



## Annex K6T6 - Definition of multimodal clusters, clusters and packages

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The prioritization is applied to clusters, which are further grouped into multimodal clusters. Multimodal clusters are derived from multimodal corridors (see Annex K6T5). The multimodal clusters serve as a basis for multimodal assessment of transport infrastructure development projects so that it is possible to address the DNSH principle, especially its mitigation areas. Therefore, the development needs are divided into three groups according to their characteristics:

- **Basic needs** covering conventional infrastructure of such parameters that all ITI regions can fulfil their basic functions. This means ensuring a connection by conventional railway with competitive travel times and capacity, and a road connection of adequate capacity and routing outside the built-up areas of municipalities.
- **Target needs** providing further significant improvement in the quality of transport connections beyond the basic needs, which will increase the competitiveness of the respective region so that it can fulfil its "growth pole" function. This is, for example, the construction of high-speed railway lines or other roads enabling further expansion of the range of services.
- **Auxiliary needs** are met by clusters that further improve the condition in a partial way by removing bottlenecks impeding speed or capacity, or offer additional services in the already implemented basic needs clusters or ensure the interconnection in an alternative way.

*Note: each cluster is listed only once. Example: if the cluster is part of the connection of two neighbouring metropolises (e.g. Brno – Ostrava), and at the same time it is part of the connection of the agglomeration to the catchment metropolis (e.g. Brno – Olomouc), it is included in the list only under the connection of metropolises and it is not listed among connections of agglomerations to the catchment metropolis.*

*Clusters of individual modes of transport are defined in the bullet points below the multimodal clusters.*

### Multimodal cluster Prague node

#### Basic needs

- Capacity increase and modernization of the Prague railway junction
- Conventional railway (CR) Prague Masarykovo nádraží - Václav Havel Airport
- Completion of the D0 motorway (511, 518, 519, 520), widening to 6 lanes along its entire length

#### Target needs

- CR New Connection II

### Multimodal cluster State border with Germany – Ústí nad Labem – Prague / Kolín

#### Basic needs

- CR Prague – Ústí nad Labem - Děčín st. border
- CR Děčín Prostřední Žleb – Lysá n/L – Kolín
- D8 motorway Prague – Petrovice st. border
- The Elbe – Vltava waterway



### **Target needs**

- HSL Prague – Lovosice
- High-speed line (HSL) Ústí n/L – st. border
- HSL Lovosice – Ústí n/L

### **Multimodal cluster Prague – Brno**

#### **Basic needs**

- CR Prague – Česká Třebová – Brno
- Conventional Railway (CR) Libice n/C / Velký Osek – Choceň – Ústí n/O
- motorway D1 Prague – Brno

#### **Auxiliary needs**

- CR Kolín – Havlíčkův Brod – Brno
- Class I road I/43 / I/73 Moravská Třebová – Brno

#### **Target needs**

- HSL Prague – Brno

### **Multimodal cluster Brno – Břeclav st. border with Slovakia / Austria**

#### **Basic needs**

- CR Brno – Břeclav – Lanžhot st. border
- D2 Motorway Brno – Břeclav st. border

#### **Target needs**

- HSL Brno – Rakvice

### **Multimodal cluster Bavaria st. border - Plzeň - Prague**

#### **Basic needs**

- CR Česká Kubice st. border – Plzeň – Prague
- D5 motorway Rozvadov st. border – Prague
- Class I roads I/20, I/29, I/19, I/34 Plzeň – Písek – Tábor – Pelhřimov – Humpolec

#### **Target needs**

- Beroun (Tachlovice) tunnel

### **Multimodal cluster Prague – Ostrava (in addition to Prague – Brno and Brno – Ostrava)**

#### **Basic needs**

- CR Česká Třebová – Přerov / Prosenice
- D11 motorway Prague – Opatovice n/L
- D35 motorway Opatovice n/L – Olomouc – Lipník n/B

