

# National Transport Strategy of Ukraine 2030

## TABLE OF CONTENTS

<b>INTRODUCTION</b> .....	2
<b>Chapter I: The purpose of the Strategy and guidelines for its implementation</b> ...	5
<b>Chapter II:</b>	
<b>Priority area 1. Competitive and efficient transport system</b> .....	7
Common problems requiring solutions .....	8
Problems addressed by the following tasks accomplishment .....	9
Expected results .....	14
<b>Chapter III:</b>	
<b>Priority area 2. Innovative development of transport sector and global investment projects</b> .....	18
Common problems requiring solutions .....	18
Problems addressed by the following tasks accomplishment .....	19
Expected results .....	24
<b>Chapter IV:</b>	
<b>Priority area 3. Safe, clean and energy -efficient transport</b> .....	27
Common problems requiring solutions .....	27
Problems addressed by the following tasks accomplishment .....	29
Expected results.....	33
<b>Chapter V:</b>	
<b>Priority area 4. Seamless mobility and interregional integration</b> .....	36
Common problems requiring solutions .....	36
Problems addressed by the following tasks accomplishment .....	37
Expected results.....	40
<b>Chapter VI:</b>	
<b>Organizational support and monitoring of the Strategy implementation process</b> .....	42

## **National Transport Strategy of Ukraine 2030**

### **Introduction**

Transport is one of the basic elements of the state economy. The transport system of Ukraine operates an extensive railway network, a developed network of roads, seaports and river terminals, airports and a wide network of aviation connections, public passenger transport routes, bus stations and cargo customs terminals. Therefore, meeting the needs of the citizens regarding the provision of necessary transport services and business development is prioritized.

Thus, 13 seaports operate in the Azov and Black Sea basins and the Danube River Delta, and their total cargo handling capacity is approximated to 230 million tons per year. 1,569.4 km of navigable waterways stretch out all over the state territory. There is a developed network of ferry connections and sea container lines, providing connection of Ukraine with its partner countries in the Black Sea region. The national network of automobile roads is 163,033 km long. Ukraine's railway network is one of the largest in Europe and it stretches over 20,951.8 km, 9,926.4 km of which (47.4 %) have been electrified. Ukraine is a transit transport “bridge” which connects the European countries with Asia and America. Air transit through the territory of Ukraine is generally managed by “Boryspil” air hub. Certain amount of international transport corridors cross Ukraine: Pan-European transport corridors III, V, VII, IX; corridors of the Organisation for Cooperation between Railways (OSJD) 3, 4, 5, 7, 8, 10; extended TEN-T, as well as part of the Transport Corridor Europe-Caucasus-Asia (TRACECA).

In 2016, transportation, storage, mailing and delivery services comprised approximately 6.7 % of GDP and 6 % of the total employed population. Many sectors of Ukrainian economy are highly dependent on transport system: agriculture, metallurgy, coal industry, mining and smelting, chemical and food industries, construction, retail trade, communications and postal services, and defence.

Nowadays, the transport industry of Ukraine, in general, satisfies the basic transportation needs of the citizens and the economy in terms of scope, but quality level is still low. The current state of the transport industry is not fully in line with the requirements for the effective transport services; for implementation of the European integration course chosen by Ukraine and the integration of the national transport system within the European network, including the Trans-European transport network TEN-T.

There is a need to strengthen the efficiency and competitiveness of the transport sector, improve legal mechanisms of public-private partnership involvement in transport development concerning related specifications, enhance cooperation between public and private sectors of the economy, as well as between state authorities and local government bodies, carry out necessary reforms, including decentralization, in particular through coordinated state policy initiatives. These

measures can provide a solid basis for sustainable development of the transport sector of Ukraine and ensure establishment of a competitive transport service market.

Passenger transport, commercial road transport in particular, municipal and suburban railway transport, became “hostages” of massive subsidized passenger transport operations, losses from which are not compensated properly neither from the state budget, nor from local budgets. For example, there is an imperfect system of compensation of preferential transport (partially implemented “user pays” principle) currently functioning in Ukraine. No mechanism for implementation and funding of public service obligations for passenger transportation stipulated by European legal framework has been introduced.

One of the reasons for the critical level of the transport sector development is systematic lack of financing; insufficient technical maintenance of infrastructure and transport technical wear out, which threatens not only the fulfilment of its social and economic functions, but also the national security.

However, global trends in the transport systems development indicate the necessity of rapid implementation of the latest transport technologies and regional mobility projects. Transportation is becoming more energy-efficient and eco-friendly, safe and convenient for clients (passengers and customers). Many countries in the world are planning to replace the majority of motor passenger cars equipped with internal combustion engines with electric vehicles by 2030. The growth of speed, efficiency and eco-safety of vehicles is a major trend in all transport systems. Railway transport at a speed of 350 km/h. becomes a reality, while "Maglev" technologies already provide a speed of 500 km/h and more.

Modern infrastructure, fair market conditions and free market competition, efficient development and coordination of various transport modes, along with the introduction of an effective state regulation and management system, will provide the basis for the development and functional growth of the national transport system of Ukraine. Improving the efficiency, quality and level of transport services provision will stimulate Ukrainian export and contribute to the development of domestic production and trade.

The National Transport Strategy of Ukraine 2030 (hereinafter the Strategy) is developed to address comprehensive solution of existing problems in the sector. The Strategy introduces priorities for the transport sector development and reflects the European integration course objectives and implementation of provisions of the Association Agreement between Ukraine, on the one hand, and the European Union, the European Atomic Energy Community and their Member States, on the other hand (hereinafter – the “Association Agreement”) by Ukraine, and changes of geopolitical situation in the region.

The Strategy identifies priority areas for improvement of the transport service quality, as well as transport infrastructure up to the European standards, improvement of safety and reduction of negative impact of transport to the environment, takes into account the need for improvement of management system, implementation of administrative reform and decentralization of tasks and functions of central executive

bodies, implementation of anti-corruption policies, and of corporate governance principles in the public sector of the economy.

The Strategy has developed a balanced approach that addresses future anticipated growth and change of demand for transport services, contributing to economic development, raising the quality of life and efficient use of resources. The Strategy is in line with the provisions of the EU-Ukraine Association Agreement, the Deep and Comprehensive Free Trade Area Agreement (DCFTA), Agreement on Certain Aspects of Air Services of 01.12.2005, initiated Common Aviation Area Agreement, as well as the Ukraine-2020 Sustainable Development Strategy, approved by the Presidential Decree No. 5 dd. 12.01.2015, United Nations Framework Convention on Climate Change, Paris Climate Agreement, Resolution No. 70/1 adopted by the United Nations General Assembly on 25 September 2015 “Transforming our world: the 2030 Agenda for Sustainable Development”, as well as the Medium-Term Government Priority Action Plan -2020, approved by the Resolution of the Cabinet of Ministers of Ukraine No. 275 dd. 03.04.2017.

The Strategy is a principal document which stipulates transport development, other strategic and program documents in the field of transportation services and public roads shall comply with the provisions hereof.

## **Chapter I**

### **The purpose of the Strategy and guidelines for its implementation**

The Strategy provides for a comprehensive vision of global priorities of the transport policy, establishment of an effective and efficient governance, determines strategic approaches for the transport sector development for the period until 2030.

The objective of the Strategy is to create an efficient transport complex of Ukraine, which would be integrated into the world transport network, meeting the needs of the population in transportation services, and improving the conditions of doing business in order to ensure competitiveness and efficiency of national economy.

The implementation of the Strategy will be in line with Ukraine`s approach to association with the EU, as its main tasks are to implement the EU-Ukraine Association Agreement and to create conditions which will contribute to gradual integration of Ukraine into the EU internal market; increase the quality of transport service provision, efficient implementation of administrative reform, anti-corruption measures, transparent decision-making, performance control, clear distribution of functions and allocation of powers between state bodies and business entities, and ensuring equal conditions for transport service provision.

Implementation of the Strategy provisions will strengthen the institutional capacity of organizations involved in harmonization of Ukrainian legislation with EU acquis and will establish grounds for enhancement of monitoring mechanism in terms of introduction aiming to create high-tech transport system.

