DECISION-SUPPORT TOOL

specifying and prioritising pilot actions for multimodal freight transport complementing OEM corridor development

D.T1.3.3

Transferability and mutual learning part

31 08 2020

Prepared by

Acronym	*Name of CORCAP partner*
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KTI	**KTI Institute for Transport Sciences Non-profit Ltd.**

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

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1. INTRODUCTION

The decision-support tool specifies and prioritises pilot actions for multimodal freight transport complementing OEM corridor development (D.T1.3.3) summarises results and findings of regional analyses and their transferability, indicating conclusions for the elaboration of pilot actions and Corridor Capitalisation Plans.

With this tool, the pilot actions can be tailored to OEM developments to reach synergies between the OEM corridor and CorCap. The second reason to prepare this tool is to see which challenges and needs the pilot actions need to respond to. The challenges and needs can be similar even the same in the regions, and it can be helpful to see another pilot could answer one of the challenges or needs. Good practices and ideas to share are useful to all project partners. The common thinking is the base of cooperation.

In order to prepare this document, we needed all of the regional analysis already prepared by the project partners, as well as the inception reports and 1st intermediate reports on the pilot actions. Some of these have already been presented at the partner meeting in Dresden. In order to identify further synergies between CorCap and the OEM corridor, we conducted an analysis of a transnational studies and OEM corridor related documents.

Structure

The project partners made their regional analysis of the regions based on the methodology presented in Budapest. Based on the criteria system (see chapter 2.3.), we prepared the analysis of the regions, which was summarised by regions in a table. Then we drew conclusions and highlighted the focal points. After that we determined which conclusions could be drawn from the regional analyses for further implementation of the pilot projects.

In addition, we made a dot table with the same criteria system (characteristics) to see which pilot has a strong relationship with the characteristics of which region. This matrix analysis clearly outlines where to find synergies. In the case of a high degree of synergistic relationship, the particular pilot may be useful in response to this criterion (challenge or need).

In the last chapter, we made recommendations and conclusions as to which pilots' knowledge should be transferred to which regions.

2. ANALYSIS OF THE REGIONAL ANALYSIS OF CHALLENGES AND NEEDS

2.1. The process of preparing the studies

The regional analyses were prepared as a result of the following processes led by KTI and LP:

Kick-off meeting 19-21 June 2019, Budapest:

The methodological concept of the Tool for analysing challenges and needs for efficient and environmentally friendly freight transport and identifying potentials of the OEM corridor for regional development (D.T1.1.1) was presented by KTI, which was applied to realise the regional analyses planned within the project.

Start of work at regional levels:

After finalisation of the template for regional analyses, the project partners started to work on their own studies.

To realise the analysis, the following methods and tools were applied:

- Questionnaires and consultations
- Analysis of statistical data
- Stakeholder workshops
- Analysis of existing studies and documents
- Expert interviews

Partner meeting 27-29 November 2019, Dresden

Preliminary results were discussed during the partner meeting in Dresden.

The partners presented initial results and findings from regional analyses of challenges and needs. During presentations and discussion, some aspects were highlighted related to each topic.

WPT1 digital meeting on regional analyses, 24 March 2020

The partners presented updated results of their regional analyses. The regional analysis of challenges and needs for the Rostock Region (D.T1.2.1) has been postponed and will be prepared at later stage. The regional analysis for the Győr-Sopron-Burgenland Region (D.T1.2.6) is in process of elaboration, but due to the current measures aimed at the containment of the COVID-19 crisis necessary data could not be provided by the responsible authorities of the Burgenland Region.

Provision of final results by partners

Results of regional analyses of challenges and needs should be provided the latest until the end of 07/2020. However, many partners have done this before.

Conclusions and next steps

Presentation and discussion of consolidated results of regional and transnational analyses would have been take place in June 2020 in Brno. However, due to COVID-19, this happened online. This gave partners the opportunity to approve the content of the decision-support tool as well.

Partner meeting 03-04 September 2020, Brno/online

In the meantime, all regional analyses have been completed. Thus, the previously created version of the decision support tool was extended until this partner meeting, where partners could approve the expanded content.

2.2. Affected partners and regions

The project partners were responsible for carrying out the regional analyses as follows:

Name of the study	Name of responsible PP
Regional analysis of challenges and needs for the Rostock Region (D.T1.2.1)	PP3, Rostock Port
Regional analysis of challenges and needs for the Free State of Saxony (D.T1.2.2)	LP, Saxon State Ministry of the Interior Supported by PP10, New railway line Dresden – Prague EGTC
Regional analysis of challenges and needs for Ústí Region (D.T1.2.3)	PP4, Usti Region Supported by PP10, New railway line Dresden – Prague EGTC
Regional analysis of challenges and needs for the South Moravian Region (D.T1.2.4)	PP5, KORDIS JMK
Regional analysis of challenges and needs for the Bratislava Region (D.T1.2.5)	PP6, Institute of Spatial Planning
Regional analysis of challenges and needs for the Győr-Sopron-Burgenland Region (D.T1.2.6)	PP7, KTI Institute for Transport Sciences Non-profit Ltd. Supported by PP9, Győr-Sopron-Ebenfurth Railway
Regional analysis of challenges and needs for the Budapest Region (D.T1.2.7)	PP8, Freeport of Budapest Logistics Supported by PP7, KTI Institute for Transport Sciences Non-profit Ltd.

2.3. Applied criteria system

The regional analyses were performed according to the methodology developed by KTI and defined in section 2.1. To prepare this decision-making document, we set up a system of criteria, upon the regional documents that could be analysed. It was an important consideration to select criteria that can be found in all analyses.

The exploration of geographical barriers was necessary for each area because they greatly influence what kind of pilot project can be implemented in a given area. Also, such data are the labour-related data of the area (for example population), presence of industry (what industries are present), agriculture, unemployment and urbanisation.

The transport volume of the area is also an important feature, although this was not defined in the same way in all analyses, and national data were reported in most analyses.

The presence of multimodality in the region is one of the key importance of the project. Therefore, we used the capacity (TEU) and the number of multimodal centres in the area as criteria, and based on these, we classified each area according to the level of intermodality.

We also defined regional cooperation as an analysis criterion, which can also generate transport needs.

Due to the lessons to be learned, a SWOT analysis of each document is also included in the table, so that the strengths, weaknesses, opportunities and threats of each region can be seen, which can be important data for other regions.

The trend analysis of the regions is also included in order to follow up on changes in transport performance. These are important to be able to make the freight corridors more environmentally friendly.

Screening of development documents was also necessary to assess the legitimacy of each development. The legal force of a development document can increase the chances of improvements.

Defining development goals provides a good basis for comparing individual pilot projects and CORCAP project objectives. In the interest of this definition, we also examined which type of city transport node will be developed in the future. Another basis for the developments may be the regional challenges and needs to which they want to respond with the indicated developments. An important aspect is that what kind of capacity utilisation will be occurred by future developments.

The choice of business model may be a lesson, although in many cases these pilot projects are not yet decided the financing model. From the point of view of predictability, it is very important in what timeframe the development investments will be realised, these are indicated in each analysis.

Another important criterion is the definition of actors and participants: the distribution of the ratio of state, municipal and private sector.

2.4. Summarising the findings and results of the territorial analyses

Based on the above criteria, the following table has been prepared. On the left side of the table, the regional analysis aspects are displayed while the columns show each region.