### **Multimodal cluster Ostrava – Slovakia st. border**

#### **Basic needs**

- CR Ostrava main station – Ostrava Kunčice – Havířov – Český Těšín – Mosty u J. st. border
- CR Dětmorovice – Český Těšín
- Class I road I/11 Třanovice – Mosty u J. st. border
- D56 motorway Ostrava – Frýdek-Místek
- Class I road I/58 Příbor – Ostrava



## **Multimodal cluster Vienna – Přerov – Ostrava – Poland st. border (in addition to Brno – Břeclav st. border)**

### **Basic needs**

- CR Břeclav st. border – Otrokovice – Přerov – Ostrava – Bohumín – Petrovice u K. st. border
- CR Brno – Přerov
- D52 motorway Mikulov st. border – Brno
- D1 Motorway D1 Brno – Přerov – Ostrava – Bohumín - st. border

### **Auxiliary needs**

- D48 motorway Běloutín – Chotěbuz st. border
- D55 motorway Břeclav (D2) – Hulín
- Class I road I/55 Břeclav (D2) – Břeclav st. border

### **Target needs**

- HSL Přerov – Ostrava
- CR (HSL) Ostrava – Katowice

## **Multimodal cluster (Prague) – Hradec Králové – Trutnovsko st. border**

### **Basic needs**

- CR Poříčany (HSL) – Nymburk
- D11 Motorway Opatovice n/L – Královec st. border

### **Target needs**

- HSL Poříčany – Hradec Králové / (Pardubice) – st. border Poland

## **Multimodal cluster Central Moravia – Slovakia st. border**

### **Basic needs**

- CR Hranice na Moravě – Horní Lideč – st. border
- Road D49 / I/49 Hulín – Horní Lideč st. border

## **Multimodal cluster Brno – Olomouc**

### **Basic needs**

- CR Nezamyslice – Olomouc
- D46 motorway Vyškov - Olomouc

## **Multimodal cluster Brno – Zlín**

### **Basic needs**

- CR Kojetín – Hulín
- CR Otrokovice – Zlín

## **Multimodal cluster Olomouc - Zlín**

### **Basic needs**

- D55 motorway Olomouc – Přerov

## **Multimodal cluster Prague – České Budějovice**

- CR Prague – Tábor – České Budějovice (basic need)



- D3 Motorway Prague – Tábor – České Budějovice (target need)
- CR Beroun (Tachlovice) tunnel, Beroun – Zdice – Písek (target need)
- D4 motorway Prague – Nová Hospoda (basic need)

#### **Target needs**

- CR Increasing the capacity of the Prague Hostivař – Benešov section (new line)

#### **Multimodal cluster České Budějovice - Dvořiště st. border**

##### **Basic needs**

- CR České Budějovice – Horní Dvořiště – st. border
- D3 motorway České Budějovice – Dolní Dvořiště st. border

#### **Multimodal cluster Prague – Most – Karlovy Vary**

##### **Basic needs**

- HSL (Prague) – Most
- D7 motorway Prague – Chomutov
- Class I road I/28 Louny – Most
- CR Most – Karlovy Vary – Cheb – Cheb st.border
- D6 motorway Prague – Karlovy Vary – Pomezí st. border

#### **Multimodal cluster Prague – Liberec – PL/DE st. border**

##### **Basic needs**

- CR Prague – Lysá n/L – Čachovice – Mladá Boleslav – Liberec
- D10 motorway Prague – Ohrazenice
- Class I road I/35 Ohrazenice – Liberec – Bílý Kostel n/N
- CR Liberec – Hrádek n/N st. border
- CR Liberec – Frýdlant – Zawidów st. border
- Class I road I/35 Bílý Kostel n/N – Hrádek n/N st. border

#### **Multimodal cluster Plzeň – Karlovy Vary**

##### **Basic needs**

- CR Plzeň – Cheb
- Class I road I/20 Plzeň – Karlovy Vary

#### **Multimodal cluster Plzeň – České Budějovice**

##### **Basic need**

- CR Plzeň - České Budějovice
- CR Písek - Protivín
- CR Ražice – Putim
- Class I road I/20 Plzeň – České Budějovice

