significant **railway hub** role at both national and European level, with a number **of European rail freight corridors** passing through the capital, and with a large-scale suburban traffic resulting from suburban crossings. As a result, the railway node 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. 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 parallel with the achievement of the 2050 climate neutrality target. Despite developments have already taken place, there is a lack of reconstruction of the capital's internal railway network – capacity expansion, establishment of new railway stations, technological developments, and intensification of rail services, - as well as the harmonisation and direct connections with other transport services. 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.

National strategic documents	
Name of document	**Situation Analysis of the National Transport Strategy**
Access	NKS_Nemzeti_Kozlekedesi_Koncepcio_36.pdf (bte.hu)
Planning period	2014
Key words	Situation analysis on the strategy which contains long-term transport development goals, examines transport areas, draws conclusions, while outlining visions for the future
Summary and objectives	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 and freight transport** by subsectors of transport means and presents the infrastructure characteristics (networks). It also contributes to the international situation by examining horizontal qualities in terms of transport safety, sustainability, smart technologies, electronic charging systems, transport education and research development, and promotes the increase of international competitiveness of domestic transport.
Name of document	**Integrated Transport Development Strategy 2007-2020**
Access	
Planning period	2007-2020
Key words	transport infrastructure and services development, sustainable transport
Summary and objectives	The Integrated Transport Development Strategy (ITDS) is a review of the country's transport policy. Taking into account the international trends and EU regulations, the ITDS attempts to satisfy the current socio-economic needs of transport as fully as possible, to promote economic growth and to improve living conditions. The development of more environmentally friendly, energy-efficient transport systems (freight and passenger transport) is a horizontal objective. The document addresses the reduction of environmental impact (GHG emissions) as well as the improvement of energy efficiency and the use of renewable energy as a horizontal factor.

	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 Sustainability Assessment of the ITDS rightly states that maintaining the favourable division of work targets, initiating such processes requires complex transport policy interventions.
Name of document	**Logistics Sector Policy Strategy**
Access	logstrat_2013.pdf (logsped.hu)
Planning period	2014-2020
Key words	The overall goal of the logistics strategy is to increase the contribution of the logistics sector to the competitiveness of Hungary by promoting the development of logistics resources, networking and innovation in accordance with its expected weight in the national economy.
Summary and objectives	The aim of the strategy is to **manage logistics** according to its economic weight. The strategic pillars attempt to achieve specific goals; promotion of networking and cooperation in the sector; development of logistically relevant administrative services; modernisation of education; support for logistics R & D & I, support for logistics infrastructure development and ensure sustainability of operations. Professional and business federation organisations were also involved in the strategy-making process; 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 the Industrial Development Non-profit Ltd (IFKA) 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. In terms of quality, despite its central geographical position, Hungary is lagging far behind the EU average; however, the implementation of the strategic plan could significantly improve Hungary's competitiveness.
Name of document	**National Port Development Master Plan Strategy**
Access	HUPORT.EU – Országos Kikötőfejlesztési Főterv – 2015-HU-TM-0152-S
Planning period	2019-2030
Key words	National Port Development Master Plan to strengthen Danube freight transport by developing TEN-T port infrastructure
Summary and objectives	The draft strategy of the National Port Development Master Plan aims 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 master plan comprehensively sets out directions for the **development of the Danube port infrastructure and port services** and the entire sector up to 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 and for that 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 modernisation of

	craft and the **digitalisation of information systems** is essential for an efficient service. Enabling 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 are only able to develop if development plans consider the effects of climate change and extreme weather, physical hazards and economic risks, and develop a skilled workforce, and creates effective and long-term waste management regulations. Since the entire Hungarian section of the Danube River is part of the TEN-T core network, its development is in the interest of both Hungary and the European Union.
Name of document	**Analysis of the Hungarian Transport, Forwarding and Logistics Market, and Mapping the Competition Situation and Competitiveness of the Transport Sector and its Subsectors**
Access	GVH_Száll_1.0
Planning period	**2010**
Key words	transport and logistics market analysis, examining the competitiveness of the Hungarian transport sectors
Summary and objectives	Personal interviews were conducted with the major carriers, freight forwarders, logistics service providers and representatives of business associations as part of a study commissioned by the Hungarian Competition Authority. As part of the empirical research, 300 carriers, freight forwarders and logistics service providers were interviewed. As a result of qualitative and quantitative surveys and based on an international outlook, an increasing number of customers expect a common, integrated service from larger, larger companies, which is growing closer in terms **of freight-logistics services traffic**. However, this does not necessarily mean that all three activities are carried out by a single company, but that the three activities are carried out by two or three more closely related parties, even in a given area. Vertically integrated services can also bring a number of benefits to customers and service companies. At the same time, larger companies are more able to provide vertically integrated services, so their competitive advantage over smaller ones can be further strengthened. On the other hand, the ability to provide such a complex service results in smaller competitive advantage for larger enterprises.
Name of document	**National Clean Development Strategy (NTFS) DRAFT**
Access	lts_hu_hu.pdf (europa.eu)
Planning period	2020-2050
Key words	Long-term development plan including three scenarios leading towards climate neutrality, climate policy principles, policies and measures for various sectors
Summary and objectives	In the 2020 Climate Act (Act XLIV of 2020 on Climate Protection), Hungary undertook to become a climate-neutral country by 2050. The draft strategy presents Hungary's long-term socio-economic and technological development plan to achieve climate neutrality by 2050. The strategy sets out three main scenarios for exploring the paths to become climate neutral up to 2050. The document focuses on **reducing energy consumption and emissions**. In Hungary, the transport sector is responsible for 20% of all GHG emissions, therefore it is important to pay special attention to road and rail transport. According to the strategy, public transport will partly be diverted to rail and bus services. In order to reduce GHG emissions it is necessary to modernise and electrify these vehicles. **Road freight transport** also plays a significant role in the causes of the increase in transport emission, for which the dynamic expansion of transit traffic through Hungary