Regions / Characteristics	Rostock Region (D.T1.2.1)	Free State of Saxony (D.T1.2.2)	Ústí Region (D.T1.2.3)	South Moravian Region (D.T1.2.4)	Bratislava Region (D.T1.2.5)	Győr-Sopron-Burgenland Region (D.T1.2.6)	Budapest Region (D.T1.2.7)
Level of intermodality	high	high	high	limited	high	limited	high
Number of intermodal terminals	4	5 train-road terminals and 3 tri-modal terminals	3	1	4	2	3
Barriers	infra: weak port hinterland infrastructure	geographical: Free State of Saxony is divided into lowlands, highlands and low mountain ranges transport: - railways: Dresden – Prague (DE-CZ) - Capacity bottlenecks in the Elbe valley (new high-speed railway line will not be operable before 2035) Various sections - delayed ERTMS deployment Urban nodes - capacity bottleneck - road: various sections - capacity bottleneck, lack of safe parking areas - IWW: Elbe River (DE-CZ) - Non-compliant draught (< 2,5m) - Airports: Halle/Leipzig, Dresden - Non-availability of alternative clean fuels	geographical (mountains) military polygon transport: - railways: the only double-track electrified line between CZ-DE via Ústi - road: lack of capacity of the main road connection nr. 13 - waterway: river Elbe is closed up to 6 months	transport: - railways: unsatisfactory capacity of the Brno-Prerov single-track - road: limited capacity towards Prague, unfinished motorways	geographical (saddle) transport: - railways: capacity of the railway lines in the larger area of Bratislava - road: lack of capacity of the roads entering Bratislava	geographical (mountains)	geographical (saddle) transport: -rail: strong passenger traffic, limited Danube crossing (only 1 bridge) - road: lack of capacity for transit, on the south section of M0 motorway ring is standing traffic jam and additional detour connections are missing -waterway: water-level deregulation on the Hungarian Danube section
Urbanisation	Rostock, Schwerin, Wismar, Stralsund, Greifsland, Neubrandenburg, Sassnitz	5 supracentral cities (Dresden, Leipzig, Chemnitz, Zwickau, Plauen), 1 supracentral city cluster with 3 cities (Bautzen, Görlitz, Hoyerswerda)	no big city in the area	Brno, Znojmo, Lednice	Bratislava, Tnava, Nitra		Capital and suburbs. pop. 3 M

Unemployment	unemployment rate: 6,7 % (2019)	unemployment rate: 5,5% (2019)	commuting to Prague and Saxony negative effects of economy structural unemployment	Generally low unemployment in the region, 3,1%. Within the region, the worst situation is in the south-western part, the best situation is in Brno	lowest unemployment in Bratislava region		almost no unemployment, shortage of labour is typical
Regional cooperation	Rostock - Øresund region; V-M - Hamburg, Stettin (Szczecin); inland of Germany	Cross-border cooperation with the Republic of Poland and the Czech Republic is particularly important for the Free State of Saxony	Saxony: emergency services	The region is an important transit hub	twin cities		International: Slovakia, inland: connection with the neighbouring counties
Industry	processing industry 31% health system 22% transport, forwarding service 20% other service 15% energy and water supply 5% retail 4% finance service 2% building industry 1%	Total industry revenue: 67.6 Mrd. EUR (2019), share of major industries automotive industry: 25% mechanical engeneering industry: 13% metal industry: 13% electrical engineering / microelectronics: 12% Food industry: 9% chemical industry: 4% other industries: 24%	coal mining chemical industry glass industry processing industry machinery industry	building industry engineering industry food industry electro-technical industry	automotive industry engineering industry pharmaceutical industry electro-technical industry food-processing industry		engineering industry food-processing industry electro-technical industry pharmaceutical industry
Agriculture		901 000 ha utilised agricultural area; a total of 462 920 livestock units		Dolnomoravsky, Dyjsko-Svratecky: livestock	Trnava nad Nitra regions: live stock		Pest county: livestock breeding and fruit/ vegetable cultivation
Dimension of freight traffic/country		Amount of goods in Mt for transports with start and/or destination in Saxony (2017) * excluding transit traffic ** including transit traffic *** excluding transit traffic, return flights and overflights					

rail road waterway air	0,74 Mt 18,85 Mt 27,05 Mt	23,5 Mt* 208 Mt* 0,2 Mt** 1,2 Mt***	50,7 Mt 29,6 Mt 0,8 Mt	172 Mt 57 Mt not available not available	47,8 Mt 176,8 Mt 1,8 Mt 0,4 Mt		52,7 Mt 202,2 Mt 8,6 Mt 50,9 Mt
Storage capacity of the terminals	Wismar Rostock Stralsund Sassnitz Virow	Dresden 90 000 TEU Port of Riesa 40 000 TEU Chemnitz Glauchau 70 000 TEU Leipzig 220 000 TEU	Lovosice 1000 TEU Ústi 800 TEU Obrnice 1700 TEU	Currently insufficient.	Bratislava-Pálenisko 1400 TEU Central Freight Station Dunajska Streda (METRANS) 25 000 TEU SLÁDKOVIČOVO 2800 TEU	Sopron-Terminal Gönyű	Rail Cargo Terminal - BILK (storage area: 22,3 ha, container handling (lifting):250.000 pc/year, storage: 6.900 TEU) Mahart Container Center Kft. (storage area: 10,4 ha (104.000 m2), container handling (lifting):175.000 pc/year, storage: 5.800 TEU) METRANS Konténer Kft. (storage area: 14,0 ha, container handling (lifting): 250.000 pc/year, storage: 20.000 TEU)
SWOT							
Strengths	M-V holds a long coastal area with several sea ports (gateways to the Baltic Sea) Rostock Port is one of the most competitive German Baltic Sea Port Established links (A19, A20, A14 [M-V to BR], A24, E55, E251), fast connection to Scandinavia and Adria Frequent trading	1. Increasingly attractive logistics location 2. Efficient metropolitan regions 3. Good connections to Central and Eastern Europe and to the German seaports 4. Modern handling facilities	Elbe river waterway as a traditional corridor for water/rail/road freight transport between CZ and DE Relatively sufficient capacities of main railways within the region for the freight transport Existing multimodal terminals and Elbe river ports with a potential for further development	Historical transportational intersection points Preferable geographical conditions transportation network is more or less built and still usable for transport Favourable geomorphological conditions	Transport network and connection to international routes Location at several TEN-T and RFC corridors Existence of road, rail, water and air (freight) transport Network of logistics facilities and distribution centres	Port of Győr-Gönyű electric rail lines GySEV CARGO Sopron Terminal	1. The presence of intermodal transport nodes – rail, road, water, air; 2. 11 railways, the majority of them is electrified; 3. Many production companies in the region; 4. 70 % of the country's logistic potential is cumulated in the analysed region;