It should be also noted that in order to create an efficient transport complex in Ukraine and to contribute to achievement of the regional transport “hub” status the Strategy takes into account the following global tendencies in the field of transport:

- high technological complexity of the transport means and their ergonomics, the multimodality, satellite navigation, “intelligent” transport systems, information technology, e-document management;
- use of composite materials, reduction of metal content, improvement of vehicles’ aerodynamics and safety;
- fuel efficiency and eco-safety of vehicles, use of alternative fuel types, "green" transport;
- mass containerization, multimodality, interoperability of transport systems in delivery chains;
- accelerating and ensuring timely delivery of passengers and freight by high-speed transport means and logistics development;
- globalization of transcontinental air transport within the framework of leading world alliances;
- strengthening the component of low-cost air transport for direct interregional communication;

- ensuring transport accessibility for the passengers, high mobility of labour resources, increasing the distance and reducing the passengers' travel time in metropolitan areas;
- motorization in developed countries, its further deterrence in cities due to the development of public and human-powered transport.

In order to implement the Strategy its main tasks will be executed in accordance with the following priority areas:

Priority area 1. Competitive and efficient transport system.

Priority area 2. Innovative development of the transport industry and global investment projects.

Priority area 3. Safe, clean and energy-efficient transport.

Priority area 4. Seamless mobility and interregional integration.

## **Chapter II**

### **Priority area 1. Competitive and efficient transport system**

For the moment it is necessary to introduce new principles for the formation and coordination of state policy in the field of transport, and create conditions to ensure control of the quality of functions performed by relevant executive authorities.

Strengthening the cooperation between public and private sectors, state authorities and local government bodies, introduction of decentralization, especially through coordinated initiatives of state policy, can provide a solid basis for sustainable development of the transport industry in Ukraine and creation of free and competitive transport services market in line with EU legislation.

The transport industry of Ukraine has a low level of development of transport and logistics technologies and multimodal transshipment facilities, which decreases its competitiveness and imposes constraints on allocation of Ukrainian products to the world transport market. According to the competitiveness rating, Ukraine holds the 85th place in the world, and 66th place on logistic efficiency. Unfortunately, none of the Ukrainian ports is in the Top 100 largest container ports in the world. Multimodal and intermodal carriage of goods in Ukraine comprises only 0.5% of the transport market. According to this indicator Ukraine is left far behind the EU states and other developed countries of the world. The transport system of Ukraine borders with the Trans-European Transport Network TEN-T, but it still cannot be fully connected to it due to the low interoperability level and overall technological underdevelopment.

In the transport sector, it is reflected, in particular, in reduction of transit traffic through Ukraine, the number of port calls at Ukrainian ports, and the inability to provide high-quality services in export transportation, which in its turn has negative influence on competitiveness and efficiency of the country economy.

There are disproportions in the modal split of transport services in the transport market. Due to low solvent demand, insufficient liberalization and competitiveness the air transport carries almost 245 times less passengers than road transport, while railway transport carries approximately 800 times more passengers than river or maritime transport.

In order to maximize the use of transport potential of Ukraine, in particular as a transit country, it is necessary to create a client-oriented system of transport service provision and ensure effective organization of transport complex performance as well as obtain a synergy effect from the efficient combination of existing potential and opportunities of all transport means on the basis of partnership and fair competition

Common problems requiring solutions:

- lack of efficient system for administrative data collecting and processing in the transportation sector, and therefore lack of objective scientific assessment of its condition and development prospects;

- lack of systematic approach to coordination of development and long-term planning of the transport performance , considering the social and economic needs of citizens, business, defence and geopolitical interests of Ukraine;
- incomplete governance reform -in particular, the process of delimitation of state regulation and inspection functions , including set up of relevant public authorities, performance and economic functions of transport enterprises; split of functions between executive authorities and enterprises within the competitive transport market;
- lack of control systems for effective management decisions, lack of transparency in the activities of public authorities and public business entities in the transport sector;
- lack of an effective system of communication and feedback between transport authorities, transport companies and users of transport services, which reduces the effectiveness and efficiency of transport management and the quality of transport and logistics services;
- lack of criteria and indicators system for assessment of the transport services quality ;
- underdeveloped intermodal, multimodal transport and transport logistics;
- a trend towards lower bandwidth utilization efficiency, namely:
  - low level of competition in the transport services market and inconsistency with European requirements for access to the transport services market ;
  - insufficient tariff policy in the field of transport services rendering;
  - low speed and poor timing of "door to door" freight delivery;
  - bottlenecks in transport infrastructure;
  - low economic attractiveness of the Ukrainian flag for ship owners;
  - lack of an effective system for prevention and avoidance of public roads destruction , including the parameter and weight control of vehicles, lack of adequate level of responsibility for exceeding the allowed parameters, and allowable values of axle loads of vehicles.

**Problems addressed by the following tasks accomplishment:**

- improve the system of collection, analysis and use of administrative data in order to improve transport services quality;
- implement programs for strengthening the capacity of state authorities in the transport sector and enhancing professional capacity and productivity of civil servants (system for staff training and development);
- use the best world practice for development of the transport sector of Ukraine, improve quality and reliability of transport and logistics services taking into account economic and regional ties of Ukraine and on the basis of an integrated



approach of coordination of activities in the transport sector and the national transport modelling;

- develop transport infrastructure by 2030 in accordance with the EU standards;
- increase responsibility and transparency in managerial decision making, in particular by:
  - delimitation of regulatory and management functions;
  - introducing corporate governance structures (boards of directors which represent the stakeholders, supervisory boards and others) at state owned enterprises, enterprise resource management systems, public monitoring and system of reporting on activities and achieved results;
  - implementing the open data system, electronic services and other measures for prevention and fighting corruption in the transport sector;
  - introducing e-governance in order to reduce the burden and simplify administrative procedures for business;
  - developing services for access to public information;
  - strengthening the dialogue between service users and state authorities, local government bodies, civil society;
- introduce service for electronic provision of administrative services;
- determine the system of indicators of state-owned companies restructuring toward commercialization, de-monopolization and open competition, increased transparency, anti-corruption efforts, reduction of transport expenses and transport efficiency advancement by:
  - optimizing and enhancing state assets management;
  - completing the PJSC "Ukrzaliznytsia" structural reform by introducing a vertically integrated management system with proper short-term strategic planning of resources, and ensuring separation of infrastructure managers from freight and passenger carriers;
  - creating a central executive body for implementation of state policy in the area of river and maritime transport, which will perform the functions of the Maritime Administration of Ukraine;
  - depriving the Ukrainian Sea Ports Authority of unauthorized state management functions;
  - setting up of an administration for efficient management of state assets in the field of aviation infrastructure;
  - decentralizing roads management, introducing effective management structure, and distributing authorities and responsibilities in the area of road management;
- increase efficiency of domestic freight transport logistics operations through elimination of existing obstacles and enhancement of relevant infrastructure, as

well as its integration into the international and Trans-European Transport Network TEN-T;

- ensure comprehensive solution of issues, in particular, preparation and implementation of the appropriate concepts and programs (plans), development of multimodal transport and logistics technologies, which is to provide for:
  - formation of regulatory and legal framework for the development of intermodal, multimodal transport and transport logistics;
  - development of multimodal transport technologies and infrastructure systems for different modes of transport, including the combinations of “air transport – railway transport – road transport”, “water transport – railway transport – road transport”, etc.;
  - creation of a network of regular container / intermodal / multimodal freight trains, synchronized with trains of the EU countries;
  - setting up the network of multimodal transport and logistics clusters and core logistics centres, dry ports, terminals, specialized transshipment facilities, etc.;
  - increase of the share of container transportation and stimulation of the development of piggyback transportation by creating favourable conditions for cargo owners and carriers, including the legislative level;
  - partial redirection of freight transport to railway and inland water transport;
  - harmonization of development of infrastructure adjacent to ports (railway access roads, roads) and ports capacity;
  - reduction of goods handling time and formalities by simplifying the administrative procedures in international traffic;
  - ensuring the unified technological compatibility in main transportation directions and connections between transport modes;
- develop a priority road network by:
  - ensuring the short-, medium- and long-term planning of roads development;
  - implementing the road management system reform, transferring 120 thousand km of roads under regional authorities responsibility, and assigning the responsibility for the road conditions to the local executive authorities.
  - defining key indicators of efficiency of road management and their implementation monitoring system;
  - creating a competitive environment for contractors performing road construction and repair;
  - introducing European standards for designing, development and maintenance of roads, improving road pavement quality and providing justifications for choosing the road pavement type, in particular by gradually restoring the operational characteristics of the road network;