	and the economic development of the Central and Eastern European region are responsible. A major part of inland waterway transport is provided by the **Danube passenger and freight transport** and the domestic fleet accounts for approximately 15% stake of the international freight traffic affecting Hungary. In terms of **waterborne shipping**, hydrogen can be a potential option, but the transition to it is still hampered by a number of factors (the life cycle of main engines and hulls is higher in shipping, technology-change would be a significant investment, currently there is no fuel supply network, etc.).
Name of document	**National Framework Strategy on Sustainable Development**
Access	https://eionet.kormany.hu/akadalymentes/download/1/26/71000/NFFT-HUN-web.pdf
Planning period	2012-2024
Key words	A comprehensive presentation of the current situation of the country and its population, complemented by the circumstances and objectives of the transition to sustainability
Summary and objectives	The UN Sustainable Development Goals (SDG's) gave rise to the document. The strategy presents **Hungary's own way towards sustainable development**. The long-term concept's aim is to ensure that Hungary does not destroy the environment during its economic development, and that the effects on the society take a more favourable turn. The document provides a framework for the **transition to sustainability** and outlines various goals, including the contribution to the development of a national consensus on sustainability.
Name of document	**National Transport and Infrastructure Development Strategy**
Access	Nemzeti Közlekedési Infrastruktúra-fejlesztési Stratégia.pdf (kormany.hu)
Planning period	2014-2030 (2050)
Key words	Improving transport infrastructure, competitiveness, public transport development, individual transport development
Summary and objectives	The basic objective of the strategy is to increase the **competitiveness of Hungary** by serving the economic processes of the transport infrastructure, as efficiently as possible. Further aims of the document are to ensure the conditions for mobility of economy and prosperity. The strategy defines the reduction of negative impacts on the environment and the implementation of climate protection aspects as social goals. In addition to the coordination of environmental and economic, national and EU objectives, the Hungarian Government set the goals of **harmonious development of individual and public transport**, the rise of environmentally friendly vehicle propulsion methods and technologies. The maintenance and **development of transit traffic** is targeted as well. According to the strategy, it is important to take advantage of the role of Hungary as a transport hub and the opportunities provided by the country's developed highway network. The priority network development goals include the **extension of highways** to the national border and the creation of high-speed access to the county seats. The main goal of the strategy for 2030 is to **interconnect the supply chains in Hungary**. The distribution of freight transport volume by mode shows the dominance of roadway transport, especially in terms of domestic freight traffic. In order to reduce emissions, it would be advisable to switch to other modes of transport. Regarding waterborne transport, the strategy claims that the Danube is untapped and **waterborne transport** should be encouraged. Inland waterway transport is mostly used

	for international traffic. However, the risks of waterborne freight transport are reflected in the navigability of waterways and thus in the inadequate use of capacity.
Name of document	**National Electromobility Strategy - Jedlik Ányos Plan 2.0 (2019)**
Access	
Planning period	2019-2030
Key words	The strategy includes goals for the development of the electric transport modes.
Summary and objectives	

Transnational strategic documents	
Name of document	**European Green Deal**
Access	EUR-Lex - 52019DC0640 - EN - EUR-Lex (europa.eu)
Planning period	2020-2050
Key words	sustainability, sustainable transport
Summary and objectives	The European Green Deal aims to make the EU's economy sustainable. It's goal to turn climate and environmental challenges into opportunities and make transition just and inclusive for all. That will transform the Union into a modern, resource-efficient and competitive economy, where there are no net emissions of greenhouse gases by 2050 economic growth is decoupled from resource use no person and no place is left behind. In order to make the EU a climate-neutral economy by 2050, the European Green Deal calls for a 90% reduction in greenhouse gas emissions from transport. To achieve this systemic change, we need to make all transport modes more sustainable, make sustainable alternatives widely available in a multimodal transport system and put in place the right incentives to drive the transition. These are the three pillars of the future actions. The European Green Deal also calls for a substantial part of the 75% of inland freight carried today by road to shift to rail and inland waterways. Short-sea shipping and efficient zero-emission vehicles can also contribute to greening freight transport in Europe. The success of the European Green Deal depends on the ability to make the transport system sustainable.
Name of document	**EU Strategy for the Danube Region (EUSDR)**
Access	Microsoft Word - EUSDR_Consolidated-Input-Document_AP-Revision_2019_DSP_v1 (danube-region.eu) EUR-Lex - 52019SC0006 - EN - EUR-Lex (europa.eu)
Planning period	2021-2027
Key words	transport infrastructure and services development, sustainable transport, port infrastructure development, water transport development
Summary and objectives	The EU Strategy for the Danube Region (EUSDR) is a macro-regional strategy, jointly developed by the Commission, together with the Danube Region countries and stakeholders, in order to address common challenges together. The Strategy seeks to create synergies and coordination between existing policies and initiatives taking place across the Danube Region. Therefore, EUSDR per se is a transnational cooperation framework and a framework for cooperation between regions. It covers a territory,