#### **Multimodal cluster České Budějovice - st. border Austria**

##### **Basic needs**

- CR České Budějovice – České Velenice st. border



- Class I road I/34, I/24 České Budějovice – Třeboň – Halámky st. border

### **Multimodal cluster Plzeň – Most**

#### **Basic needs**

- CR Plzeň – Žatec – Chomutov
- Class I road I/27 Plzeň – Most

### **Multimodal cluster Karlovy Vary – Ústí nad Labem**

#### **Basic needs**

- CR Most – Teplice – Ústí n/L
- Class I road I/13 Karlovy Vary – Teplice
- Class I road I/63 Teplice – Řehlovice

### **Multimodal cluster Ústí nad Labem - Liberec**

#### **Basic needs**

- CR Děčín – Česká Lípa – Liberec
- Class I road I/13 - motorway D8 – Děčín – Bílý Kostel n/N

### **Multimodal cluster Ústí nad Labem - Mladá Boleslav**

#### **Basic needs**

- CR Česká Lípa – Bakov nad Jizerou
- Class I road I/16 Nová Ves – Bezděčín

### **Multimodal cluster Liberec – Mladá Boleslav – Hradec Králové**

#### **Basic needs**

- CR Čachovice – Nymburk
- Class I road I/38 Bezděčín – Poděbrady (D11)
- Class I road I/35, D35 Turnov – Jičín – Hradec Králové

#### **Auxiliary needs**

- CR Doubí u Turnova – Turnov – Jičín – Hradec Králové
- CR Loukov – Turnov – Stará Paka – Jaroměř – Hradec Králové

### **Multimodal cluster České Budějovice - Jihlava**

#### **Basic needs**

- CR Veselí nad Lužnicí – Jihlava
- Class I road I/19, I/34 Tábor – Pelhřimov – Humpolec – Havlíčkův Brod

### **Multimodal cluster Jihlava – Pardubice – Hradec Králové**

#### **Basic needs**

- CR Jihlava – Havlíčkův Brod
- Class I road I/38, I/34, I/37 Jihlava – Havlíčkův Brod – Ždírec nad Doubravou – Pardubice – Hradec Králové



## Multimodal cluster of other cross-border connections and connections to remote regions

- Class I road I/38 Hatě st. border – Znojmo – Jihlava; Havlíčkův Brod – Poděbrady (D11)
- Class I road I/53 Znojmo – Pohořelice
- CR Šatov st. border – Znojmo – Unkovice (Brno), new line
- Class I road I/38, I/9 Mladá Boleslav – Česká Lípa – Nový Bor – Rumburk st. border
- CR Česká Lípa – Rumburk
- Class I road I/7 Chomutov – Hora sv. Šebestiána st. border
- Class I road I/44 Mohelnice – Šumperk – Jeseník – Mikulovice st. border
- CR Zábřeh n.M. – Šumperk / Jeseník – Glucholazy st. border

## Multimodal clusters of suburban connections

### Prague

- CR northern bypass for freight transport Tišice interconnection – Neratovice – Kralupy n/V – Kladno Ostrovec
- CR Prague Ruzyně – Kladno Ostrovec
- Class I road I/61 D7 – Kladno – D6
- CR Prague Vysočany – Neratovice
- Class I road I/9 Zdiby – Mělník
- CR Prague Smíchov – Rudná – Beroun
- CR Prague – Vrané n.V. – Davle
- Class I road I/12 Prague – Úvaly
- Class I road I/2 Prague – Kostelec nad Černými lesy

### Brno

- CR Brno – Třebíč / Ivančice/ Moravský Krumlov
- Class I road I/23 Brno – Náměšť n/O
- Brno north-south diameter
- CR Brno – Kyjov – Moravský Písek
- Class I road I/50 Holubice – Staré Město – Starý Hrozenkov st. border
- CR Boskovice interconnection