- improving quality and durability of roads, designing road paving on the basis of conclusions suggested by feasibility studies;
- increasing the share of hard-surface public roads;
- developing a network of road service stations to ensure examination of compliance with the requirements of drivers work schedules in accordance with the European Agreement concerning the Work of Crews of Vehicles engaged in International Road Transport and other regulations;
- introducing long-term contracts for roads maintenance based on their performance and final results;
- increasing the number of mobile dimension and weight control systems and ensuring effective control of weight and dimension parameters violation by cargo transport means;
- create a competitive environment and favourable business climate in the market of transport services through:
  - expanding the list of services provided by transport sector enterprises;
  - ensuring equal and transparent rules of the game in the transport services market :
    - adoption of regulatory and legal acts on transport market liberalization and non-discriminatory open competition in accordance with the EU legislation;
    - guaranteeing operators' equal, open and transparent access to transport infrastructure;
    - development of a transparent national transport and forwarding services market;

#### *railway transport*

- liberalizing railway transport market on the basis of equal access to railway infrastructure and fair competition between carriers by:
  - providing regulatory and legal support of the railway market operations through adopting the Law of Ukraine "On Railway Transport" and related by-laws;
  - reforming authorities which perform state management function of the industry in accordance with European standards: Ministry of Infrastructure, regulatory authority, safety enforcement body, investigation body;
  - introduction of mechanisms for granting access to carriers of various types of ownership to the railway transportation market (licensing, safety certification);

- structural reform of PJSC "Ukrzaliznytsya" - financial and organizational separation of the infrastructure manager and transport activities;

*road transport*

- gradually liberalizing international road freight transport;
- introducing new licensing approach for road carriers, including requirements to good reputation, financial capacity, professional competence of staff and ensuring access to the road transport market in accordance with best European practice;

*waterborne transport*

- reducing bureaucratic formalities in ports;

*air transport*

- establishing conditions for sustainable development of air transport:
  - liberalizing of air transport, in particular by removing constraints on the number of designated airlines, operation points and frequency of flights between Ukraine and partner countries on the parity basis;
  - signing and implementation of the Agreement on Common Aviation Area with the EU and simultaneous bilateral negotiations on liberalization in accordance with this Agreement;
  - election of Ukraine as a member of the ICAO Council and active participation in its activities;
  - organization and use of airspace of Ukraine in accordance with the standards and recommended ICAO practices, EU legislation and Eurocontrol documentation;
  - technical improvement of air navigation system by creating communication, navigation and supervision infrastructure in order to organize air traffic;
  - increasing the permitted capacity of airspace of Ukraine by introduction of Free Route Airspace of Ukraine (FRAU) and navigation technologies on the basis of GNSS;
  - developing passenger and cargo terminal complexes with multimodal technologies, financed by their owners and/or public-private partnerships, ensuring international standards of passenger service quality, including specific services for persons with limited mobility and persons with disabilities, cargoes and post;
  - enhancing competitiveness of "Boryspil" international airport as a leading airline hub in Eastern Europe, in particular, by expanding the aviation destinations network, and attracting more air carriers;

- deregulating economic activity of regional airports with passenger traffic up to 5 million passengers in accordance with the relevant EU legislation;
- reconstructing airport runways and complex modernization of equipment in regional airports in order to allow for operation of medium-haul aircraft, and, if applicable, wide-body aircraft in accordance with the European legislation;
- creating a civil aviation cyber security system, taking into account the ICAO requirements, the instructions of the national regulator in the field of cyber security and current European practice;
- harmonization of the functions to be executed by the National Bureau of Air Accidents Investigation of Ukraine in accordance with the European legislation in order to make the best decision in the event of an incident or act of unlawful interference;
- providing institutional and legislative guarantees by Ukraine for fulfilment of its obligations as a flag state, port and coastal state in accordance with the international agreements signed by Ukraine and the EU acquis;
- introducing a simplified registration procedure for vessels under the State Flag of Ukraine, creation of an international ship register;
- introducing a comprehensive set of legislation which will protect airports as integral property complexes, take into account technological specifications and international requirements to airport infrastructure, introduce modern approaches to economic regulation of activities concerning airports of different forms of ownership, their balanced tax policy with regard to aviation and non-aviation activities;
- gradually liberalizing freight traffic by inland waterways, opening of inland waterways for vessels under the flag of third countries;
- ensuring gradual optimization of activities and privatization of state stevedoring companies in seaports;
- introducing transparent and effective tariff models, transitioning to the commercial practice of setting tariffs for transportation through:
  - developing the tariffs formulation procedure in accordance with the actual structure of costs, sustainable development requirements, providing free pricing in competitive sectors of the transport services market;
  - introducing “user pays” and “customer pays” principles for transport service payment;
  - reforming the tariff formation system for rail services with deregulation of locomotive and carriage tariff components under state regulation of infrastructure;

- reforming tariff regulation of passenger transportation by road and electric transport in cities in accordance with European practice;
- developing and approving the method of port charges accrual, revision of the amount of port charges, which will ensure attractiveness of sea ports for transport service users and establish a guaranteed source for reimbursement of expenses for reconstruction and reasonably justified development of port infrastructure;
- reviewing the policy of river tariffs and charges formation in order to stimulate development of the inland waterway transport;
- increasing competition in air transport and ground handling market, in particular by attracting new providers, including budget airlines, and provision of incentives to existing air carriers.

Setting up of an efficient national transport system and optimization of transport expenses will be the basis to increase transport competitiveness on the world transport market which will ensure the increase in the share of transport services export in the balance of foreign trade and GDP, as well as increase the defence capability of Ukraine.

**Expected results:**

- assessment of the real situation, forecast of the demand for transport service provision, ability to forecast the transport sector development on the basis of scientific analysis of information. Setting up conditions necessary to present information on the Ukrainian transport sector at the Eurostat website;
- harmonization of the transport legislation of Ukraine with the EU acquis:
  - Ukrainian transport market liberalized in accordance with the provisions of the Association Agreement and Common Aviation Area Agreement between the EU and Ukraine;
  - activities associated with management of infrastructure, freight and passenger railway transport are separated;
  - establishment of a transparent competitive environment in the transport services market, particularly for operators of passenger, freight and traction services for the railway transport;
  - introduction of equal activity rules for all rail transport market operators and a mechanism to guarantee equal access to the rail infrastructure market;
  - providing equal, non-discriminatory terms for operators' access to the transport market and fair competition between them based on their financial capacity, carrier's good reputation and professional competence of the staff;

- creation of competitive conditions, including rail transport carriers of non-public form of ownership (up to 25 % of transport market in 2025, up to 40 % in 2030);
- increase competitiveness of Ukrainian motor carriers in the European markets;
- introduction of enterprise resource planning (ERP) systems and use of the world's best management practices by the Ministry of Infrastructure of Ukraine and state enterprises under its management;
- transport sector is one of the top 5 industries of Ukrainian economy with regard to its attractiveness in the labour market;
- growth of labour efficiency in the transport sector and value added in domestic and international economy;
- transport sector labour efficiency (in ton-kilometres, passenger-kilometres per employee/year) at a level above the EU average, creation of new workplaces;
- prevailing economic trends of transport sector share growth in the GDP and the transport component decrease in the price of goods and services ;
- improvement of transport enterprises financial performance ;
- introduction of a single taxation system for all business entities engaged in one activity;
- development of an efficient competitive multimodal national transport system and strengthening of the transit potential of Ukraine's transport sector:
  - ensuring interoperability (operational compatibility) of the national transport network with the world multimodal transport network, including with a 1435-mm gauge railway track network;
  - passenger, freight and logistics infrastructure complexes established as integral parts of multimodal clusters of rail, road, air and waterborne transport. This measure includes, in particular, improvement of the system of multimodal transport and logistics clusters and logistics centres at the borders, ports and within the country, which will ensure Ukraine's ranking as one of the Top 50 countries according to the Logistic Performance Index (World Bank LPI) in 2025, and one of the Top 20 countries in 2030;
  - providing "door to door" delivery and implementation of "six rules of logistics" in supply chains (goods, quality, quantity, time, place, cost - the right product of the right quality shall be delivered in right quantity at the right time at the right place at a minimum cost);
  - participation of Ukraine in international large-scale transport projects;
  - not less than 1,900 million tons of transferred freight in 2030, in particular, due to attraction of air freight flows to Ukrainian airports;