	which is highly heterogeneous by means of population density, economy, languages, history and culture. As far as possible, objectives and actions should thus concentrate on issues with transnational impact and impact on subregions of the Danube Region. For increasing the quality of life in the Danube Region, the Strategy (in alignment with the Cohesion policy of the EU) needs to focus its activities on objectives describing strategic and long-term changes that it is expected to achieve during the next decade (programming period of 2021-2027)such as: 1) Counteracting Climate Change, 2) Stimulating Sustainable Development, 3) Establishing and enforcing Knowledge Society, stimulating the Economy and fight Poverty, 4) Improving Mobility and Connectivity, and 5) Enhancing Democracy, sound Administration and strong Involvement of Civil Society and Youth. The wide range of issues addressed by the EUSDR are divided among 4 pillars and 12 priority areas, which are in line with the above-mentioned strategic objectives, and which build the backbone of the Strategy's structure. The four pillars are: 1) Connecting the Danube – smart and sustainable, 2) Protecting the Environment – clen and green, 3) Building Prosperity – smart, social and innovative, 4) Strengthening the Danube Region – effective, sound and safe. Counteracting Climate Change has become one of the main challenges of the Danube Region. Measures to slow down global warming and for a better adaptation and increased resilience, securing water supply for people and agriculture, coping with increasing and more frequent natural disasters, preserving and restoring biodiversity, etc. need transnational and international answers and cross border cooperation in the whole macro region. In line with all these challenges, all initiatives in the macro-region should stimulate sustainable development since this strategic objective is a horizontal issue. For instance, enhancing mobility should consistently follow this principle independent from the transportation mode or type of residential area. Environment friendly technologies should be implemented in all cases. Improving mobility and connectivity is a crucial factor to enhance the competitiveness and prosperity of the Danube Region as infrastructure often is inefficient, desolate, and fragmentary. Efficient cross-border connections for environmentally friendly transport modes are missing; inland navigation has high potential when kept in high, sustainable standards. The implementation of TEN-T priority projects and the Rail Freight Corridors (EC-regulation 913/2010) are of high importance for the Danube Region, especially for the Western Balkans. A coordinated approach for speeding up the improvement of sustainable and low-carbon mobility in the macro-region is essential.
Name of document	**White Paper on Transport (Roadmap to a single European transport area — Towards a competitive and RESOURCE-EFFICIENT transport system)**
Access	https://ec.europa.eu/transport/sites/transport/files/themes/strategies/doc/2011_white_paper/white-paper-illustrated-brochure_en.pdf
Planning period	2020-2050
Key words	transport infrastructure and services development, sustainable transport
Summary and objectives	This strategic document presents the Commission's vision for the future of the EU transport system and defines a policy agenda for the next decade. According to its main aim, efficient transport is a precondition for maintaining the EU's prosperity, therefore Europe needs less congestion, fewer emissions, more employment and more growth. It is also a key to a well-functioning internal market and the ability of all European regions to remain part of a fully integrated world economy. Transport is also

	an important part of the economy itself, since many European companies are world leaders in infrastructure, logistics and the manufacture of transport equipment and traffic management systems. However, in a world of rising oil prices, growing congestion and looming climate change, the EU's transport system needs a radical overhaul to maintain its role of growth engine and keep pace with mounting global competition. Therefore, the EU needs to break the shackles of transport's dependency on oil, but without sacrificing its efficiency. The strategy established in this White Paper shows how this above-mentioned transformation can be achieved. It defines 10 very challenging goals designed to guide policy actions and measure progress — including phasing out conventionally fuelled cars from cities by 2050, and a 50 % shift in middle distance passenger and longer distance freight journeys from road to other modes by the same date — to achieve a 60 % reduction in CO2 emissions and comparable reduction in oil dependency. These are underpinned by 40 concrete initiatives — to be developed over this decade. The White Paper also defines a strategy to which all transport stakeholders should contribute. No overhaul of the transport system will be possible without concerted action involving national, regional and local authorities, transport operators and transport users.
Name of document	**Sustainable and Smart Mobility Strategy (EUSSSM) Draft - Putting European transport on track for the future**
Access	com20200789.pdf (europa.eu)
Planning period	2020-2050
Key words	
Summary and objectives	The document is a follow-up and review of the White Paper on Transport issued by the European Commission. It declares an updated vision compared to the White Paper, although some challenges remained the same. Overall, it has to be declared, that the EU must shift the existing paradigm of incremental change to fundamental transformation. Thus, the strategy sets out a roadmap for putting European transport firmly on the right track for a sustainable and smart future. To make the vision a reality, it identifies 10 flagship areas with an action plan that will guide the work in the years to come. The scenarios underpinning the strategy, common to those supporting the 2030 climate target plan, demonstrate that, with the right level of ambition, the combination of policy measures set out in this strategy can deliver a 90% reduction in the transport sector's emissions by 2050. According to the plans, by 2030 high-speed rail traffic will double, zero-emission vessels will be ready for market, 100 European cities will be climate neutral, and automated mobility will be deployed at a large scale. By 2050, beyond the reduction of GHG emissions, nearly all vehicles will be zero-emitting, the rail freight traffic will double, high-speed rail traffic will triple, and the multimodal Trans-European Transport Network (TEN-T) will be equipped for sustainable and smart transport and with high-speed connectivity. The EU needs to take full advantage of smart digital solutions and intelligent transport systems (ITS). Connected and automated systems have enormous potential to fundamentally improve the functioning of the whole transport system and contribute to our sustainability and safety goals. In terms of road transport, energy efficiency shall be a criterion for prioritising future choice of suitable technologies looking at the whole life cycle. Although, manufacturers are already heavily investing into battery-electric, hydrogen fuel-cell vehicles and nother alternative fuel solutions. Rail transport will also need to be further electrified; wherever this is not viable, the use of hydrogen should be increased.

	To overcome the obstacles related to railway transport, the EU targets to build a high quality transport network with high-speed rail services on short-haul distances and with clean aviation services improving coverage of long-haul routes. According to the Commission, upgrading the necessary TEN-T infrastructure is needed to enable the shift towards more sustainable links. Apart from that, the waterborne transport sector requires significant development. Inland and seaports have a great potential to become new clean energy hubs for integrated electricity systems, hydrogen and other low-carbon fuels, and testbeds for waste reuse and the circular economy. E-commerce has significantly changed consumption patterns. To serve consumer needs, the existing framework for intermodal transport needs a substantial revamp, and multimodal logistics must be transformed through interconnection of all transport modes for. Measures are set for airports and port to become cleaner and sustainable and to become zero-emission nodes and to transform them into multimodal mobility and transport hubs, linking all relevant transport modes together. The EU pursues to seize the untapped potential of ports both along TEN-T corridors and in those inner cities where inland waterways can green the last mile of city logistics. And finally, the recovery from the crisis caused by the COVID-19 pandemic should be used to accelerate the decarbonisation and modernisation of the entire transport and mobility system, limiting its negative impact on the environment and improving the safety and health of the citizens. The twin green and digital transitions should reshape the sector, redraw connectivity and re-energise the economy. Transport should showcase European ingenuity and industriousness – standing at the vanguard of research, innovation and entrepreneurship, and driving the twin transitions.