### Ostrava

- CR Ostrava Kunčice – Frýdek-Místek – Valašské Meziříčí
- CR Ostrava Svinov – Opava – Krnov
- Class I road I/11, I/57 Ostrava – Opava – Krnov
- CR Studénka – L. Janáček Airport / Kopřivnice - Štramberk
- CR Frýdlant n/O – Ostravice
- Class I road I/11 Ostrava – Třanovice

### Pilsen

- CR Plzeň – Klatovy
- Class I road I/27 Plzeň – Klatovy
- Class I road I/26 Plzeň – Staňkov
- CR Radnice – Ejpovice; Rokycany – Příkosice



## **Liberec**

- Class I road I/14 Liberec – Tanvald – Desná
- Class I road I/14 Liberec – Tanvald – Desná
- Class I road I/13 Stráž n/N – Frýdlant
- CR Liberec – Hodkovice n/M, current line
- CR Raspenava – Bílý Potok p.S.
- CR Frýdlant – Nové Město p.S.
- Class I road I/65 Rádelský mlýn – Jablonec n/N

## **Olomouc**

- CR Olomouc – Uničov
- Class I road I/46 Olomouc – Šternberk
- CR Olomouc – Hlubočky

## **České Budějovice**

- CR České Budějovice – Český Krumlov
- Class I road I/39 České Budějovice – Český Krumlov

## **Hradec Králové**

- CR Jaroměř – Náchod / (Trutnov)
- Class I road I/33 Jaroměř – Náchod st. border

## **Pardubice**

- CR Pardubice – Skuteč

## **Zlín**

- CR Zlín – Vizovice
- Class I road I/49 Otrokovice – Zlín – Vizovice

## **Jihlava**

- CR Jihlava – Třebíč
- CR Kostelec u J. – Slavonice

## **Mladá Boleslav**

- CR Mladá Boleslav – Sobotka – (Jičín)
- Class I road I/16 Kosmonosy – Sobotka – Jičín

## **Most**

- CR Most – Postoloprty – Žatec / Louny
- CR Most – Litvínov – Louka u L. – Hrob
- Class I road I/27 Most – Dubí
- CR Oldřichov u D. – Litvínov
- CR Prunéřov – Kadaň



## Description of project packages

Project packages are focused on specific areas, usually consisting of smaller projects that are not monitored by name in the Sector Strategies, and if they are, their list may not be exhaustive. A financial framework is set for each package. These funds will be allocated to individual projects usually on the basis of a more specific policy concept or on the basis of another follow-up process.

### 1. Bypasses and upgrades on class I roads, classified as E, F, G

A greater number of bypasses, through-traffic roads and partial modifications to road networks, classified as E, F and G, are planned in the time horizon until 2050. The preparation of these projects will be proposed on the basis of the operational situation and will be specified in three-year action plans that will be part of the implementation stage of the TSS 3. The projects will be prepared in cooperation, as proposed by the RMD.

### 2. Contribution for the renewal of class II and III roads

Measures to increase the safety or fluency of traffic on class II and III roads are financed from the STIF budget approved for the respective year. Providing a financial contribution to the regions helps in the revitalization of the network of class II and III roads. The financial package will be specified in the TSS action plans based on the financial situation of STIF. The preparation of projects is the responsibility of regional authorities.

### 3. Contribution to the modernization and development of urban public transport in electric traction

The co-financing of projects of municipal authorities on the development of their urban public transport networks in electric traction is governed by the conditions set out in the Transport Programme. The projects are submitted by the cities and financed from the Cohesion Fund.

Urban public transport infrastructure projects in electric traction, especially rail systems, are a considerable financial burden for cities, while they carry large volumes and outputs in passenger transport in a sustainable manner. There are also many projects that provide suburban service, and so they should involve the relevant region's participation. Based on the project's importance, the state can also participate in selected and justified projects, and regarding mitigation measures, the projects may involve EU funds in the following programming periods.

### 4. Support of private freight transport terminals

Freight transport terminals are an integral part of the transport infrastructure and without their functioning it will not be possible to meet the goals in the field of multimodal transport. The financing of private freight transport terminals is governed by the conditions set out in the Transport Programme. The projects are submitted by the private entities and financed from the Cohesion Fund.