- 6,000 million of transported passengers;
- joining the maritime "Blue Belt" zone girding Europe, ensuring monitoring of ships and cargo (blue belt) and establishment of appropriate port facilities ("blue lanes");
- Ukrainian sea ports in Top 100 of the largest container ports in the world;
- improved navigation through inland waterways;
- establishment of international cooperation and transport operating companies interested in increasing the volume and efficiency of transport in their respective market segments based on public-private partnerships;
- establishment and successful operation of private operators in the railway transport;
- increased transit of containers and other cargoes via Ukraine as part of development of the following transport routes: the EU countries - China (The New Silk Road), the EU countries - Iran and India, the EU countries – Turkey and other countries (at least 1 million container TEUs in 2025 and 2 million TEUs in 2030);
- the level of freight transport unitization (the share of intermodal transport units in transport operations) not lower than 10% in 2025, and minimum 20% in 2030;
- introduction of a flexible system for competitive tariff and pricing policy formation by the state and carriers, attracting transit cargoes and reducing the expenses on export and import of goods;
- establishment of a transport authority for tariff and competition regulation;
- simplification of procedures for gaining international status by regional airports in accordance with the ICAO requirements;
- simplification of formalities while carrying out international air freight transport via Ukrainian airports by implementation of the UNECE recommendations concerning the "single window" principle with regard to technologies and procedures of control, development of PPP in the field of international trade procedures simplification;
- reduction of potential corruption factors in motor carrier appointing on a competitive basis, and creation of a competitive passenger transport market;
- provision of a competitive environment for road construction, maintenance, technical service and repair contractors and introduction of independent performance quality control system ;
- increased responsibility of road transport carriers for violation of vehicles weight and dimension parameters and establishing conditions for enforcement of vehicles weight and dimension parameters by transport operators, including increased number of weight complexes - from the existing 34 to 112 units in



short-term perspective, implementation of weight-in-motion system of vehicle control;

- decentralization, transfer of road management to regional authorities and increase of responsibility for the road condition.

## **Chapter III**

### ***Priority area 2. Innovative development of transport sector and global investment projects***

Today, there is intense competition among countries for leadership in the market of transport services, where speed, safety and efficiency of transport, which directly depend on widespread use of innovations and high technologies, provide for competitive advantages. The level of innovative transport technologies reflects and enhances state competitiveness.

Modern development of Ukrainian transport complex should not only take into account the need to adapt to European standards, specifications, principles of management, etc., but also consider the fact that innovation and technologies are critical for new and more effective model design regarding the management of Ukrainian transport complex development.. At the same time the following standards for freight transport in terms of goods delivery speed are established on Ukrainian railways: up to 400 kilometres per day, which is less than 17 km/h, while the standard for cargo is within the limits of 8 - 14 km/h.

The lack of sustainable funding of transport sector development over last decades and insufficient technical maintenance of infrastructure facilities have led to large-scale overuse of the transport infrastructure.

A larger part of the investment funds for infrastructure improvements is expected to be provided by the external sources, mainly from international financial institutions, private investors and public-private partnership projects. Attracting investment funds from these sources into innovative transport projects is a necessary condition for the development of not only the transport sector but also of the national security and competitiveness of Ukraine. It is the creation of a favourable investment climate which is the primary objective of state governance and regulation that are ensured by sufficient legal framework.

#### **Common problems requiring solutions:**

- lack of funding of state-owned transport sector and imperfect fiscal policy, which leads to the outflow of funds from transport sector companies;
- lack of criteria and practical experience of prioritization of transport infrastructure development, insufficient funding of transport infrastructure facilities in order to ensure sustainable growth of transport operations within the territory of Ukraine;
- insufficient resource management and lack of measures that ensure sustainable development of enterprises; of (the degree of transport and warehousing enterprises fixed assets wear of (enterprises carrying out the following economic activities: “Land and pipeline transport”, “Waterborne transport”, “Air transport”, “Warehousing and auxiliary activities in the field of transport”) was estimated at 97.9% in 2014), lack of means of transport as well as an ineffective mechanism of stock renewal stimulation ;

- insufficient levels and unconformity of depth in some sea ports and areas of inland waterways with certificate data;
- inefficient mechanism of legal regulation of land plot allocation for transport infrastructure facilities construction and operation, and technological constraints of construction works on adjacent territory;
- imperfect monetary regulation associated with the need to sell the major part of hard currency proceeds; with the fiscal policy with regard to appliance of VAT to imported vehicles, specialized land machines, their units and spare parts;
- imperfect public procurement procedures;
- inefficient legal regulation of investments attraction in transport sector, including private investments and investments under PPP projects, which leads to reduction of private investments in transport sector, as well as limited capacity of instruments allowing for private investment in infrastructure facilities;
- lack of mechanisms of investment compensation in strategic transport facilities;
- lack of a transparent accounting system for transport costs and lack of an effective mechanism to control provision and use of funds allocated for the transport infrastructure repair, reconstruction and construction;
- technological backwardness of the domestic transport and infrastructure, lack of modern technology and of innovative transport policies implementation;
- discrepancy in transport-related education system and vocational training of specialists with innovative modern challenges, including:
  - inability of the existing education and training system to ensure the innovative development of Ukraine's transport sector;
  - lack of national standards and legal regulation for professional training and retraining;
  - ambiguity of national standards for professional competence of transport sector experts and non-recognition of educational documents (individual licenses and certificates) issued by Ukrainian educational institutions by the EU countries.

**Problems addressed by the following tasks accomplishment:**

- introduce mechanisms to encourage phased upgrade and development of the transport infrastructure and renewal of vehicles used for the sector needs, including:
  - improvement of the transport infrastructure management system and implementation of the Road map for national transport network development on the basis of the national transport modelling ;

- introduction of an effective tax mechanism and involvement of private capital in the development of:
  - railway transport, including incentives for upgrading traction and the rolling stock;
  - inland waterways transport, including incentives for fleet renewal and support of long-term investment in the renovation and construction of river vessels;
  - aviation sectors in general and implementation of strategic projects in the field of aviation, modernization and development of airport infrastructure and providers of air navigation services in Ukraine, including introduction of modern technologies of remote control towers of regional airports servicing small amount of transport operations;
- introduction of public-private partnerships mechanism use for the implementation of projects on transport infrastructure development at the legislative level;
- development and implementation of a program (action plan) to update railway rolling stock, including high-speed passenger and freight multimodal transport;
- implementation of the Charter of international road cargo transport within the CEMT multilateral quota;
- setting up of conditions at the legislative level for the development of seaports including their water areas and land resources, transition to the European management model “port-landlord”;
- identification of stable funding sources for maintenance and operation of shipping locks;
- improvement of the financial model of aviation infrastructure development support and strategic project implementation by regional airports, including involvement of public-private partnerships and comprehensive international programs with preferential funding conditions;
- improvement of currency regulation for civil aviation enterprises in order to reduce the cost of their services and increase competitiveness in international air transport markets;
- development of unmanned aerial vehicles, legal regulation of their use within the air space of Ukraine and, in particular, near airports and civil aviation airfields;
- regulation of legal, operational and financial relations between owners and actual operators of airports, including relations within the framework of public-private partnership projects;