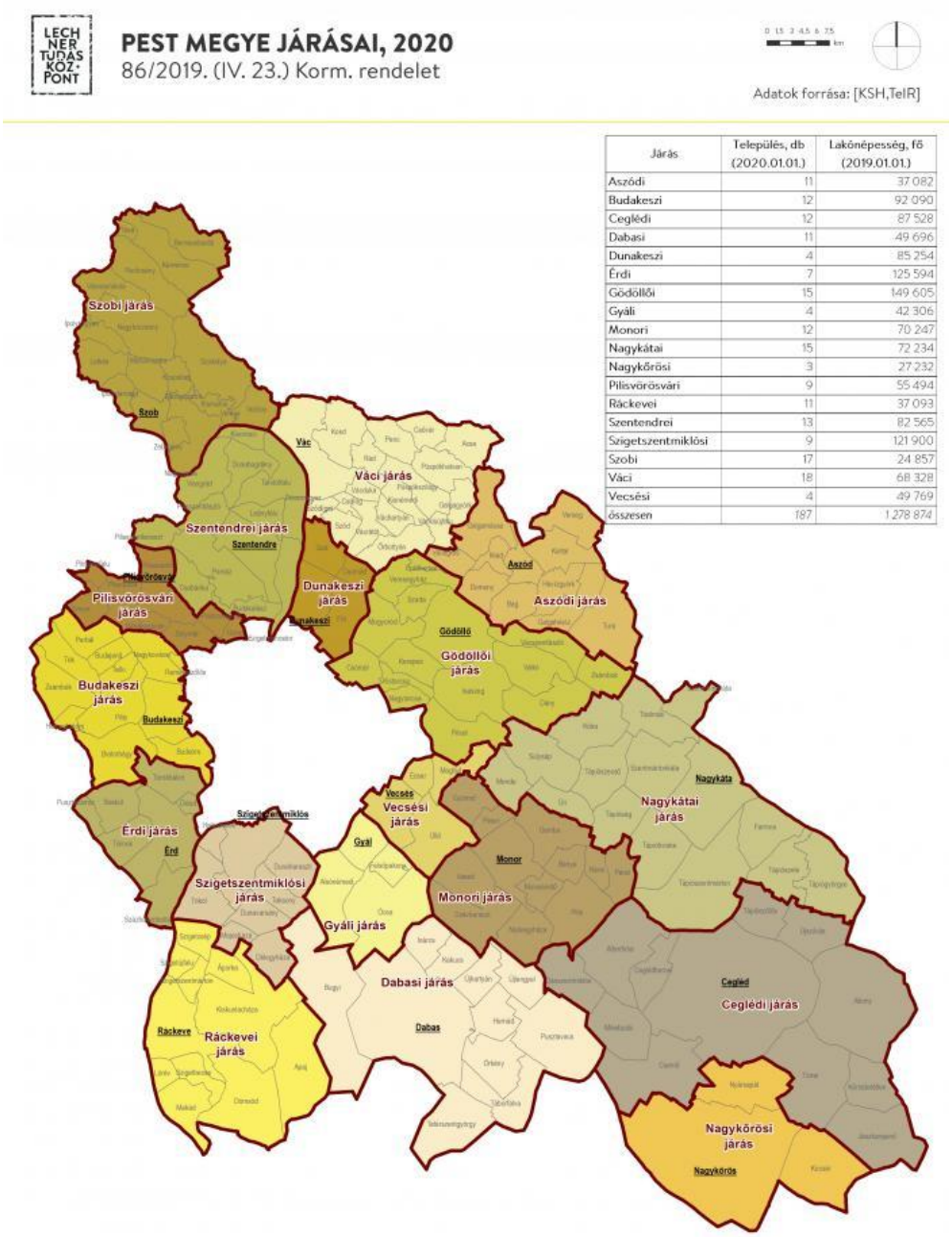
5.3. List of planned development projects for 2021-2027

Project proposals, presentations	
Name of document	**Intermodal Infrastructure and Capacity Enhancement Project at Csepel Freeport - Planning Phase 2**
Access	Projektosszefoglalo_INFRA2.pdf (mahartfreeport.hu)
Planning period	2018
Key words	waterway, railway, road network developments, utility infrastructure developments, utility network mobilisation, port intermodality,
Summary and objectives	The aims of the plan are: • to increase intermodality in integrated development and • interconnection of the Csepel Freeport's internal transport modes (road, rail, water). By strengthening the logistics function and increasing the ports' logistics capacity, freight volume can be increased, in accordance with the domestic and EU legislation's requirements. During the 2nd Phase of the development waterway, railway, and road network developments, restoration of certain sections of the river wall and increasement of the coastline protection will be carried out. Public utility infrastructure and a license plate recognition system are also being developed. The traffic management and information systems greatly increase the reliable operation of the Freeport. In the context of railway development, obsolete tracks will be completely rebuilt to ensure increased rail traffic.