### 5. Development of state-owned freight transport terminals and marshalling yards

The supplementation of the freight transport terminal network owned by the state is governed by the Transport Programme conditions and by STIF rules. The modernization of multimodal terminals will be designed and financed on the basis of the Policy Concept of Loading Points.



## 6. Support for the development of private freight transport ports

The development of private ports is governed by the conditions set out in the Transport Programme, based on projects submitted by private entities.

## 7. Recreational boating - wharfs

The construction of a continuous network of public wharves for short-term or medium-term berthing of vessels, ensuring the accessibility of settlements along the waterway from passenger and recreational boating, is governed by the conditions established in a separate follow-up process through the Waterway Directorate and River Basin Management state enterprises as the waterway administrators, and entities with the right to manage state property.

## 8. Recreational boating - other projects

Other recreational boating projects focus mainly on the removal of problematic places for boating, the completion and improvement of infrastructure of waterways usable for water tourism, with an emphasis on providing a continuous network of wharf infrastructure, services for vessels, and continuously navigable waterways involved in attractive destinations.

## 9. Support for the development of cycling infrastructure

The construction or repair of bicycle paths or the setup of bicycle lanes will be financed by funds from the STIF budget, approved for the relevant year, and from the IOP. The preparation of projects is the responsibility of the regional and local authorities.

## 10. Support for the development of barrier-free pedestrian routes

The measures to increase the safety or fluency of traffic or measures to make transportation accessible to persons with limited mobility or orientation will be financed by financial contributions from the STIF budget approved for the relevant year. The preparation of projects is the responsibility of the local authorities.

## 11. ITS and C-ITS implementation support

Due to its geographical location, the Czech Republic has to provide for transit transport relations, which places great demands not only on the technical parameters of the transport infrastructure, but also on ensuring that traffic participants are informed in real time about ordinary, but especially about extraordinary situations.

ITS allow traffic flows to be optimized in such a way that vehicles travel smoothly without sudden stops and subsequent starts, thereby eliminating excessive energy consumption. At present, the massive development of large cities is evident. It is necessary to invest in ITS systems for influencing and controlling urban motor vehicle traffic, urban public transport and city logistics.

With regard to the transport infrastructure owned by the state, it is necessary to support the introduction of systems and equipment for reliable data collection, their optimal transfer to systems where they are validated, processed and evaluated using sophisticated algorithms and subsequently are provided in the form of verified, high-quality and reliable transport information through interoperable services to end users of the transport system or can be further used in integrated transport information centres both within the Czech Republic and in neighbouring countries. Traffic information is also distributed to third parties for further use under equal conditions through the a



national (single) access point. It is necessary to ensure that the state can supervise the way of organizing, influencing and managing traffic through accurate, high-quality and guaranteed traffic information, warning messages, management scenarios and instructions.

C-ITS systems are based on secured communication (two-way data exchange) relating to the current road traffic, both between the vehicles themselves and between vehicles and equipment on the road infrastructure. C-ITS systems do not directly interfere with the vehicle's control systems, the appropriate response is decided on by the (pre-warned) driver. C-ITS systems provide secured warning information about dangerous and collision situations, not navigation instructions.

For C-ITS communication both between individual vehicles and between vehicles and devices on the transport infrastructure, it is currently possible to use either ITS-G5 technology (the so-called "secure WiFi for cars" in the dedicated 5GHz band), where stationary C-ITS stations are installed on the transport infrastructure, or it is possible to use high-speed data transmission in mobile networks (LTE technology and the oncoming 5G) and deliver a warning message to the driver using mobile networks on those sections of the road network that are not equipped with stationary C-ITS stations. For the proper functioning of C-ITS, it is again necessary to take into account transmission networks that may not be directly part of the traffic way. In addition, it is necessary to consider that the flow of C-ITS messages passes through a central element guaranteeing the reliability and security of the system, which does not have to be located in the immediate vicinity of the traffic way. The use of a specific technology for C-ITS communication on a specific section of the transport network depends on the results of an economic analysis of cost effectiveness. In this context, both technologies can be complementary (a part of the section may be equipped with stationary stations and another part of the section can use mobile networks), not compete in the sense that either only ITS-G5 technology or only LTE will be deployed.