	Intermodal Hubs			Enough capacity for border crossing Network of existing logistic centres	Currently majority of sections at the Bratislava node have enough capacity (throughput) for the current volume of regular transport	no borders (Schengen area)	5. 94 % of the combined transport operates in the analysed region; 6. Economic development level is above the EU average; 7. Strong purchasing power – vigorous trade flows; 8. International airport – continuously developing.
Weaknesses	Current hinterland infrastructure issues (conditions of established infrastructure) Tight approach fairways (e. g. Wismar) Fairway depth Last mile connections Current shunting routes	1. Poor accessibility of rural areas, especially in Eastern Saxony 2. Missing electrification of important railway lines (Dresden-Görlitz, Chemnitz-Leipzig) 3. Very high noise emissions of freight transport in the Elbe valley	Limited quality of road and rail infrastructure (incomplete motorway network, missing road bypasses, the poor state of some main railways) The low cross-border capacity of the rail connection	Poor quality of roads, especially D1 motorway Poor condition of bridges Most railway lines have not been renovated for 40 years No terminal allowing cargo transfer between all modes of transport Possible problems with rail hub in Brno Insufficient capacity of railway in East-West direction	Excess traffic loads on the roads leading to Bratislava Bratislava Main Railway Station has insufficient capacity of transport tracks for the current volume of regular transport Insufficient railway capacity in the section Bratislava-Nové Mesto - Bratislava Main Railway Station Several railway sections with low line speed Low preference of public passenger transport In some terminals, gantry cranes have a lower load capacity than current needs Insufficient length of handling rails in terminals	not electrified lines need of changing directions on some stations there is a detour towards the Adriatic lack of capacity of node Sopron parameters of the lines	1. Shortcomings in the preparation of projects; 2. Access to industrial sites by rail is only possible with diesel engines and on run-down tracks; 3. Lack of human resources – in all sectors; 4. Limited EU-tender opportunities; 5. Low proportion of environmentally friendly modes of transport.

					Insufficient loading infrastructure in the intermodal terminals		
Opportunities	Higher throughputs with enhanced hinterland infrastructure Connecting existing infrastructure Extension/intensification of current trade routes OEM corridor Access to European funds for the strengthening of port and inland port infrastructure Increase in handling efficiency	1. Additional federal funding (end of coal-based power generation) for infrastructure measures 2. Planned to shorten of the planning times 3. Rail freight transport using additional border crossings	High-speed railway increasing capacity of the cross-border connection and clearing capacity of conventional railways for freight trains SMART technologies and new technologies improving the effectiveness of freight transport (and boosting multimodal transport) Improved navigability of Elbe river waterway boosting waterway and multimodal transport	Switch of freight transport from road to rail Improvement of amenities for truck transport Fastening the connection to neighbouring countries	Modernisation of Bratislava Main Railway Station Construction of new railway stations and terminals of integrated passenger transport (TIOP) and reconstruction of existing railway stations Increasing the capacity of railway stations and railway lines (double-track or triple-track of existing tracks) in Bratislava City Improvement of road traffic situation after completion of strategic transport structures (D4 highway and R7 expressway) Completion of Outer Bratislava Highway Ring (D4 tunnel under Small Carpathians and connection to Austrian road network) Interconnection of international airports Bratislava and Vienna by railway connection Building of sufficient loading infrastructure in the intermodal terminals will enable to strengthen the position of combined transport in the region	building connection lines building local and regional routes attractive industry in West-Hungary agriculture growth of the transport needs shorter way to the Adriatic environment and climate	1. To increase the number of intermodal nodes; 2. Complex area and industry development; 3. Logistic and industrial potential in the area; 4. Extension of client range considering logistic companies; 5. Development of transport infrastructure; 6. Digitalization.

					(country)		
Threats	Sediment displacement Enlarging container terminals/feeder in BSR Intensification of direct Baltic Sea approaches by large container ship Technical issues (Cyber security with ongoing digital practise) Less throughputs caused by disease outbreaks or government interventions (currently: Corona virus)	1. Congestion of motorways (e.g. A4 towards PL) 2. Flood risks to the railway infrastructure along the OEM corridor (Dresden-Usti) 3. Persistent periods of low water levels on the Elbe river 4. Further increase in CO2 emissions 5. Demographic change (skilled workers)	Stagnation of rail/waterway infrastructure undermining the competitiveness of environment-friendly nodes Urban development undermining the development of rail/port freight transport Noise pollution control measures reducing operation of rail freight during night hours	Depleted capacity of transport roads and rails Lack of rest areas on roads Lack of truck and train drivers	Ever increasing traffic intensity at the entrances to Bratislava Section between Bratislava Main Railway Station and Kvetoslavov on the regional line Bratislava - Dunajská Streda - Komárno is overloaded (in terms of parameters from UIC 406) Insufficient capacity of some sections and railway stations already for the current volumes of transport (direction Bratislava - Dunajská Streda and partly direction Bratislava – Kúty - Czech Republic) Average age of critical infrastructure elements is high (it applies to both technical and technological equipment)	Speedway M85 and M86 path conflicts between PT and FT slow realising of the projects will of the local politics	1. In the short term the present infrastructure needs modernisation in many places; 2. New developments do not always consider the actually prospective capacities e.g. limited Danube-bridge capacity; 3. Congested road infrastructure – M0, M1, M3; 4. Limited regional developments – insufficient free area for development; 5. Possibility of worldwide economic crisis – EU economy slowing down; 6. Political risk, local interests; 7. Transit-country situation.

Trends 2030/2050	Constantly increasing trade relations among Baltic Sea neighbouring states Þ more employments in ports and forwarding service companies, higher regional income from port handling activities, increasing export range for regional agricultural and energy products Ship sizes tend to increase, boosting throughput volumes per ship Þ port infrastructure amendments must take place to serve changing developments and to keep competitive Freight throughputs on new Silk Road increase Þ goods will enter the BSR through seaports by more hinterland rail transport; development might impact positively M-V's port throughputs New corridor build-ups/extensions Þ change to generate attractive location places for new companies and industries in M-V, especially at infrastructure interfaces and preferably for processing industry	The considerable increase in the volume of trucks between Saxony and Poland, therefor Saxony is trying to avoid a further worsening of the tense situation on the A4 motorway. In Saxony, the possibilities for stops (loading / unloading sites) at the Glauchau, Leipzig, Kodersdorf, Horka and Görlitz stations are being investigated.	economic growth in CZ energy products of nuclear and coal will be phasing out significant reduction of consumption of the transport sector industry digitalisation	Becoming increasingly difficult to provide enough routes for freight trains Strengthening places that are classified as bottlenecks Construction of high-speed infrastructure	ensure plenty of freight routes (in peak and saddle alike) ensure in rail transport the minimisation of the impact of freight transport on the operation of the main passenger terminals ensure the efficient use of existing and, where necessary, to support new freight locations ensure increase the cooperation of rail transport with other modes of transport and increase its share in modern logistics processes, particularly in long-distance transport		GDP growth which results the growth of the household's outcome increase of transport volume, increasing the energy demand of the transport sector Road: The growth of road transport is in correlation with the trend in freight performance: slow but steady growth is expected. Rail: The volume index of rail transport is increasing, mainly due to the development of rail freight corridors. Waterway: The freight performances can be quadrupled especially in the case of bulk goods
Screening of documents:	Federal Transport Infrastructure Plan 2030 Build-up Orient/East-Med Corridor	Federal Transport Infrastructure Plan 2030 Transport Interconnection Forecast 2030			development concepts strategic development plan		Infrastructure planning masterplans Logistics Sector Policy Strategy