Name of document	**Development of a rail track connection between Kelenföld and Ferencváros stations - Technical Study**
Access	offline
Planning period	2016
Key words	technical study about rail track developments related to the railway stations between Kelenföld and Ferencváros
Summary and objectives	The development of the rail-track connection between Kelenföld and Ferencváros stations include the development of a three-track link, the preparation of new stops and the improvement of railway infrastructure and related passenger facilities. In addition to the European and the long-distance freight traffic, this line segment plays a key role in international and domestic passenger transport, therefore its development is financially supported by the EU through its CEF fund and by the project called "Developing the Southern Railway Interconnection Bridge". In the recent period, the development of the railways consisted mainly of modernisation of the national main lines and did not exceed the city limit of Budapest, therefore the main purpose of the project development is to eliminate bottlenecks in the TEN-T Core Network and to create interoperability of the rail system.
Name of document	**Current issues in transport development (presentation)**
Access	Microsoft PowerPoint - Előadás Siófok ML.pptx (fomterv.hu)
Planning period	2019-2023
Key words	road and railway infrastructure development, bicycle road developments, intermodal hub development, water transport development, airport infrastructure development, Modern Cities, Hungarian Village Programme
Summary and objectives	The presentation summarises the completed, ongoing and planned transport development projects until 2023. In order to increase the competitiveness of the Hungarian railways and to ensure a high standard of passenger and freight transport, road and railway infrastructure improvements are needed. Regarding development of waterborne transport, priority will also be given to related areas such as the development, capacity-building and modernisation of port infrastructure, and creation of barrier-free and predictable waterborne transport facilities. Within the framework of the Complex Road Renovation Programme and the Hungarian Village Programme, the focus will be on the reconstruction of side roads and local roads and the development of bicycle paths, which measures are relevant factors regarding tourism. The study also comprises innovative solutions for creating railway test tracks, railway technical control centres and school bus network. Follower: Budapest Rail Node Study (BRNS)
Name of document	**Design of a single-track separate-level rail link at Ferencváros station**
Access	Phase: preparation
Planning period	-
Key word	road and railway infrastructure development, Southern Railway Bridge, lifting the route of passenger trains
Summary and objectives	Ferencváros station is the largest station in Hungary, both in terms of rail traffic and land area. Its central role was established during the construction of the Southern Railway Bridge, which carries about 90% of the rail traffic between the eastern and western parts of Hungary.

	The aim of this project is to increase the capacity of the existing bottleneck by removing the bottleneck by lifting the route of passenger trains on the circular railway over the junction area of Ferencváros station, thus allowing the replacement of some level crossings. The design task is to prepare the concept plan and permit plans for all sections, obtain the permits and, on this basis, prepare the technical documentation for the construction tender and the related plans and work sections.
Name of document	**EU NAIADES III**
implementation	in progress
Summary and objectives	The programme will exploit the potential need to renew barge fleets and to improve access to financing, while ensuring full compliance with environmental policies, such as the Water Framework Directive and the Habitats Directive.
Name of document	**FuelEU Maritime initiative**
implementation	in progress
Summary and objectives	The initiative will promote the production and uptake of maritime fuels.
Name of document	**European Year of Rail of 2021**
implementation	2021
Summary and objectives	The initiative attempts to boost cross-European connections. In line with the European Green Deal, the programme intends to make rail transport more attractive through improving the clients' satisfaction, raise the frequency of trains, connecting the services with other modes of transport and facilitating the ticket-buying process, while promoting sustainability. The initiative is in line with the Shitf2Rail, TEN-T and the Fourth Railway Package initiatives.
Name of document	**Fourth railway package**
implementation	in progress
Summary and objectives	With the implementation of the Fourth Railway Package the ultimate goals are to improve the quality of railway services, harmonise the vehicles of the EU and reduce costs for cross-border trains.