- transition to planned financing with a clear understanding of the state of the road network in the medium and long-term perspective;
- ensuring of the State Road Fund functioning and targeted use of funds;
- ensuring sustainable financing for the maintenance of local roads at the expense of local budgets and using partial funding from the State Road Fund;
- regulate the creation of a simplified mechanism for withdrawal and redemption of land plots for the transport infrastructure development, land concessions for road construction and land registration by enterprises and transport organizations for its use at the legislative level;
- create the legal framework and economic mechanisms to facilitate localization of best innovative technologies in construction of transport infrastructure, production and renewal of rolling stock and other means by domestic enterprises, including the incentives for the development of their external economic activities by establishing customs privileges;
- creation of a modern communication, navigation and surveillance infrastructure in Ukraine in order to organize air traffic in accordance with the tasks of Ukraine as a Eurocontrol member;
- introduce e-freight system for transportation of goods including dissemination the best practice of sea ports for Ukrainian airports;
- introduce electronic management at all stages of logistics chain for air freight and mail in accordance with the global program “IATA-FIATA Air Cargo Program”;
- ensure efficient use of funds and corruption prevention while implementing transport development projects:
  - development a transparent mechanism for setting priorities, reasonable technical and economic feasibility, cost-benefit analysis, transparent public procurement rules;
  - introduction of long-term financial planning in accordance with strategic priorities, timing and life cycle of facilities with prioritization of projects related to the TEN-T;
  - creation of a unified system for coordination, planning, attraction, and monitoring of international assistance for the efficient allocation of investments by priorities of the transport sector;
  - introduction of a system for disclosure of financial and operating information of state enterprises, ensuring transparency of their financial flows;
  - providing the public with the right to control the quality of works and the targeted use of funds;
  - providing state guarantees and protection of investors;

- development and introduction of compensation mechanisms for investments in strategic investment and innovative projects;
- introducing a unified taxation system for all business entities engaged in single type of activity;
- set up a mechanism for involvement and localization of best world technologies in the field of transport, transport construction and machine building;
- ensure comprehensive innovative development of transport, in particular by implementation of the state strategy (targeted approach) of innovative development and investment projects in the field of transport, while foreseeing possible establishment of Transport Innovation Fund and interrelation of targets and resources through relevant plans and programs for development of :
  - roads;
  - railway and road traffic safety, air and maritime navigation safety;
  - multimodal transport;
  - high-speed railway traffic;
  - inland waterways transport;
  - regional airports and airfields (heliports) of general aviation;
  - digital transport corridors and e-logistics;
  - renewal of railway rolling stock, road, air, maritime and river fleet;
  - upgrading the municipal transport with preferred transition to electric transport;
- create conditions for implementation of integrated information systems for passengers and cargo owners:
  - introduction of new technologies and information support of transport operations, in particular by creating a single information system of technological interaction among various transport modes, cargo owners, freight forwarders, customs and state supervision bodies on transport and in border crossing points;
  - implementation of innovative solutions and best practices for customs and other supervision procedures during transport operations;
  - simplification of formalities and improvement of cargo handling technologies in logistics terminals, airports and ports of Ukraine;
  - simplification of formalities and promotion of introduction of innovative technologies (smart infrastructure and smart mobility) and intelligent transport systems;
  - expansion of cloud technologies for data storage, virtualization and data processing centres, etc.;

- increased road network capacity by implementing intelligent transportation systems;
- implementation of automated control over cargo storage (transporting by all transport modes);
- setting up of conditions for the development of transport and logistics activities and competitive 3RL - 5RL - providers;
- support and practically implement the results of research projects in the field of transport, including by developing national think tank organizations and international scientific and technological cooperation, in particular:
  - introduction of new educational programs of training and retraining of the transport sector staff, in particular by implementing joint programs of educational institutions, government, businesses and NGOs and cooperating with international organizations;
  - implementation of capacity building programs for public authorities by enhancing professional capacity and productivity of officials (staff training and development system);
  - ensuring sustainable dialogue and regular consultations among research organizations, financial institutions, transport companies, and government authorities;
  - ensuring research and innovative partnership with the EU, USA, China and other countries (OECD, Horizon, Erasmus and other programs), including measures to improve sovereign rating of Ukraine according to the OECD in order to reduce cost of international export and credit funding of transport sector and transport sector enterprises;
  - approval of standards for professional competence of transport sector experts;
  - introduction of a system for professional accreditation of drivers and road transport personnel in accordance with European practices;
  - development of aviation training institutions and centres for air staff training;
  - simplification and increased effectiveness of the system of Ukrainian transport specialists certification, ensuring consistency with international training and assessment standards, concluding agreements on recognition of Ukrainian seafarers' certification and other transport sector specialists with other partner states

**Expected results:**

- modernized transport infrastructure (with due consideration of the master plan conclusions and sub-sector development programs);
- introduction of project infrastructure cycle for transport development management and transport infrastructure maintenance;

- increase of investments in the transport sector in the amount necessary to provide for updates of at least 90% of transport assets by 2030;
- saving public funds by introducing a transparent system of justification, adoption and implementation of the procedure of public procurements and public procurements contracts for execution of works, including by involving international organizations;
- attraction of private investments to upgrade the transport fleet - about 10.1 billion UAH per year;
- increase of private investment flow in airport terminal infrastructure;
- adopted legislation and established conditions for operation and management of concessions regarding transport infrastructure facilities;
- transition from residual funding of road economy to medium and long-term planned funding with clear understanding of the road network condition;
- renewed rail rolling stock, public passenger transport, maritime and river fleet due to localization of best world technologies on domestic machine-building enterprises;
- organization of innovative transport means production by national enterprises having the share of local content of not less than 80% as of 2030;
- attraction of specialists and new jobs in transport construction, mechanical engineering and related industries - at least 20,000 new and 80,000 complementary jobs for each 10 billion US dollars of investments;
- reduction of fixed assets wear out degree (“Transport, warehousing, postal and courier activities” type of economic activity according to the Classifier of Types of Economic Activities of Ukraine (KVED) from 51.7% (as of 2015) to 45% in 2030;
- creation of a unified system of coordination, planning, monitoring and involvement of international financial assistance for the efficient allocation of investment in the transport sector on the basis of priority principle, taking into account the National Transport Model;
- ensuring targeted use of funds by setting up a mechanism to control certain stages of infrastructure development project cycle management;
- introduction of a system, which allows to disclose financial and operating information of state-owned enterprises managed by the Ministry of Infrastructure;
- innovative development of transport sector:
  - use of high-tech rolling stock on railways, roads (development of new types of transport: electric cars, high-speed trains, etc.), waterborne transport fleet renewal,



- high-tech transport infrastructure is modernized, including the development of innovative logistics systems network for passenger service and cargo handling, creation of intelligent transport systems;
- reliable functioning client-oriented national multimodal transport network that provides user-friendly interface for interaction of passengers, cargo owners and clients with the transport system, and its informational transparency;
- ensuring efficient information support of the trade - transport business process, in particular by introducing a unified system of information flow in terms of goods transportation management from the producer to the consumer and the interface between the transport customer and the carriers;
- implemented strategy (program) for the development of digital transport corridors and electronic logistics by supporting introduction of paperless trading, mutual recognition of electronic shipping documents and provision of cross-border transport services;
- introduced innovative solutions and world's best practices of customs and other supervision procedures in transport sector;
- implemented intelligent transportation systems and traffic control systems in land and waterborne transport (ERTMS), (ITS), (SST and LRIT), RIS; SMART tachographs;
- use of the European satellite navigation system (Galileo) and GNSS navigation technologies;
- integration of Ukrainian air navigation system into the European system taking into account requirements for environment protection;
- restoration of Ukrainian transport enterprises operation and creation of new workplaces;
- use of innovative technologies in road transport sector, revival of business activities and construction works, increased living standards, increase of budgetary income and other external results achieved through implementation of transport infrastructure projects;
- provision of conditions for introduction of speed passenger traffic on railways (up to 400 km/h), overnight delivery of valuable cargo (up to 350 km/h), expedited container delivery (not less than 200 km/h);
- upgraded river transport infrastructure and deep-sea port infrastructure;
- repaired shipping locks on the Dnipro River and implemented locks upgrading projects;
- revived fleet of maritime and river transport of Ukraine;

- compliance of actual depth of Ukrainian sea ports and approach channels with their certificate characteristics, development of deep-sea ports, automated transshipment at sea terminals;
- guaranteed 3.65 m depth of the Dnipro River;
- ensured development of national and regional airports and harmonization of the airport infrastructure with international standards through its modernization with the preservation of state-owned status of integral property complexes of airports, and introduction of state property efficient management ;
- network of Ukrainian motorways reconstructed and fully compliant with TEN-T standards and interconnects regional centres, as well as connected to Kyiv in order to increase regional mobility;
- increase of the share of hard-surface state public roads which comply with regulatory requirements from 30% (as of 2015) to 70% in 2030;
- functional ring roads around Kyiv and other major cities;
- extension of professional capacity and creation of an effective system for professional training and technical support to the innovative development of the Ukrainian transport sector, in particular by introducing a preventive model of training for transport sector specialists (the latest staff training program);
- joint programs implemented by various educational institutions, business sector and public administration for the development of the transport sector;
- national diplomas and certificates recognized by transport companies are all over the world;

## Chapter IV

### *Priority area 3. Safe, clean and energy-efficient transport*

Transport safety, energy consumption and transport impact on the environment in Ukraine do not meet modern requirements. In recent decades there was a rapid increase in the number of vehicles and traffic load in the world, leading to increase in the number of traffic accidents and negative consequences.