	Enhancement of port hinterland infrastructure Infrastructural preparation for Fehmarn Belt Fixed Link impacts (by 2028+) Strengthen tourism industry along M-V's coastal line Focus on agriculture and renewable energies in M-V's central areas Strengthening of supra-regional (+ international) infrastructure, business relations and cooperation Intensify use of over-slopping influences from bordering regions	Inland Waterway Transport Masterplan Rail Freight Masterplan Federal Programme „Future Rail Freight Transport“ Initiative „Deutschland-Takt“ Strategic Concept Rail - Railway Infrastructure in the Free State of Saxony Structural Development Act for Coal Mining Regions State Transport Plan of Saxony 2030 Regional transport plans Overall Concept Elbe Federal Spatial Planning Act Free State of Saxony – State Development Plan 2013 regional saptial planning documents			traffic modelling projects		Analysis of the Hungarian Transport, Forwarding and Logistics Market, and Mapping the Competition Situation and Competitiveness of the Transport Sector and its Subsectors National Transport Strategy Urban Development Concept Transport Development Strategy 2014-2030 Budapest Rail Node Study (BRNS) DRS 2019 Implementation - Implementation of EU macro-regional strategies Pest County Territorial Development Concept Study National Port Development Master Plan Strategy

Goals/targets of developments	Termination of motorway A14 Magdeburg-Schwerin, federal road Mirow-Wittstock, B96 extension Neubrandenburg-Berlin, fixing motorway A20, construction of federal road B192/B392, Usedom infrastructure enhancement & "Karniner Bridge" re-construction Speeding up designated railway corridors, Increasing axle load capacities up to 25 t on Rostock-Berlin & Stralsund-Berlin corridors, rail amendments to withstand FBFL, Hamburg-Szczecin: higher speed capacity (120 km/h) and addition siding tracks, re-activation of Berlin-Swinoujscie railway link Infrastructure & amendments: Ports (M-V) Infrastructure & amendments: Pipelines (M-V)	Further development of cross-border road and railway infrastructure Improvement of the overall condition of the state road network Better use of capacity reserves Improvement of performance and traffic safety on highly congested federal roads and state roads Improvement of the eco-compatibility of road freight transport	Modernize and complete the transport infrastructure in the international context Seek effective and sustainable logistics solutions using the principle of co-modality Create access to competitive multimodal transport chains for companies, using the railway and possibly waterborne transport Build public multimodal terminals in accordance with AGTC parameters, Create conditions for the development of rapid rail freight transport between the main points of transshipment and hubs of economic activity,	Extension of electronic toll collection and usage of new satellite technology Other limitations for trucks Change of voltage system Reconstruction of road infrastructure The region is currently missing a large multimodal terminal that is fully accessible for all transport modes.	a significant intervention in strengthening of the railway interconnection between east and west of Slovakia effects of the core northern route of the European Silk Road on trade with Russia development of port capacities as well as planned transported commodities. to ensure modernization and compatibility of technical parameters of railway infrastructure, enable development of railway transport		to support the general transport and economic development in the Hungarian Central Region with the needs formulated by CorCap, participation in a specific development in Freeport of Csepel: the Smart Gate System to facilitate road traffic and the fluent movement the transhipment

		Support of research projects for alternative road surface structures with increased requirements for evenness and improved grip Elimination of bottlenecks in the railway network Development of technologies and concepts for the innovative use of available railway infrastructures Development of the airports Leipzig/Halle and Dresden in line with demand for intercontinental air traffic Better integration of Leipzig/Halle Airport into the national railway network Maintenance of the Elbe river for inland navigation / Provision of reliable operating conditions for inland waterway transport Expansion of the ports of Riesa and Dresden in line with demand Further qualification of ports with road and rail connections to better meet their function as hubs or terminals for	Support new concepts of city distribution based on the principles of City Logistics; Set lower rates on the charges for the use of the transport route for single wagon consignments and in case of combined transport only for intra-continental lines. Create conditions for the development of air freight transport Ensure the operation of the Rail Freight Corridors on the territory of the Czech Republic Create suitable conditions for the utilization of waterborne transport. Support the deployment and development of ITS systems for freight transport in public logistics determine continuous relations of international long-distance freight and determine procedures of implementation of the operation of longer trains allowing connection of the territory of the Czech Republic onto European high-speed railway network	Relocation of Brno Railway Station to the southern part of the city. Development of air freight transport.			

		combined transport					
Node functions for the future	To strengthen corridor nodes in M-V, especially the ports Rostock and Wismar To serve higher demand and to adapt to increasing ship sizes approach fairways in Rostock and Wismar need to be deepened Port hinterland infrastructure in catchment area must improve to enhance node practise Newly developing port storage and operation areas should/must be accessible by rail Ongoing port electrification and digitalisation must take place to keep the ports competitive and to comply and to enable networking activities Sufficient human capital and technical equipment to secure node efficiency Railway upgrading to forward goods timely in proper quantities	- Prioritisation of gap closure and construction measures in road sections with high heavy traffic - Establishment of additional offers in combined transport (including non-cranable semi-trailers) - Testing of heavy load routes for the designation of heavy load corridors - Examine the inclusion in the VEMAGS® Interactive Map additional information on loading possibilities for large and heavy goods in ports and rail loading points - Provision of state budget funds for preliminary planning on the railway network - Provision of budgetary resources for NE (private) railway infrastructure for rail freight - Expert participation in the implementation of measures agreed in the Elbe master plan for freight shipping, regular maintenance of the Saxon Elbe - Reintroduction of a state funding programme for private sidings - Pilot project to assess the effects of extending the 44-tonne derogation (truck axle load limit) - Pilot projects with	Ústi nad Labem	Brno	Bratislava	Sopron	Budapest Freeport Csepel: Improvement of intermodality, in the first place raising of level of service at inland waterway transportation.

		Saxon railway companies or logistics locations (e.g. use of innovative/ modular freight wagons) - Use of the air freight handling station at Leipzig/Halle Airport for (time-critical) pre-carriage and onward carriage by rail - Pilot projects for the digitisation of multimodal logistics chains involving inland navigation - Consideration of the requirements of logistics-intensive companies in local land use planning (e.g. dimensioning of access roads) - Coordinated strategy for the development of nationally significant settlement areas for logistics-related uses					
Regional challenges and needs	implementation issues financing	Road: - Creation of new border crossings and increased permeability for freight traffic DE-CZ - Maintenance and improvement of road infrastructure, closing of existing gaps - Construction of additional truck parking areas and service stations on motorways - Designation of "heavy goods roads" - Improvement of performance and traffic safety on highly congested federal roads and state roads - Promotion of a future-oriented transport policy:	Securing faster (passenger) train connection to Prague from regional centres Securing faster and/or direct (passenger) train connection to Dresden from main regional centres		To build sufficient capacity of rail corridors at the Bratislava Railway Junction To strengthen regional rail suburban transport as part of the integrated transport system, which also includes the building of new sections of regional railway lines	- political outlooks in Hungary and in Austria - big challenges because of the political willingness	Better connection between RFCs and the Danube waterway plus a good possibility to utilization of logistic makings in Budapest region Possibilities to creation of a new intermodal node for Nordwest-Southeast transport corridor