5.4. Maps

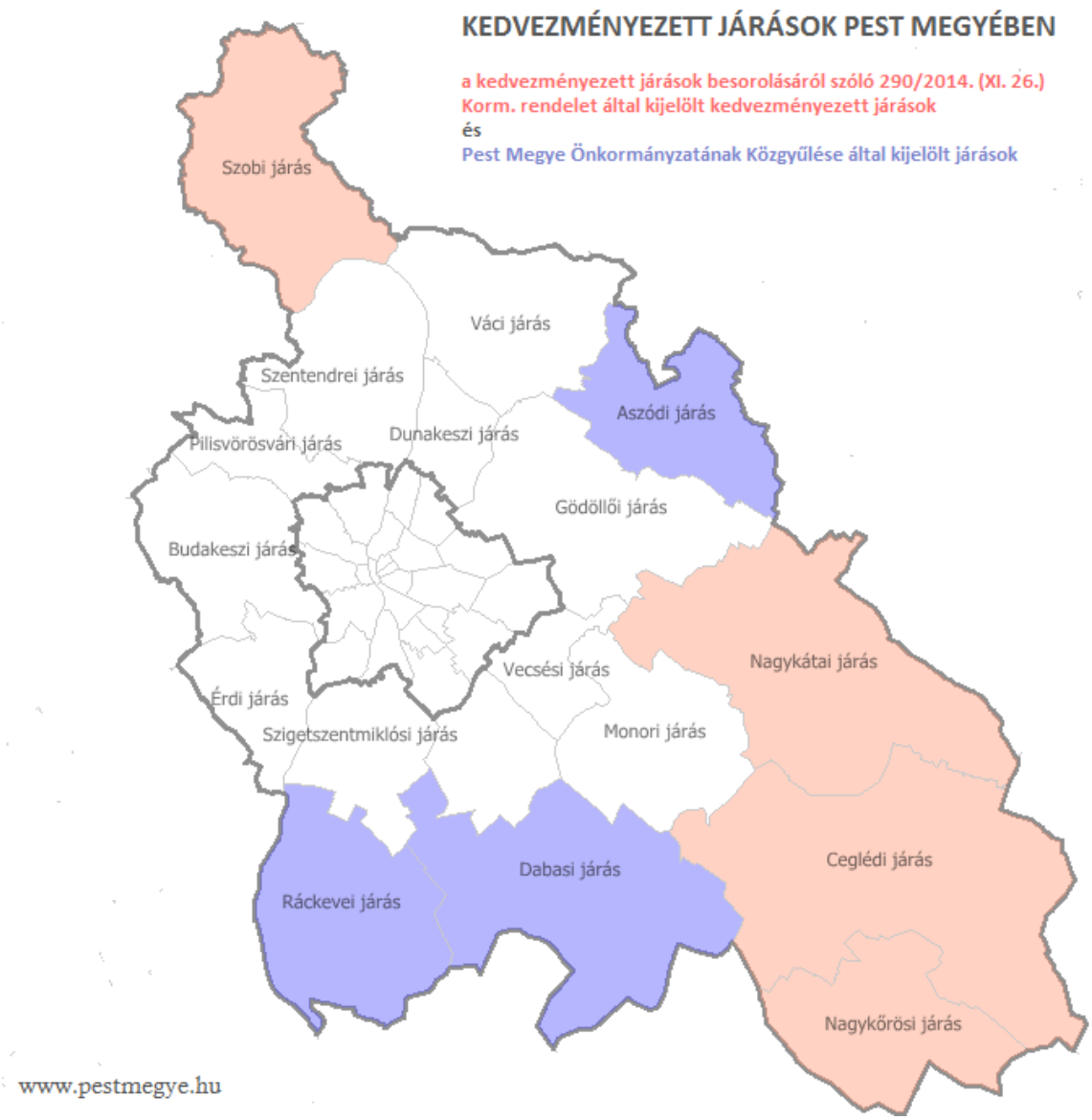


Járás	Település, db (2020.01.01.)	Lakónépesség, fő (2019.01.01.)
Aszódi	11	37 082
Budakeszi	12	92 090
Ceglédi	12	87 528
Dabasi	11	49 696
Dunakeszi	4	85 254
Érdi	7	125 594
Gödöllői	15	149 605
Gyáli	4	42 306
Monori	12	70 247
Nagykátai	15	72 234
Nagykőrösi	3	27 232
Pilisvörösvári	9	55 494
Ráckevei	11	37 093
Szentendrei	13	82 565
Szigetszentmiklósi	9	121 900
Szobi	17	24 857
Váci	18	68 328
Vecsési	4	49 769
összesen	187	1 278 874

7. Figure Pest county and its micro-regions

Source: Pest County Regional Development Plan 2021-2027 - consultation version

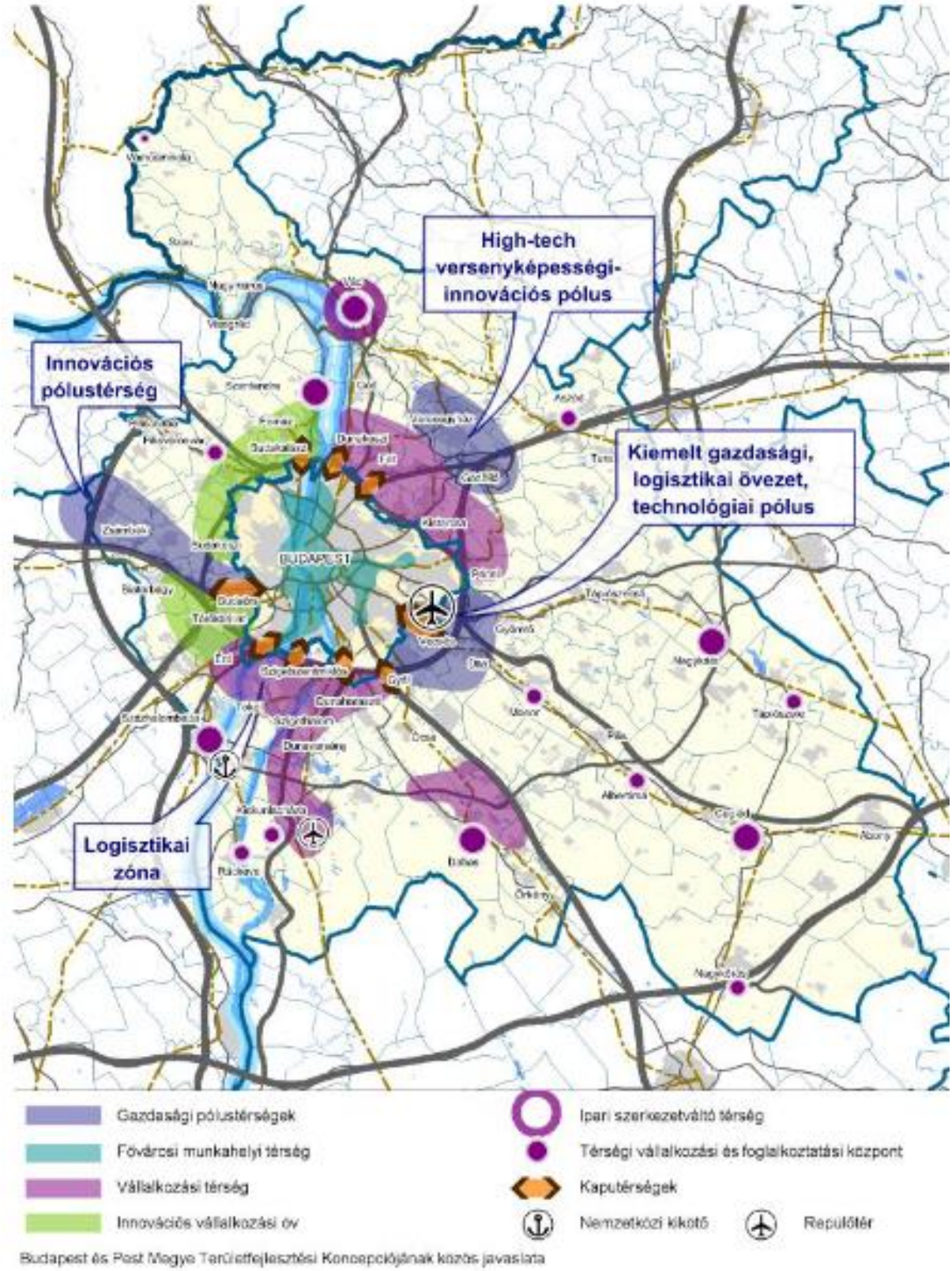
A PROJEKT AZ INTERREG CENTRAL EUROPE PROGRAMBÓL, AZ EURÓPAI REGIONÁLIS FEJLESZTÉSI ALAP TÁMOGATÁSÁVAL, AZ EURÓPAI UNIÓ ÉS MAGYAR ÁLLAM TÁRSFINANSZÍROZÁSÁVAL VALÓSUL MEG.