Between 2011 and 2016 about 26,700 people died in road traffic accidents in Ukraine and in 46.7% of the cases the victims were pedestrians and cyclists. According to the World Bank annual losses resulting from traffic accidents in Ukraine make up to about 4-5 billion USD. Thus, in 2016, almost 3,400 people died on the Ukrainian roads, and 33,600 people were injured.

90-95% of pollutants emissions into the urban air in crowded places account for the road transport. The EU Transport Policy sets up a task to reduce by half the use of cars using "traditional fuels" in the urban transport by 2030 and completely abandon their use by 2050.

In order to fulfil its international obligations, in particular commitments under the UN Convention on Biological Diversity and the UN Convention on Desertification it is necessary to use technologies that minimize industrial impact on wildlife and land in order to contribute to the conservation of seas biological diversity.

#### **Common problems requiring solution:**

- high mortality and injury rate due to road traffic accidents;
- significant share of vehicles operated by Ukrainian carriers are outdated, inefficient and have severe environmental impact;
- imperfect legislative mechanisms and legal regulation in the field of transport safety;
- imperfect state supervision (control) in the transport sector;
  - lack of effective transport safety management systems and lack of a single coordinating public authority for road safety management, resulting in the lack of an integrated system of road safety state management ;
  - unclear division of functions and powers as well as poor coordination and institutional capacity of public authorities and local government bodies in planning and implementing actions in the field of road safety;
- ineffective systems for monitoring of road transport accidents, their statistics and risk management
- ineffective approach to solving the issue of accidents high rate, their severe consequences and lack of scientific basis for activities in the field of road safety;

- lack of specific measurable goals to improve road safety, appropriate strategy and coordinated action plan;
- unsatisfactory technical condition of a large number of vehicles and lack of the system to control over the safety of vehicles during their operation;
- poor implementation and practical application of new technologies and technical means of traffic management, automated systems for traffic control and regulation;
- insufficient sustainable funding of measures designed to prevent and reduce the accident rate, as well as to reduce the number of accidents with serious consequences;
- ineffective system of accident notification and emergency assistance to accident victims (poor condition of primary healthcare assistance during the first hour after the accident);
- poor training of drivers and lack of effective control over the activities of driving schools;
- low level society education in terms of road safety, personal responsibility and observance of traffic rules;
- poor environmental control in the field, lack of responsibility for harmful impact on the environment and low awareness of the population regarding environmental protection measures;
- no incentives of use of power storage alternative sources in transport infrastructure facilities;
- increasing human pressure, high levels of air pollution and noise caused by road vehicles in the areas of human activity;
- unresolved problem of used tires, waste oils, and vehicles recycling ;
- significant impact of road transport on global climate change;
- virtual absence of responsibility for the harmful impact on the environment;
- lack of implementation of energy saving technologies;
- taking into account the need to preserve the most valuable river ecosystems, habitats, species of plants and animals protected by the Ukrainian and international law while developing plans for river infrastructure development and dredging works;
- unsettled issue of unmanned aerial vehicles controlled use and ornithological situation near airports at the legislative level;
- poor condition or virtual absence of forest plantations on rights of ways of roads and railroad precincts;
- lack of bicycle lanes and pedestrian zones in cities.

Problems addressed by the following tasks accomplishment:

- improvement of state transport safety management system in line with the international standards and strengthen the institutional capacity of public authorities, which directly or indirectly regulate the transport market and carry out steps of state supervision (control) over the transport safety;
- harmonization of regulatory legal acts in the field of safety and security with the EU standards, regulations and directives;
- introduction of the use of SMART-tachographs for trucks and buses;
- protection against unauthorized interference in transport activities:
  - development, adoption and enforcement of laws based on modern international requirements and best practices;
  - improvement of technical equipment, organization and staffing of transport security facilities to prevent and respond to unlawful interference;
  - introduction of new security technologies, including scanners, detectors of new explosives, smart chips and cyber security systems;
  - introduction of aviation security information technologies, in particular the aviation security information system;

*Increasing transport safety:*

- transposition of European rules, standards and regulations into the national legislation of Ukraine, including requirements for the safe operation of infrastructure and the means of transport;
- introduction of a globally recognized road accident classification;
- improvement of the system for collection of information on transport accidents, its analysis and investigation on the basis of managerial decisions;
- introduction of an effective mechanisms of transport safety management, state supervision and control;
- ensuring effective distribution of functions among public authorities for investigation of traffic accidents, licensing, certification and state control of transport safety;
- ensuring implementation of European standards for dangerous goods transportation, including the principles of multimodality;

*Increasing road traffic safety*

- implementation of the program for road safety improvement;
- creation of an inter-agency body for coordination in the field of road safety;

- development of efficient procedures for funds allocation from the State Road Fund and other sources in order to implement actions aimed at improving the road safety;
- integration of road safety modules into Ukrainian educational system;
- creation of advisory bodies in the field of road safety by local state administrations;
- reforming of the system for control of vehicles technical condition and inspection of vehicles technical condition during their operation on roads;
- determining the influence of factors related to infrastructure in places of traffic accidents concentration , safety evaluation of the existing road infrastructure and implementation of engineering actions to improve safety indicators, road design with due consideration of various speed limits;
- ensuring control over the provision of road safety, including information campaigns and fines for violation of traffic rules, enforcement of control over compliance with traffic rules;
- establishment of 50 km/h speed limits within the territory of localities;
- widespread use of innovative technologies related to road safety;
- implementation of programs and measures designed to increase the safety of the most vulnerable road users, in particular, pedestrians and cyclists;
- improvement of pedestrian infrastructure, parking zones, vehicle speed limits and development of cycling infrastructure;
- improvement of training system for drivers and other road users with regard to primary healthcare assistance to victims of accidents;
- introduction of system for training and certification of professional competence for drivers and transport managers in accordance with EU acquis;
- establishment of the Register of motor carriers, which includes an offence database ;
- organization of social campaigns to inform people about risks on the roads and mandatory compliance with traffic rules: Safety Month, TV commercials, outdoor advertising etc.;

#### *Increasing air transport safety*

- implementation of the flight safety program in order to create an effective system of flight safety management both at the level of the state and aviation entities in accordance with Annex 19 to the Convention on International Civil Aviation and the Global Aviation Safety Plan for 2013-2027;

- harmonization of Ukrainian legislation with the EU legislation and enhancement of cooperation with the European Aviation Safety Agency (EASA);
- legal regulation of ornithological situation control in Ukrainian airports taking into account the requirements of the ICAO;
- integration of information exchange systems between the border service and air carriers to increase the speed of control procedures;
- updating the state policy in the aviation security sector taking into account the State Civil Aviation Security Program at the national level and supervision of its implementation by aviation entities in accordance with Annex 17 to the Convention on International Civil Aviation;
- introduction of aviation safety information technologies;
- improvement of rules and procedures of a unified civil and military system of air traffic coordination in accordance with the state interests of Ukraine, standards and recommended ICAO practices, Eurocontrol documents and EU legislation;
- introduction of ICAO and World Customs Organization standards with regard to the development and implementation of the WCO SAFE Framework of Standards to secure and facilitate global trade and introduction of an authorized authority to ensure safety of the air cargo and mail logistics chain and to simplify the procedures for passenger transfers;