ITS also increase the safety of vulnerable traffic participants and support the independent and safe movement of people with reduced mobility, orientation or communication.

Developed ITS and C-ITS will be an integral part of safety measures on the transport infrastructure, where there will be almost zero deaths due to traffic accidents, minimal delays in the transport system, environmental impacts will be close to zero and the transport system will be used by fully informed users of the transport system.

Support for the implementation of the ITS and C-ITS systems is governed by the conditions set out in the Transport Programme based on the ITS Development Strategy 2021 - 2027 with a 2050 perspective. Project submission is the responsibility of transport infrastructure managers.

## 12. Support for the acquisition of airport security equipment for passenger check-in

The airport equipment with technical or similar means used to protect civil aviation from illegal acts is financed by financial contributions from the STIF budget approved for the relevant year. Projects are submitted by the civil airport operators.



### 13. Railway infrastructure repair projects included in the project category

The preparation of these projects will be proposed on the basis of the operational situation and will be specified in three-year action plans that will be part of the implementation stage of the Transport Sector Strategies. The project proponent is the Railway Administration (Správa železnic).

### 14. Grade-separated crossings with superior infrastructure

The construction, modernization, or repairs of local roads or publicly accessible purpose-built roads at points of crossing with superior transport infrastructure will be financed by contributions from the STIF budget, approved for the relevant year. The preparation of projects is the responsibility of the regional and local authorities.

### 15. Equipping railway vehicles with ETCS units

The equipment of railway vehicles with on-board components of the control-command and signalling system according to the decision of the European Commission on the technical specifications for interoperability relating to the control-command and signalling subsystems of the trans-European rail system is financed by a financial contribution from the Cohesion Fund and from national resources.

### 16. Railway level crossings and their replacements

The preparation of these projects will be proposed on the basis of the operational situation and will be specified in three-year action plans that will be part of the implementation stage of the Transport Sector Strategies. The project proponent is the Railway Administration (Správa železnic). Support for the modernization of level crossings and their replacement is governed by the conditions set out in the Transport Programme based on the Policy Concept of Level Crossing Removal and Replacement.

### 17. Station buildings and barrier-free access to railways, buildings of the Railway Administration

The real property in the locations of railway stations and stops is primarily intended for organizing, securing and managing rail transport, for meeting transportation needs and providing services connected with the transport of people and goods. The intention is to adapt the passenger stations to the requirements of current railway transport and its links to other modes of transport, thereby increasing the competitiveness of passenger railway transport and creating conditions for the development of tourism. The reconstruction and revitalization of station buildings, including barrier-free adaptations, is carried out on the basis of the Programme for the Reconstruction and Revitalization of Passenger Stations, which is included in the Policy Concept for Managing the Real Property of Passenger Stations. Projects are financed from the STIF budget for the respective year.

### 18. Waterways outside the TEN-T

The implementation of construction measures is financed through the STIF budget based on the Water Transport Policy Concept.

### 19. Modernization or optimization of the other conventional lines

The modernization or optimization of the other conventional lines is envisaged and is supported by feasibility studies approved or underway or other documentation enabling the preparation of



buildings. The projects are prepared in cooperation with the Railway Administration and based on suggestions of the regional ordering authorities (Transport Service Plans of the Regions), and will be specified in three-year action plans, which will be part of the implementation phase of the Transport Sector Strategies.

## 20. Deployment of ETCS and GSM-R on lines outside the defined clusters, TCC, CTC

ETCS (European Train Control System) is a European train control system that has become the basic standard in the field of railway traffic management and control in European countries and is, together with the radio system GSM-R (Global System for Mobile Communication – Railways), part of the ERTMS project. (European Rail Traffic Management System). In addition to achieving interoperability and a possible increase in capacity (especially in its second application level during infrastructure optimization), the key benefit of the introduction of ETCS is an increase in the level of railway traffic safety.