8. Figure Preferential (for subsidies) micro-regions marked by blue and orange colour in Pest County

Source: www.pestmegye.hu

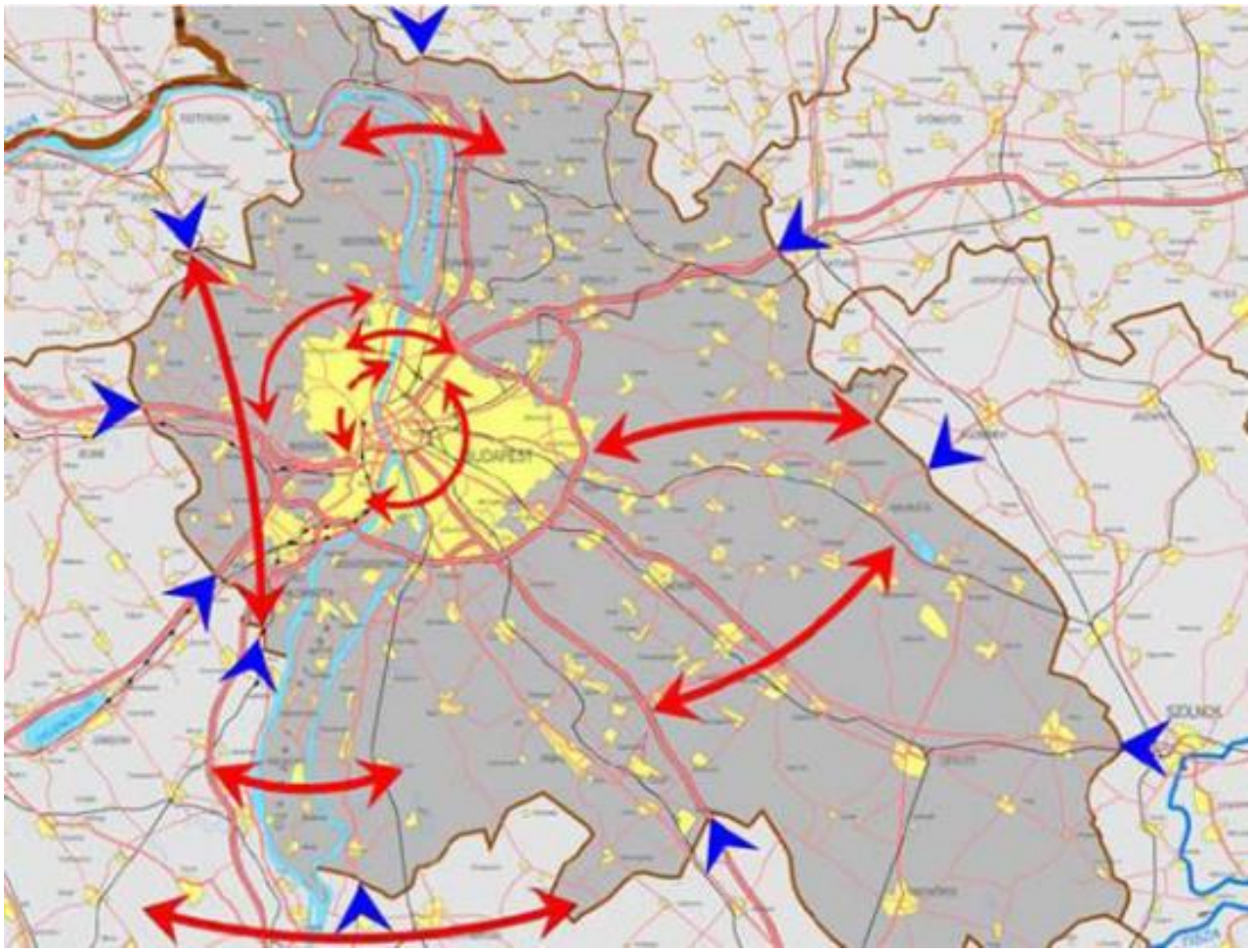
A PROJEKT AZ INTERREG CENTRAL EUROPE PROGRAMBÓL, AZ EURÓPAI REGIONÁLIS FEJLESZTÉSI ALAP TÁMOGATÁSÁVAL, AZ EURÓPAI UNIÓ ÉS MAGYAR ÁLLAM TÁRSFINANSZÍROZÁSÁVAL VALÓSUL MEG.



9. Figure Pest County and its special economic centres and economic and innovation zones

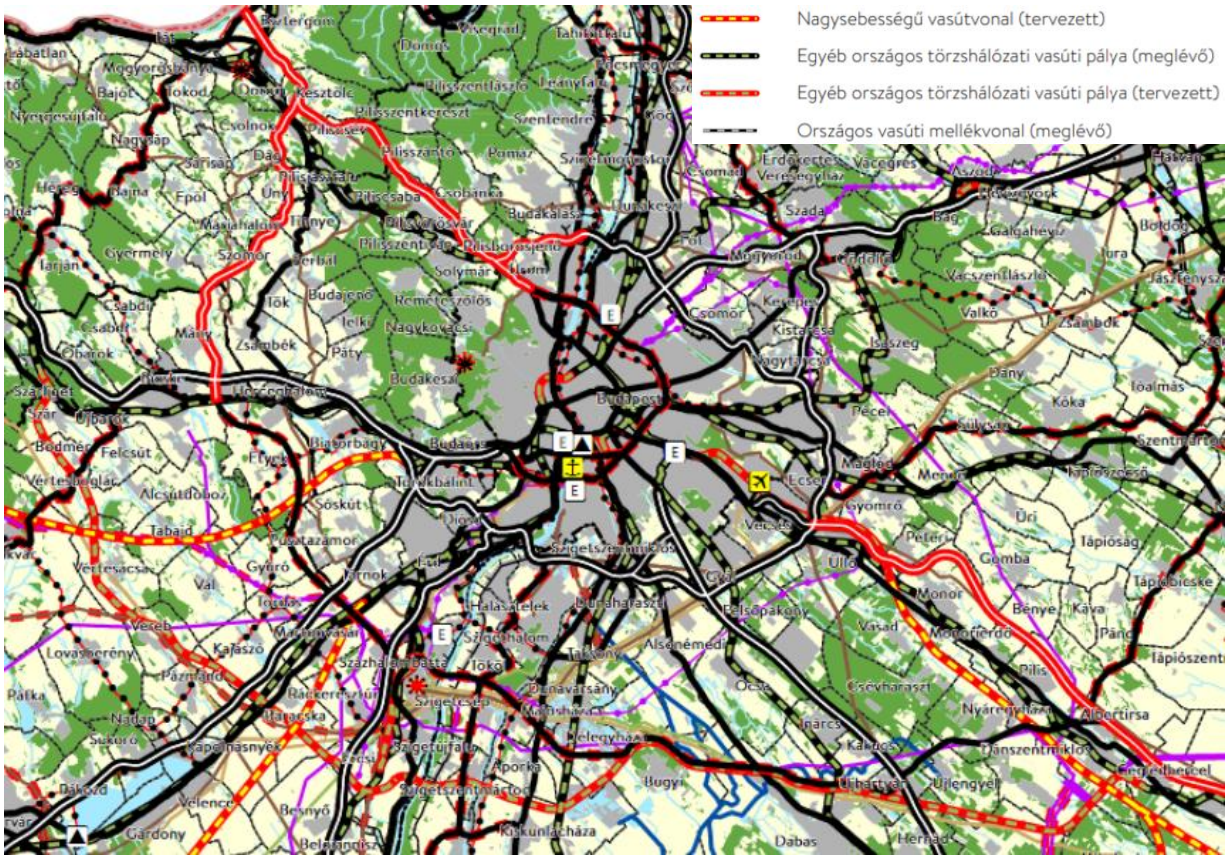
Source: Pest County Regional Development Plan 2021-2027 - consultation version