#### *Increasing railway transport safety*

- implementation of a safety management system in the rail transport of Ukraine in line with the EU acquis;
- introduction of the procedures for state safety certification of railway companies;
- establishment of rail transport accidents investigative body;

#### *Increasing maritime safety*

- reforming of the state monitoring system related to navigational safety of vessels;
- creation of national segment of the EU SafeSeaNet system for exchange of information on ship movements and emergencies;
- integration into the SafeSeaNet European information system;
- implementation of common procedures with the EU for maritime safety, maritime vessels navigation monitoring, help and communication at sea,
- separation of functions for maritime safety ensuring, state supervision and administrative services provision carried out by offices of seaport captains;

- development of the GMDSS (Global Marine Distress and Safety System) coastal infrastructure;
- acquisition of maritime and aeronautical search and rescue units and infrastructure deployment;

*Increasing environmental safety of transport*

- ensuring priority of ecological safety requirements, mandatory nature of compliance with ecological standards, regulations and limits for use of natural resources while carrying out economic, administrative and other types of activities;
- implementation of the preventive measures in the field of transport associated with the protection of environment and development of a mechanism of for the incurred damages reimbursement;
- ensuring environmental impact assessment at the stage of designing and developing plans and programs for transport sector development;
- considering the importance of reducing the negative impact of road transport and road infrastructure on the environment due to the location of ecological network sites (key, binder, buffer sites), migration routes, preservation of the unity of sites and natural ecosystems, construction of special passages and protective barriers in places of wild life migration while planning, designing and constructing roads and infrastructure;
- renewal, protection and use of protective forest plantations close to roads and railroad precincts as parts of ecological network;
- economic incentives for transition of cargo and passenger transport to more environment friendly modes of transport such as railway and water transport;
- introduction of fees system for motorway users based on the vehicles emission standards ;
- incentives to use more environment friendly transport modes, including electric cars, electric public transport, such as metro, trams, trolley buses, electric buses and human-powered modes of transport: bicycles (public bicycle sharing systems), kick scooters and establishment of public rental mechanisms for these modes of transport;
- economic incentives for carriers to reduce emissions of pollutants and greenhouse gases and reduce noise from vehicles;
- improvement of the system for response to sea pollution by defining the sources of financing and agencies responsible for the implementation of national system for urgent and effective responding to events which lead to pollution of the sea or the coastline by oil and other hazardous and polluting substances;



- Effective implementation of the International Convention for the Prevention of Pollution from Ships (MARPOL Convention);
- incentives (including fiscal incentives) to use environmentally friendly alternative sources for heat and energy production, as well as to use environmentally friendly modes of transport and special-purpose vehicles;
- incentives to use more eco-friendly materials in manufacturing mixtures for roads construction and transport infrastructure;
- implementation of a set of regulatory and fiscal measures, including implementation of international environmental standards for vehicles, promotion of alternative motor fuels usage , differentiation of vehicle taxation based on emissions of greenhouse gases and other environmental indicators;
- implementation of modern technologies for testing transport vehicles with regard to ecological parameters;
- carrying out of strategic environmental impact assessment while drafting programs and plans for transport industry development;
- implementation of the National Plan for responding to pollution incidents from ships at sea, taking into account renewal and purchase of modern additional technical facilities and equipment designed for liquidation and localization of sea environment pollution;
- creation (construction, reconstruction) of sufficient port reception facilities for waste and polluted water, as well as for residual cargo to ensure compliance with relevant international conventions joined or intended to be joined by Ukraine.

**Expected results:**

- reduction of the mortality rate due to traffic accidents per 100.000 people by 50% by 2030;
- reduction of the number of serious injuries due to traffic accidents per 100.000 people by 50% by 2030;
- the Agency for Traffic Safety established, guided and coordinated by the Cabinet of Ministers of Ukraine through the Minister of Infrastructure of Ukraine;
- implemented mechanisms to prevent unauthorized interference in the work of transport, protection of the road, passengers and cargo transport system,;
- functioning electronic traffic monitoring system, transport risk management, and geographic information system;
- reduction of macroeconomic losses from transport accidents by 50% by 2030;
- provision of well-defined aspects of economic entities administrative responsibility for transport legislation violation in the field of railway transport in amendments to the Law of Ukraine “On Railway Transport”, introduction of

heavy penal sanctions for transport legislation violation in the field of railway transport;

- effective and transparent activities of safety agency and investigation agency carried out;
- introduced system of obligatory and voluntary notifications and creation of electronic database;
- appropriate level of safety for hazardous goods transportation reached;
- improved certification and licensing system;
- introduction of an efficient system for transport safety management, based on European standards; implemented transport risk management system;
- increase of forest plantations protective functions, enhanced aesthetic, taxonomic, recreational and other protection specifications of the plantations;
- implemented steps to ensure river and maritime navigation safety:
  - Ukrainian segment integrated to the European SafeSeaNet system;
  - introduced effective functioning and sustainable development of the National System for Search and Rescue at Sea;
  - harmonized technical requirements of Ukrainian river information service with the requirements of European standards;
  - safe operation, maintenance of appropriate technical condition and timely repair of hydraulic structures associated with inland waterway transport;
- reduction of specific greenhouse gas emissions from mobile sources into the atmosphere by 60% compared to 1990, due to increase of the share of public transport and electric transport, electric busses, human-powered modes of transport (bicycles);
- reduction of the total air-pollutant emissions volume from mobile sources in carbon monoxide percentage of in view of relative aggressiveness of principal pollutants by 70% (compared to 2015);
- increased use of electric vehicles and electric cars, in particular, increase of electric transport share of in domestic traffic to 75% in 2030;
- increased use of alternative fuels to 50% by 2030;
- adoption of the Action plan for reduction of environmental impact of transport, which is positively correlated with the introduction of energy saving technologies, use of alternative motor fuels, restoration and expansion of the possible use of electric vehicles;
- improved environmental impact of air transport;
- reduction of specific consumption of fuel per 10 t/km by 30% by 2030.

## Chapter V.

### *Priority area 4. Seamless mobility and interregional integration*

At present, the management of the regional transport development is inefficient. Extremely high (as compared to the CIS countries and the rest of the world) number of privileged passengers has demonstrated significant degradation of the public passenger transport.

Public passenger transport is characterized by poor quality of services due to the systematic lack of investment, outdated transport fleet, low capacity of passenger buses, actual refusal to use bus stations by operators, a large number of "illegal" transport providers, and significant numbers of citizens entitled to preferential fares. In many cities, tram and trolleybus traffic has stopped. There is no regular bus service for 23% of residents of rural and mountain areas. The poor quality of public passenger transport results in the increase of passenger car traffic.

That is why, the improvement of mobility is important, which means improved rural, regional and metropolitan traffic, including in particular, for disabled persons and persons with reduced mobility.

Government's commitments for passenger transport should focus on implementing high standards of service.

#### **Common problems requiring solution:**

- low quality of passenger services;
- system of social service ordering and socially important services of public passenger transport is not in line with the EU acquis;
- reduced carrying capacity of public transport;
- reduced living standards of 23% of rural areas residents due to lack of regular transport services;
- poor availability of transport, transport facilities, as well as transport infrastructure for disabled persons and persons with reduced mobility;
- dominance of vehicles with high carbon and sulphur emissions in urban and regional transport modes;
- unprofitable suburban railway passenger services, subsidized by cargo railway transportation;
- large number of preferential fares (almost 20 million people are entitled to transport benefits) and unresolved issue of their monetization or compensation for such transport;
- low efficiency of taxi service market regulation;
- limited budget funding of costs associated with public passenger services, inadequate procedures for service tendering and contracting;

- lack of state social standards for public transport services and criteria for assessing the quality of passenger transport services, which obstructs an objective assessment of the provided services;
- lack of a systemic control on the part of transport organizers and supervising bodies over compliance with service contract terms on public bus routes, which does not guarantee high quality and safe services for passengers;
- lack of operators' motivation to invest into enhancement of the quality and comfort of transport on public bus routes;
- uncontrolled and inefficient system of passenger fare collection in the road transport;
- presence of unfair competition (many operators in the transport market, which perform regular passenger carriage, operate without appropriate permits), which inhibits operators' investment in measures to improve service quality of the passenger transport;
- high 'shadow' cash flows and informal employment in the road transport;
- monopoly in the market of bus station services;
- underdeveloped system of domestic air transport services, including poor condition of regional airports/airfields and lack of conditions related to general purpose aviation development;
- high cost of air passenger transport;
- high duration of passenger transport services.
- significant financial burden on transport companies associated with social passenger services;
- lack of support and promotion of cycling.