		with a share of more than 90%, the majority of freight traffic is currently transported by road - Improvement of the eco-compatibility of road freight transport (city logistics concepts, alternative engines in urban areas) - Extension of the A4 motorway - Expansion of the Central Germany-Lusatia road link (MiLau)					
	to hold time constrains	Rail: - Elimination of bottle-necks & improvement of urban-rural connections - Further development of cross-border railway infrastructure - Expansion of rail nodes according to demand - Provision of economical-ly viable long-distance passenger rail transport and rail freight transport - Development of techno-logies and concepts for innovative use of railway infrastructures (e.g. reactivation/re-commissioning of dedicated and cancelled railway lines as required)	Increasing capacity of RFC 7 for freight trains		To increase the use of the railway line No.116 Trnava - Senica - Kúty, because of the relieving of the railway junction Bratislava, especially from transit freight transport	-Lack of employees	
	standing oppositions/regional activism	Air: - Development Leipzig/ Halle and Dresden airports in line with demand for inter-continental air traffic - Expansion of the freight hub Leipzig/Halle airport	Improving the quality of railway infrastructure Securing operability of railway no. 090 / 098 Prague – Ústí nad Labem – Děčín		Modernization of the railway lines to 160-200 km in flat western Slovakia and electrification of currently non-electrified lines will meet the European standard for passenger and freight transport Extension of broad-gauge line China - Russia - Ukraine - Slovakia - Austria	-Different salaries	
	compliance of regional and EU policies						
	intermodal competitiveness	- Better integration of Leipzig/Halle airport into the national railway	Securing operation of freight trains with a length of at least 740 m		Interconnection of the TEN-T railway corridor with the airport and railway network in Bratislava		

	COVID-19	network - Reduction of CO2 and noise emissions IWW: - Maintenance of the Elbe river for inland navigation, reliable conditions for IWT - Expansion of ports in Riesa and Dresden in line with demand Multimodal terminals: - Demand-oriented expansion of freight villages - Further qualification of ports with road and rail connections as hubs or terminals for combined transport - Development of a further location in southwest Saxony for multimodal transport	Switch 3 kV DC on railways to 25 kV/50 Hz AC power supply – to secure enough capacity of power supply for operation of stronger locomotives, Secure sufficient capacities of intermodal terminals with proposed improvements of railway infrastructure and spatial reserves for their future development Secure redevelopment of the vicinity of railway stations in regional centres to capitalize the potential of faster train connection,				
Future capacity utilisation		New railway-line Dresden-Prague: - Reduction of travel times for long-distance passenger traffic between Dresden and Prague - Significant increase of rail freight capacity - Reduction of noise pollution along the existing route in the Elbe Valley and creation of a flood-proof routing	New line: high-speed passenger trains, conventional line: more capacity for freight trains		Double tracks and electrification on the line Vienna - Marchegg - Devínska Nová Ves Double tracks and speed up to 160 km/h on the line Kittsee - Bratislava Third track Bratislava hl. st. - Devínska Nová Ves + new tunnel		A new faster railway connection to the northern seaports and northwester industry & logistic areas plus a rapid freight line for primeur farm produce
Business model			Financing from the public sector and esp. by co-financing from ESIF	It is not fully decided yet. European union subsidy. Vast majority of developments will be financed and operated by public sector	not decided yet		not decided yet

			Co-financing from ERDF, CF, CEF and even other funds and/or through other instruments is a necessity for realizing proposed developments				
Chronology (timeframe)		2038-2050	2020-2045	2035-2050	2035-2050		2020-
Stakeholders	freight forwarders (esp. DB Schenker, DHL, DSV, LKW Walter) operators administration	transport companies regional ministries of transport and spatial planning (Saxony, Ústecký kraj), regional spatial planning authorities	transport companies municipalities public	transport companies state actors public/media	relevant public administration institutions infrastructure managements municipalities		transport companies state actors
Pilot project	Publicity politics/EU	Logistics concept for an OEM freight liner train Rostock-Saxony/Czech Republic	Follow-up studies that would design the development of conventional railways, freight transport infrastructure and urban development concerning planned high-speed railway projects Public acquisition of land to get in control over the development of the vicinity of railway stations and/or land necessary for the construction of the high-speed railway and its facilities	Speeding up railway connections in the sections of Brno-Prerov and Brno-Vranovice Finishing highway constructions Completion of road rings	Further development of Bratislava port and its interconnection with other transport terminals IDS BSK (Integrated Transport System of Bratislava Region) Investments to improve and increase the capacity of the railway interconnection within the Bratislava Railway Junction Potential extension of the broad-gauge line across the south of Slovakia to Austria Bratislava ring road Logistics centres and car parks the development of the capacity of Bratislava Airport with a particular focus on the development of air freight	To run a 740 m long demonstration train	

Upon the result of the prepared table, based on the criteria above, the following conclusions and consequences can be drawn:

- In most of the regions, the level of intermodality is high, so the conditions of combined transport are suitable;
- Geographical barriers are present in most regions, this can increase the investment costs;
- The rivers of examined regions cannot be navigated all year round, which hinders the continuity and availability of water transport;
- The good quality industry is presented in most regions, which may provide a basis for the future transport performance growth;
- The unemployment is low (mostly in industrial areas), which has a good effect on demand;
- The regional relations play a significant role within the country, in international relation it has a lower extent;
- Agriculture is more significant in only some regions, so the transport of agricultural products appears as an import activity rather than an export;
- The road transport plays a key role in transport, followed by rail and waterways;
- The capacity of intermodal terminals is very different;
- As for the SWOT analysis:
    - strengths
        - availability of adequate infrastructure;
        - existence of terminals;
    - weaknesses
        - non electrified rail lines;
        - emission of noise, pollutants, greenhouse gases and CO_2;
        - poor quality of the infrastructure in some regions;
    - opportunities
        - faster connections (high speed railways, motorways, air connections);
        - technical modernisation;
        - growth of transport needs (industrial potential);
        - digitalisation in transport, communications, etc.;
    - threats
        - low water level (rivers cannot be shipped);
        - demographic change (elder population and less born);
        - increasing of emission (more road transport more emission of CO_2);
        - lack of employees (e.g. engine-driver, engineer);
        - congestion of rail infrastructure (too many trains on tracks);

  - worldwide crisis (the measures taken to stop the epidemic and their effects);
  - politics (change of directions, another key points, key sectors).
- According to the trend analysis the capacity demand and energy consumption of freight transport are increasing, but the rate of digitalisation is also growing but this may have a decreasing effect on transport needs;
- According to the screening documents the largest investors are the states, the most of the development ideas are laid down in-state strategy documents;
- The most important development goals include the increasing the share of railways, eliminating the bottlenecks, modernising transport infrastructure including the electrification of the railway lines;
- As for the challenges and needs the most important issue is to create faster rail connections, but labour migration due to the different wages cannot be neglected;
- The better utilisation of the capacities in the future is depending on the double track and faster railway lines;
- The business models are not yet developed and decided, public funding and the EU can play an important role;
- Timeframe: 2020 – 2050;
- As for the actors: the participation of the state and the region and the involvement of transport companies and key stakeholders are expected everywhere.

Conclusions from regional analyses that can be drawn for further implementation of the pilots

The intermodality level is high in the whole CorCap area, which means a good basis for the future developments. The developments should deal with the main goal of the project: environmentally friendly advancement. They should take advantage of adequate infrastructure. The developments can be reached with less manpower e.g. digitalisation and modernisation (e.g. smart systems). Those pilot actions are very suitable, which help to realise the main goal of the project.

Mainly they are pilots in correlation with train and waterway traffic. These two modes of transport are the most environmentally friendly ways of goods transport. In the railway sector, there is an opportunity to raise the speed of the transport. But of course, the capacity of these sectors cannot be increased to infinity. That is why to make pilot action to reach a better utilisation of the already existing capacities (e.g. longer trains).