The preparation of these projects will be proposed on the basis of the operational situation and will be specified in three-year action plans that will be part of the implementation stage of the Transport Sector Strategies.

## 21. Change of electric traction system, TPS performance

The transition to alternating current traction will make it possible to increase the performance of rail transport through a more efficient power supply, increased energy efficiency by reducing losses in the line, reduced cost of electrifying other lines, making the power supply of high-speed lines compatible with the conventional railway network, and making train haulage more efficient by better using the traction properties of modern tractive rolling stock. The fundamental economic benefit of AC traction is the reduction of operating costs (reduction of losses and higher use of energy recovery) as well as the elimination of damage from stray currents and the costs of their removal. Project support is financed from the STIF budget on the basis of the Policy concept of transition to a unified power supply system on the Czech railway network. Most of the projects are named (specific, not in packages).

The parameters of the existing energy network will be increased on the basis of the operational situation and in interaction with modernization projects on the same lines and the increase will be specified in three-year action plans that will be part of the implementation stage of the Transport Sector Strategies.

## 22. Electrification of lines outside the defined clusters

In the financing and selection of lines for rapid electrification, the use of the 25 kV 50 Hz AC system is considered economically viable.

The selection and implementation of projects will be based on the document *Simple Electrification Projects for passenger long-distance and freight transport*, and the projects will be financed through the RRF, STIF and possibly the Modernization Fund, or the Cohesion Fund.

## 23. Public filling and recharging stations for alternative drives

Support for building public infrastructure for alternative fuels with an emphasis on recharging stations and hydrogen filling stations will include a relatively broad portfolio of technologies (recharging points with both AC and DC installed depending on the locality type), and the representation of the different



types of recharging stations will evolve over time. For these reasons, it appears that a good indicator for recharging infrastructure is not the number of recharging stations, but their overall performance, or volume of delivered electricity.

In connection with the development of the infrastructure of publicly accessible recharging stations, the government must clarify the state concept regarding the distribution of these stations among motorway rest areas. This issue (including the topic of so-called recharging hubs) should be addressed in the update of the motorway rest area concept. In the long term, it is also necessary to deal with the question of whether it is desirable to start developing the so-called dynamic (in-motion) charging in the conditions of the Czech Republic.

The development of the infrastructure of hydrogen stations is an absolutely necessary condition for the development of hydrogen mobility. The infrastructure of hydrogen refuelling stations that should serve hydrogen buses can be developed either on the basis of non-public stations located, for example, in the depots of public transport companies, or in combination with the operation of hydrogen-powered private cars, as public infrastructure. As regards the support for non-public hydrogen filling stations, it is assumed that these stations will be used mainly by public transport companies, freight transport or large company fleets.

The financing of projects is governed by the conditions set out in the Transport Programme or CEF based on the National Clean Mobility Action Plan. Project proposals are submitted by private entities.

## 24. Point defects on the road network and noise barriers on the existing road network

The projects included in this package are not part of the modernization of the respective route and are aimed at eliminating point defects. These are places on motorways and class I roads that are characterized by a high accident rate or locally limited capacity. This also includes the completion of noise barriers to meet the noise limits of the existing road infrastructure.

## 25. Modernization of the technical equipment

This package covers the equipment of the Railway Administration with technical means for the maintenance of the railway network.

## 26. Information technology

The package includes projects aimed at digitizing the processes related to the operation and maintenance of the railway network of the Railway Administration.

## 27. Ensuring the operation of trains 740 m long

The package includes projects on the already modernized railway infrastructure, which are supposed to ensure the operation of 740 m long trains. This involves the modification of railway stations, and after 2030 also the capacity increase of selected lines.

## 28. Ensuring sufficient capacities of motorway rest areas

The package includes projects dealing with sufficient capacity and equipment of motorway rest areas and stops. This area is based on the follow-up concept of rest stops/areas, setting the standards and measures for their implementation.