Problems addressed by the following tasks accomplishment:

*Ensuring mobility and functioning of modern passenger transport:*

- ensuring efficient state supervision (control);
- introduction of an efficient control over reporting filed by all transport entities and increasing their responsibility for the provision of falsified data;
- combatting illegal transport, set up conditions for the operators to 'come out of the shadows' and ensure legalization of incomes;
- development of multimodal passenger transport and introduction of a "single transport ticket";
- addressing the issue of preferential fares of public transport passengers:
  - accomplishing social functions with due compensation of the related transport costs (reforming of the public passenger transport system through switching to targeted subsidies, etc.);

- streamlining the organization and funding of socially important interregional passenger transport by all transport modes;
- improvement of the structure and the mechanism of narrow-gauge railways management;
- introduction of contractual relationships between operators and local authorities on socially important passenger transport ordering;
- liberalization and deregulation of the passenger road transport market;
- regulation of taxi and bus station services;
- stimulation of the domestic transport development by abolishing the VAT, state passenger charges, and by reducing the cost of fuel;
- development of domestic air transport, including modernization of regional airports and airfields of Ukraine using international credit programs and grants in order to reduce the cost of airport services and make them more affordable;
- creation of favourable conditions for engaging more air carriers for international and domestic air transportation and, in particular, low-cost airlines;
- introduction of strategic transport planning in urban, suburban areas and regions as part of their strategic planning, including efficient and convenient suburban transport with other transport facilities (air ports, railway stations, sea and river ports, bus stations, etc.);
- increase the share of public transport in order to provide convenient means of transport for the citizens, including vulnerable groups, and reduce the negative environmental impact, including greenhouse gas emissions;
- allocation of separate lanes for public transport in cities;
- providing institutional support for cycling transport development, as well as for drafting and implementation of legal acts regarding use of cycling transport and its participation in road traffic;
- development of the Strategy for the development of cycling transport and ensuring cycling security, which would be based on a scientific approach and would take into account progressive foreign practices and experience;
- development of socially and environment-focused mobility with regard to short-distance travels in accordance with “The city of short routes” models, introduce principles of inter-modality and ensure the best possible interaction of cycling transport with other modes of transport;
- development of cycling infrastructure;
- promotion of the development and popularization of aviation, including by simplification of the procedures for registration, certification and customs registration of aircraft and ultralight aircraft, as well as bringing the national

legislation in compliance with the ICAO standards related to irregular non-commercial international flights;

- improvement of passenger services quality in accordance with the EU legislation:
  - implementation of the mechanism of quality control systems for passenger transport including their mandatory publishing;
  - introduction of an instrument to organize public service obligations and socially important passenger transport;
  - using new technologies and intelligent transportation systems for improving the quality of transport services, systems of notification about the provided services, introducing electronic and integrated automated systems for fare collection;
  - creation of conditions for establishment of joint suburban passenger transport companies with the participation of local authorities;
  - creation of conditions for establishment of private passenger transport operators (long distance traffic);
  - creation of conditions for connecting regional centres by a network of speed (160 to 200 km/h by 2025) and high speed (250 to 400 km/h by 2030) railway transport, including on the basis of public-private partnerships;
  - ensuring gradual replacement of the municipal fleet by electric vehicles regardless of its ownership, if necessary, with amendments to the existing laws, including by the efforts of local authorities;
  - carrying out inspections of vehicles use upon expiration of its established lifetime set by the manufacturer;
  - introduction the criteria for monitoring of observance of the rights of the passengers and quality of passenger transport, as well as introducing systems of incentives for carriers achieving social standards and adhering to them;
  - introduction of independent assessment of the passenger services quality against established criteria or standards;
  - ensuring availability of transport services for all citizens, including persons with disabilities and other low-mobility groups by providing them with accessible environment for free movement and smooth communication;
- gradually upgrade the public transport fleet and replace the carbon-emitting transport modes, to promote green transport modes, develop cycling in cities, replace the concept of a mini-bus with more flexible and environment friendly systems, equipped to transport people with disabilities;

- promote the increase of urban mobility and development of the system of parking areas and passenger terminals network to transfer from individual transport to municipal public transport modes.

**Expected results:**

- providing the citizens with high-quality, safe and affordable transport services regardless of their place of residence;
- provision of access to transport services for all users, ensuring high mobility at the average level of EU countries;
- reduction of the share of people living in rural areas at the distance of 3 km from hard-surface roads up to 0.5% by 2030;
- 90% of administrative units covered by scheduled bus transport by 2030;
- increased comfort of public transport, reduction of the travel time;
- creation of integrated multimodal regional passenger transport networks;
- implementation of programs for city transport models design, including development of intermodal infrastructure for railway, bus stations and ports to ensure the efficient combination of transport operations performed by individual vehicles and public transport and optimize the fleet structure to meet the needs in transport, eco-safety, and the needs of people with disabilities and other low-mobility groups;
- introduced systems of electronic fare payment in public transport;
- introduced mechanism for reduction of cost of domestic air transport and incentives for aviation development;
- development of the system of regional airports of Ukraine taking into account their role for the country in general and for each region in particular, including development of programs of harmonious development of regional and metropolitan airports of Ukraine;
- regulated mechanism of preferential fares, streamlining of the organization and funding of socially important passenger transport;
- mechanisms for implementation and funding of socially-important air transport introduced and developed with due consideration to international and national air law and EU practices, including setting up of the list of regional airports of Ukraine and routes for the Program of socially important services up to 2030;
- legal procedures related to transfer or selling at the final price of surplus property of state-owned aviation enterprises to specialized airports of communal ownership, state or communally-owned aviation museums, etc. are introduced;
- implemented contracts for public services in line with the updated legislation on public procurement;

- satisfying the needs in passenger transport and development of tourist routes in remote areas by using narrow-gauge railways;
- increase of the share of public transport in general infrastructure up to 25% by 2020;
- increase of the share of public transport fleet taking into account the needs of people with disabilities up to 50% by 2030;
- increase of the share of public facilities, public amenities, transport infrastructure and road service facilities equipped taking into account the needs of people with disabilities up to 60% by 2030;
- unshadowing the public passenger transport market;
- functioning private commuter rail companies and the established ones involving local government bodies in the passenger transport system.



## **Chapter VI.**

### ***Organizational support and monitoring of the Strategy implementation process***

The implementation and monitoring of Strategy performance is carried out by the Cabinet of Ministers of Ukraine, the Ministry of Infrastructure of Ukraine and other national and local authorities, involving NGOs and business associations, as well as international organizations. In case of a need to amend the Strategy, amendments will be made in compliance with applicable law.

In order to implement the Strategy, an Action Plan will be developed for every three-year period; it can be reviewed and updated in future. The Action Plan should include: identification of key tasks and activities; responsible body/implementing structure; timing and connection between key tasks; main stages; implementation schedule; estimation of resources and costs; monitoring, evaluation and review mechanisms.

The Ministry of Infrastructure will also set up a Monitoring Committee including representatives of relevant stakeholders - government authorities, NGOs, businesses, the media, etc.

The Monitoring Committee should continuously assess the implementation of the Strategy and efficiency of the transport sector operation. If a problem is determined or the strategic priorities are changed, the Committee may initiate examination of the issue, review, renewal or update of the Strategy.

Such monitoring includes preparation and publication of an annual report on the implementation of the Strategy Action Plan.

The effective implementation of the Strategy Action Plan will be ensured by using appropriate tools for monitoring of key performance indicators and strengthening the institutional capacity of the Ministry of Infrastructure of Ukraine and other national government authorities whose activities are guided and coordinated by the Cabinet of Ministers of Ukraine through the Minister of Infrastructure of Ukraine.