The timeframe is important. We do not have too much time until the irreversible climate change, as one of the biggest challenges of the future. The success of the whole project depends on how politicians and decision-makers can understand our goals. The developments, even the pilot actions should meet political willingness. With our project and pilot actions, we have to answer the social challenges of each region.

The right direction of development plans provides an answer to the challenges and needs of each region. The pilots cannot be transplanted from one to another region without any thought and background analysis. The local specificities, regional characteristics should be taken into account.

Relation of the pilots to the development of the OEM corridor

Firstly, one of the main development goals of the OEM corridor is the elimination of the bottlenecks of the infrastructure. The CorCap's pilot actions should contribute to achieving these "green" goals. The intermodality and interoperability goals mean a faster good transport mode, which is the basis of CorCap. Sustainability and innovation are also very important goals for the future. To reach these, we need to emit less emission of pollutants and noise and use more electric power. Pilots need to help achieve these goals.

Another OEM development goal is improving the competitiveness of international rail freight transport. All of the pilots looking forward to this direction are suitable for the development of the OEM corridor and CorCap.

As pilot projects correlate with the OEM corridor development plans and the achievement of CorCap project goals, synergies should be positive.

3. RELATIONSHIP BETWEEN SPATIAL CHARACTERISTICS AND PILOT ACTIONS

3.1. Methodology

After analysing the regions, the fit to the pilots is examined. This can be done by using the table in the previous chapter. After retaining the analysis criteria and the names of the regions, the fit to the given cell can already be examined. The strength of the fit is assessed on a three-gradual scale. The scale is divided by dots as follows:

Degree of connection	Number of dots
low	1
medium	2
high	3

In the case of pilots, different colours are used to identify them. These appear as follows:

Topic of the pilot action	Deliverable	Colour
Smart traffic management system for the Budapest Freeport	D.T2.2.1-3	Blue
Solutions for accessibility harmonisation of inland ports in the German-Czech section of the OEM corridor	D.T2.2.4-5	Orange
Analysis of goods flows and development of logistics concept for new intermodal services along the OEM corridor	D.T2.3.1-4	Red
Logistics concept for an OEM freight liner train Rostock-Saxony/Czech Republic	D.T2.3.5-6	Green
Low-cost improvements for rail freight transport along the OEM corridor and related railway networks	D.T2.3.7-10	Grey
Identification of attractive multimodal logistics locations and elaboration of profiles for development in the South Moravian Region and in the Bratislava Region	D.T2.4.1-5	Yellow

The table generated by using the above notations is suitable for showing which characteristics best fit which pilot. These matches are also explained in text in addition to the proposals on transferability.

3.2. Matrix analysis

This chapter presents the degree of fit of the pilots for each region. The table has also been filled in depending on the strength of the pilots' adaptation to the given regional characteristic (1-3 points - pilots with different colours).

Based on the analysis of the matches, the following table was obtained:

Name of the region / Characteristics	Rostock Region (D.T1.2.1)	Free State of Saxony (D.T1.2.2)	Ústí Region (D.T1.2.3)	South Moravian Region (D.T1.2.4)	Bratislava Region (D.T1.2.5)	Győr-Sopron-Burgenland Region (D.T1.2.6)	Budapest Region (D.T1.2.7)
Level of intermodality							
Number of intermodal terminals							
Barriers							
Urbanisation							
Unemployment							
Regional cooperation							
Industry							
Agriculture							
Dimension of freight traffic/country							
rail							
road							
waterway							
air							
Storage capacity of the terminals							
SWOT							
Strengths							
Weaknesses							
Opportunities							
Threats							
Trends 2030/2050							
Screening of documents							
Goals/targets of developments							
Node functions for the future							
Regional challenges and needs							
Future capacity utilisation							
Business model							
Stakeholders							
Pilot project							

The table shows that connection points can be observed in many cells. However, of these points, we only want to analyse in more depth those for which a high degree of connection has emerged. The region in which the pilot in question will be implemented is excluded from the analysis because it is assumed that the particular pilot was selected because it can adequately respond to the challenges and needs of that region.

Based on the completed table, it can be seen that a high level of connection can be observed for **the D.T2.2.1-3 pilot (Blue)** in the following regions:

Rostock Region (D.T1.2.1)

- name of the characteristic: **Dimension of freight traffic/country: waterway**
  REASON: Due to the outstanding dominance of waterway traffic, traffic management is essential for the logistics centers concerned e.g. Port of Rostock
- name of the characteristic: **Strengths**
  REASON: It is an outstanding intermodal hub with significant trade flows
- name of the characteristic: **Trends 2030/2050**
  REASON: In the case of increasing waterway freight traffic and port logistics activities, the coordination of these activities and volumes will be even more crucial

Free State of Saxony (D.T1.2.2)

- name of the characteristic: **Number of intermodal terminals**
  REASON: The number of logistics centres and the degree of intermodality are high, which is decisive for the pilot
- name of the characteristic: **Storage capacity of the terminals**
  REASON: It is the most prominent of the regions, the supply of which requires serious logistical conditions
- name of the characteristic: **Strengths**
  REASON: An increasingly attractive logistics location is characterized as a strength which strongly associate with this pilot

Ústí Region (D.T1.2.3)

- name of the characteristic: **Opportunities**
  REASON: This pilot is already a smart solution in itself that can help you make better use of logistics opportunities
- name of the characteristic: **Goals/targets of developments**
  REASON: It can be an efficient and sustainable logistics solution for them that would promote co-modality

Bratislava Region (D.T1.2.5)

- name of the characteristic: **Dimension of freight traffic/country: road**
  REASON: Due to the outstanding dominance of road traffic, traffic management is essential for the logistics centers concerned
- name of the characteristic: **Strengths**
  REASON: In the case of a network of logistics facilities and distribution centers, it is essential to manage the traffic induced in them

Based on the completed table, it can be seen that a high level of connection can be observed for **the D.T2.2.4-5 pilot (Orange)** in the following regions:

Rostock Region (D.T1.2.1)	•name of the characteristic: **Goals/targets of developments** **REASON**: As a result of railway developments, it will be worth re-evaluating the region from the perspective of this pilot
Ústí Region (D.T1.2.3)	•name of the characteristic: **Barriers** **REASON**: Due to the presence of the river Elbe, it is very justified to take into account the results of this pilot •name of the characteristic: **Strengths** **REASON**: The exploration of existing roads and bottlenecks is outstanding for the navigability of the Elbe and for the multimodal terminals •name of the characteristic: **Goals/targets of developments** **REASON**: The pilot can help achieve the goals of the region
Bratislava Region (D.T1.2.5)	•name of the characteristic: **Strengths** **REASON**: The existence of waterway transport induces proper regulation of TEN-T corridors connected to oversized and heavy goods transports
Győr-Sopron-Burgenland Region (D.T1.2.6)	•name of the characteristic: **Strengths** **REASON**: The existence of waterway transport induces proper regulation of TEN-T corridor connected to oversized and heavy goods transports
Budapest Region (D.T1.2.7)	•name of the characteristic: **Barriers** **REASON**: Due to the presence of the river Danube, it is very justified to take into account the results of this pilot •name of the characteristic: **Strengths** **REASON**: The existence of waterway transport induces proper regulation of TEN-T corridor connected to oversized and heavy goods transports •name of the characteristic: **Trends 2030/2050** **REASON**: In the case of increased waterway freight traffic, its coordination between the point of origin and destination will be even more crucial •name of the characteristic: **Screening of documents: National Port Development Master Plan Strategy** **REASON**: This document also touches on the topic of the pilot