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



10. Figure Pest County and its special economic centres and economic and innovation zones

Source: Pest County Regional Development Programme 2021-2027 - consultation version

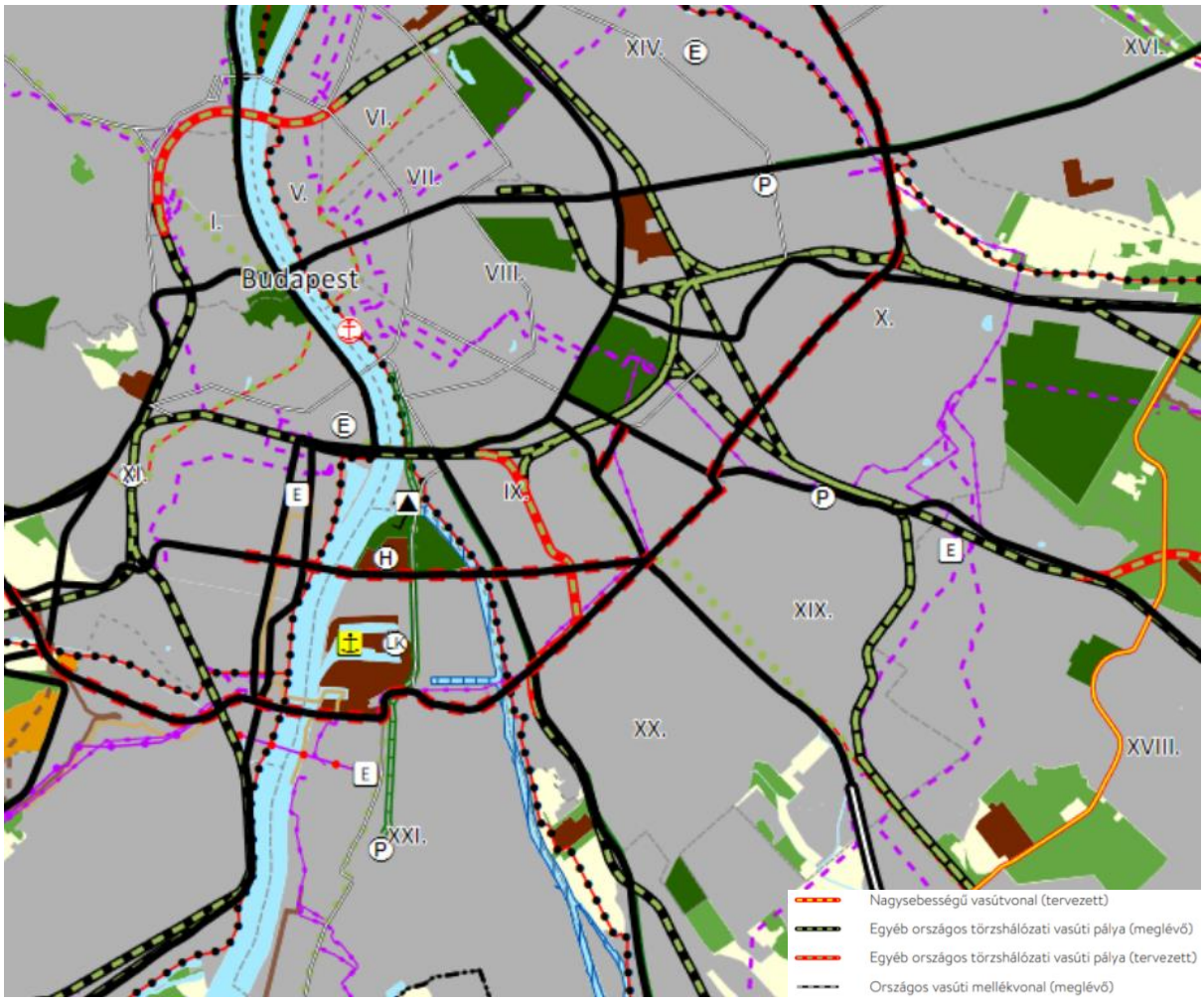


11. Figure Extract from the planned transport network of Hungary (Surrounding area of Budapest)

Source: Act XXXIX of 2021

amending certain acts relating to town and country planning Annex 1.
http://kozlonyok.hu/nkonline/MKPDF/hiteles/MK21084-2R.pdf

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



12. Figure Extract from the planned transport network of Budapest

Source: Act XXXIX of 2021

amending certain acts relating to town and country planning Annex 2.
http://kozlonyok.hu/nkonline/MKPDF/hiteles/MK21084-3R.pdf

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