Based on the completed table, it can be seen that a high level of connection can be observed for **the D.T2.3.1-4 pilot (Red)** in the following regions:

Free State of Saxony (D.T1.2.2)

- name of the characteristic: **Strengths**
  REASON: With good accessibility and connections (even with seaports), rail freight has an advantageous position
- name of the characteristic: **Screening of documents**
  REASON: There are many promising studies to increase the share of rail freight transport

Ústí Region (D.T1.2.3)

- name of the characteristic: **Barriers**
  REASON: The only double-track electrified line between CZ-DE is via Ústi and there is a lack of capacity of the main road connection nr.13
- name of the characteristic: **Strengths**
  REASON: There are a relatively sufficient capacities of main railways within the region for the freight transport
- name of the characteristic: **Opportunities**
  REASON: The development of railway infrastructure can promote the willingness to change modes
- name of the characteristic: **Goals/targets of developments**
  REASON: A lot of plans to increase the share of rail freight transport
- name of the characteristic: **Pilot projects**
  REASON: Several pilot projects which will help to increase the share of rail freight transport

South Moravian Region (D.T1.2.4)

- name of the characteristic: **Opportunities**
  REASON: Facilitating the shift of freight from road to rail and fastening the connection to neighbouring countries can promote the willingness to change modes

Bratislava Region (D.T1.2.5)	•name of the characteristic: **Dimension of freight traffic/country: road** **REASON**: Due to the outstanding dominance of road traffic, it may be particularly important to divert it to rail •name of the characteristic: **Strengths** **REASON**: The advantageous location in several TEN-T and RFC corridors promotes the willingness to change modes •name of the characteristic: **Opportunities** **REASON**: Improvemnet of the existing infrastructure can promote the willingness to change modes •name of the characteristic: **Trends 2030/2050** **REASON**: They would like to ensure the increase of the cooperation of rail transport with other modes of transport and increase its share in modern logistics processes, particularly in long-distance transport
Győr-Sopron-Burgenland Region (D.T1.2.6)	•name of the characteristic: **Opportunities** **REASON**: Development potential to facilitate mode change
Budapest Region (D.T1.2.7)	•name of the characteristic: **Dimension of freight traffic/country: road** **REASON**: Due to the outstanding dominance of road traffic, it may be particularly important to divert it to rail •name of the characteristic: **Strengths** **REASON**: Adequate railway infrastructure to deal with any increase in railway volumes •name of the characteristic: **Weaknesses** **REASON**: The low proportion of environmentally friendly modes of transport can be changed with a well-supported transport concept •name of the characteristic: **Opportunities** **REASON**: Improvemnet of the existing infrastructure can promote the willingness to change modes •name of the characteristic: **Screening of documents** **REASON**: There are many promising studies to increase the share of rail freight transport

Based on the completed table, it can be seen that a high level of connection can be observed for **the D.T2.3.5-6 pilot (Green)** in the following regions:

Rostock Region (D.T1.2.1)	•name of the characteristic: **Goals/targets of developments** **REASON:** As a result of railway developments, it will be worth re-evaluating the region from the perspective of this pilot
Ústí Region (D.T1.2.3)	•name of the characteristic: **Opportunities** **REASON:** High-speed railway increasing capacity of the cross-border connection and clearing capacity of conventional railways for freight trains •name of the characteristic: **Goals/targets of developments** **REASON:** A lot of plans to increase the share of rail freight transport and and deepen cross-border links •name of the characteristic: **Regional challenges and needs** **REASON:** Plans for securing faster and/or direct (passenger) train connection to Dresden from main regional centres
South Moravian Region (D.T1.2.4)	•name of the characteristic: **Dimension of freight traffic/country: rail** **REASON:** Due to the outstanding dominance of rail traffic, the involvement of these regional actors in the concept may be particularly important in the future
Bratislava Region (D.T1.2.5)	•name of the characteristic: **Strengths** **REASON:** Due to the advantageous location in several TEN-T and RFC corridors, the involvement of these regional actors in the concept may be particularly important in the future •name of the characteristic: **Trends 2030/2050** **REASON:** They would like to ensure the increase of the cooperation of rail transport with other modes of transport and increase its share in modern logistics processes, particularly in long-distance transport •name of the characteristic: **Regional challenges and needs** **REASON:** Plans for interconnection of the TEN-T railway corridor with the railway network in Bratislava
Budapest Region (D.T1.2.7)	•name of the characteristic: **Strengths** **REASON:** It has a strong logistics base and background infrastructure •name of the characteristic: **Opportunities** **REASON:** Logistic and industrial potential in the area and there is a plan to extand of the client range considering logistic companies •name of the characteristic: **Regional challenges and needs** **REASON:** There is a good possibility for the utilisation of logistic makings in the Budapest region and a need for a better connection between Rail Freight Corridors and the Danube waterway •name of the characteristic: **Future capacity utilisation** **REASON:** Plans for a new faster railway connection to the northern seeports and northwester industry and logistic areas

Based on the completed table, it can be seen that a high level of connection can be observed for **the D.T2.3.7-10 pilot (Grey)** in the following regions:

Rostock Region (D.T1.2.1)	•name of the characteristic: **Opportunities** **REASON**: This pilot can help in mapping low-cost investment opportunities and intelligent capacity planning
Free State of Saxony (D.T1.2.2)	•name of the characteristic: **Barriers** **REASON**: In the case of a delayed ERTMS deployment, the system approach to be developed may be a solution •name of the characteristic: **Opportunities** **REASON**: The system could help to shorten planning times
Ústí Region (D.T1.2.3)	•name of the characteristic: **Opportunities** **REASON**: The new technology can improve the effectiveness of freight transport (and boost the multimodal transport) •name of the characteristic: **Regional challenges and needs** **REASON**: Plans for increasing the capacity of RFC 7 for freight trains and securing the operation of freight trains with a length of at least 740 m •name of the characteristic: **Future capacity utilisation** **REASON**: New line for high-speed passenger trains and a conventional line to have more capacity for freight trains
South Moravian Region (D.T1.2.4)	•name of the characteristic: **Trends 2030/2050** **REASON**: The system could help to provide more routes for freight trains and to strengthen places that are classified as bottlenecks
Bratislava Region (D.T1.2.5)	•name of the characteristic: **Weaknesses** **REASON**: This pilot can help in mapping low-cost investment opportunities and intelligent capacity planning •name of the characteristic: **Trends 2030/2050** **REASON**: The system could help to provide more routes for freight trains and to ensure the minimisation of the impact of freight transport on the operation of the main passenger terminals
Budapest Region (D.T1.2.7)	•name of the characteristic: **Barriers** **REASON**: Due to the strong passenger traffic and the limited Danube crossing (only 1 bridge), traffic management is of paramount importance.

Based on the completed table, it can be seen that a high level of connection can be observed for **the D.T2.4.1-5 pilot (Yellow)** in the following regions:

Free State of Saxony (D.T1.2.2)	• name of the characteristic: **Industry** **REASON**: Due to the presence of many industries, it can be assumed that there are many logistics centers in this region, which are the focal points of the analysis • name of the characteristic: **Strengths** **REASON**: It would be interesting to transpose the study in terms of metropolitan region and attractive logistics locations as characteristics • name of the characteristic: **Trends 2030/2050** **REASON**: The considerable increase in the volume of trucks between Saxony and Poland • name of the characteristic: **Screening of documents** **REASON**: The pilot results can serve as background for regional Master Plan modifications • name of the characteristic: **Goals/targets of developments** **REASON**: The further development of cross-border road and railway infrastructure will facilitate the availability of logistics centers
Ústí Region (D.T1.2.3)	• name of the characteristic: **Threats** **REASON**: Stagnation of railway infrastructure, which undermines the competitiveness of environmentally friendly hubs • name of the characteristic: **Goals/targets of developments** **REASON**: Create access to competitive multimodal transport chains for companies, using the railway
Győr-Sopron-Burgenland Region (D.T1.2.6)	• name of the characteristic: **Opportunities** **REASON**: Theres is an attractive industry in West-Hungary and the transport needs are growing
Budapest Region (D.T1.2.7)	• name of the characteristic: **Strengths** **REASON**: 70 % of the country's logistic potential is cumulated in the this region • name of the characteristic: **Opportunities** **REASON**: Complex area, transport infrastructure and industry development is needed • name of the characteristic: **Trends 2030/2050** **REASON**: The volume index of rail transport is increasing, mainly due to the development of rail freight corridors • name of the characteristic: **Screening of documents** **REASON**: The pilot results can serve as background for regional Master Plan modifications

4. RECOMMENDATIONS AND CONCLUSIONS

Based on the previous chapter, it can be seen that there are a number of regional features that the pilots selected by the project partners could either make very good use of and further highlight its importance or resolve and remedy the situation.

In order to facilitate knowledge sharing, we also make proposals for the pilot partners related to each pilot for which regions it would be expedient to transfer the acquired knowledge. Thus, increasing the synergistic impact of the CorCap project along the OEM corridor.

In the case of the **D.T2.2.1-3 pilot**, we believe that the Rostock Region, Free State of Saxony, Ústí Region and Bratislava Region are the most potential target areas for the transfer of results and knowledge. So, the transferable automated access control and traffic management system that will be developed is targeted to these intermodal sites located in these regions, but also to any intermodal logistics sites that are in need of a similar solution or identifying similar challenges as FBL.

All river ports in CE region that are connected to road transportation may be interested to learn about the outcome and product that the Pilot Action will deliver.

But there are some risks of transferability too. For example, the system can be used only by “closed” logistics centres that are not situated on public roads and access to the site has to be controlled.

The system can be implemented as a boxed solution only for those sites that has no current system in place, especially any automated process for the management of the traffic flow. An existing system may limit its effectiveness.

The logistics sites, which would like to implement this system, have to meet a certain complexity in order to take full advantage of the system deployment.

In the case of the **D.T2.2.4-5 pilot**, we believe that that the Rostock Region, Ústí Region, Bratislava Region, Győr-Moson-Sopron-Burgenland Region and Budapest Region are the most potential target areas for the transfer of results and knowledge. The most relevant of these would be the Budapest and Ústí Regions because this pilot will develop solutions for the access of heavy and oversized goods transports to the inland ports. It will give further recommendations for the improvement of the accessibility of other comparable loading points along the Orient-East-Med- corridor. It will be advisable to take its recommendations into account, as it will also show the locations where the pilot's lessons should be transferred.

Its target group consists mainly of the port operators, transport and heavy lift operators, shippers of heavy and oversized goods, road infrastructure authorities, business development agencies.

In the case of the **D.T2.3.1-4 pilot**, it can be seen from the analysis that each region could be considered as a potential target area for the transfer of results and knowledge. This is because the approach developed during the implementation of the action will be generally transferable to the interested public and the willingness to change modes in the direction of the railway will be assessable everywhere along the corridors.

It will show and verify how to implement such actions successfully and will demonstrate how each type of market player can identify and approach potential users to convince them of using a newly developed transport offer. It is to be seen as a strategic guideline. Even a model-based calculation concept to elaborate costs for a new transport concept is transferable to the general public.

In the case of the **D.T2.3.5-6 pilot**, we believe that that the Rostock Region, Ústí Region, South Moravian Region, Bratislava Region and Budapest Region are the most potential target areas for the transfer of results and knowledge.

The structure and approach will show ways how to implement future freight train projects in the TEN-T corridors. Within the partnership, the Hungarian partners are seen as the most relevant target group for the transferability of the logistics concept based on the numbers of dots and special characteristics. Target groups in Central Europe are rail freight companies, terminal operators as well as inland and seaports.

In the case of the **D.T2.3.7-10 pilot**, we believe that that the Rostock Region, Free State of Saxony, Ústí Region, South Moravian Region, Bratislava Region and Budapest Region are all potential target areas for the transfer of results and knowledge.

The concrete purpose of this pilot is to develop – and partly demonstrate – a system approach for possible improvement measures for rail freight based on low-cost investments and smart capacity planning and traffic management and to apply this approach on the OEM-corridor, resulting in proposals for concrete measures along a section of the OEM corridor. A technical demonstrator is also part of the pilot action.

The specific potential projects identified through the application of the system approach to the Brno-Budapest section of the corridor are, naturally, specific to the locations concerned, but it is likely that similar solutions could be identified and implemented in other parts of the corridor as well as in other corridors.

The general system approach can be considered as generally applicable to railway corridors in Europe. During the implementation phase both RFC7 OEM and RFC11 Amber corridors will be involved. The solutions elaborated under the pilot action are in principle transferable to any other entities involved in planning and managing of rail-freight related infrastructure along the OEM corridor, including planning authorities and entities in charge of policy decisions, such as Ministries.

In terms of risks, certain elements of the guidelines could be specific to certain conditions (such as single or double track), but none of these conditions are unique to the OEM corridor.

In the case of the **D.T2.4.1-5 pilot**, we believe that that the Free State of Saxony, Ústí Region, Győr-Moson-Sopron-Burgenland Region and Budapest Region are the most potential target areas for the transfer of results and knowledge.

The purpose of this pilot activity is to assess the impact of the expected increase in rail freight intensity in the RFC 7 OEM (incl. the part of TEN-T) corridor from the point of view of spatial planning on the territory and to propose a way to bring these findings into spatial planning and other relevant strategic documents of the South Moravian Region and Bratislava Regions. Based on these analyses, this methodology can be applied to the NUTS 3 regions of the listed territorial units as well. The stakeholders in these regions should also identify their attractive multimodal logistics locations and elaborate their profiles for the development.

The approach will be based on a GIS-based assessment of regional accessibility in the affected area according to different modes of transport and the analysis of scenarios of transport development until 2050. These results should serve for masterplans updates.

There are some risks to putting outputs into practice among the partners that are worth paying attention to:

- Employee turnover at regions;
- Unexpected important (transport, business) investments in the region;
- Outputs are too specific for spatial planning needs in the conditions of Slovakia and Czech Republic;
- Outputs are too oriented to Bratislava and South Moravian Regions environment.

It is very important to note that this analysis is based entirely on studies and reports prepared by the project partners. Thus, the following decision support tool was created only by referring to these inputs and trusting their authenticity. However, before transfer the knowledge of a pilot project, it is strongly recommended to map the regional characteristics at a deeper level and to adapt the content of the pilots to these local specificities in order to have the expected positive effect.