

**МИНИСТЕРСТВО ТРАНСПОРТА И КОММУНИКАЦИЙ
РЕСПУБЛИКИ БЕЛАРУСЬ**

**УЧРЕЖДЕНИЕ ОБРАЗОВАНИЯ
«БЕЛОРУССКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ ТРАНСПОРТА»**

Кафедра славянских и романо-германских языков

Т. С. ЯРОШ, Н. В. ПШУЛ, О. Н. БУЛАВИНА

**АНГЛИЙСКИЙ ЯЗЫК
ОБЩИЙ КУРС ТРАНСПОРТА**

Учебно-методическое пособие

Гомель 2020

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ОБЩИЙ КУРС ТРАНСПОРТА

*Одобрено учебно-методической комиссией
факультета иностранных студентов
в качестве учебно-методического пособия
для студентов 1 курса всех специальностей*

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Пособие состоит из трех разделов, каждый из которых включает в себя словарь, тексты транспортной тематики, послетекстовые упражнения для работы над лексикой и дополнительные тексты.

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UNIT 1

TRANSPORT IN BELARUS

Vocabulary Notes

transportation – транспорт, перевозка
route – маршрут
availability – наличие, доступность
carrier – перевозчик, грузоперевозчик
pipeline – трубопровод
vehicle – транспортное средство
network – сеть
hub – транспортный узел
crossroads – перекресток, развилка
transshipment – перевалка, перегрузка
cargo – груз
goods – товары, груз
interregional – межрегиональный
destination – пункт назначения
ensure – обеспечить, гарантировать
fleet – парк транспортных средств
toll – дорожный сбор, плата
domestic – внутренний, внутригосударственный
towing – буксировка
vessel – судно, плавсредство
junction – узел, узловая станция
multiple – многократный
comprise – включать, составлять
highway – магистраль, автострада
shuttlebus – маршрутное такси
provide – обеспечивать, предоставлять
capacity – пропускная способность
wheel – колесо, рулевое колесо
pump – насос
congestion – затор
safety – безопасность
facilities – средства обслуживания
fare – плата за проезд

Read and translate the text and do the following exercises.

T e x t 1A

TRANSPORT IN BELARUS

Belarus is a country with a well-developed transportation system. The country has available all major types of transportation – railway, motor, air, river, pipeline. The sphere of transport communication in Belarus, located at the crossroads of transit routes, is enhancing the quality and availability of its services, solving issues of export-import and transit operations for foreign carriers. More than 100 million tonnes of European cargo annually passes through Belarusian territory.

Belarus serves as an important transit corridor for the Europe and Central Asia region. Two transport corridors cross the territory of our republic, i.e. the 2nd All-European transport corridor, which connects the EU countries with China and Asia Pacific Region via Transsib and Kazakhstan; and the 9th All-European transport corridor, which connects the Baltic states with the Black Sea Region and runs to the Mediterranean and Middle East states.

Belarus Transport as a system consists of two subsystems: public and non-public transport. Public transport includes rail, water (river), road, air and pipeline transports. Public transport services the needs of the economy and the population for transport of goods and passengers. Non-public transport is carried for own account by all kinds of vehicles in plants, enterprises, etc.

Transport infrastructure includes transport networks (roads, railways, air passages, canals, pipelines, bridges, tunnels, waterways, etc.), as well as transport hubs and terminals, which make possible the transshipment of cargo or passenger transfer from one mode of transport to another (airports, railway stations, bus stops and ports).

Railway transport

The Belarusian Railway is one of the most important transport systems of the republic, which transports up to 70 % of all cargoes carried by the national public transport. The railway network was launched over 150 years ago, in 1862, when the Grodno-Parechie section of the line was opened. Belarusian Railways occupy a leading position for transport services, annually transporting more than 140 million tons of cargo and 90 million passengers.

For many residents of Belarus, railway transport is one of the most comfortable, reliable and accessible. There are 20 major railway stations with a well-developed infrastructure and services for passengers. Interregional lines carry passengers between Minsk and regional centres, as well as between regional centres of the Republic. Depending on speeds, and the number of stops, interregional lines are divided into business and economy classes. Business class interregional trains connect the capital with Brest, Gomel and Vitebsk. Railroads inside

the country can get you to over 2,100 destinations. You can buy train tickets personally in ticket offices at stations, and also book by phone or online. The cost of travel along Belarusian railways is not high and depends on the line, class, and category of the railway car.

Automobile transport

The road infrastructure of Belarus represents an optimal extensive network of motorways that ensure a continuous year-round communication with almost all populated areas. The share of motor transport is 76,2 % of the volume of cargo transportation and 53 % of passenger transportation. The fleet comprises around 20 thousand buses and coaches, 62.6 trucks and many cars of all forms of ownership. General-use roads are classified as republican and local ones. Solid-paving roads have the length equal to 62.6 thousand kilometers and 40.5 thousand kilometers of them are roads with asphalt paving. Since 2013, the National electronic toll collection system – BelToll – has been operating across 1,512 km of Belarusian roads.

The main flow of the transit transport by road through the territory of the Republic of Belarus goes through two international transport corridors: corridor II (East-West) and corridor IX (North-South) with a branch IX B. One of the most important components of the Belarus State transport policy is the integration of main roads into the European transport system and combined network of the CIS international roads.

Air transport

Belarus is a comparatively small country, therefore there are no regular domestic air flights. The National Airport Minsk welcomes international flights that connect the Belarusian capital with many countries across the globe.

Existing airports in regional centres welcome charter flights, cargo aircraft, and airliners that need an emergency landing. Apart from that, airports in Gomel, Grodno, and Brest offer regular flights to the Russian city of Kaliningrad. Belavia national airline is a major air carrier. Currently Belavia has offices in 12 European countries. International routes include Austria, Cyprus, France, Germany, Ireland, Israel, Italy, Kazakhstan.

Water transport

At present, water transport is enjoying rich development, meeting the needs of the economy of the Republic of Belarus for transportation of cargo and passengers, alongside other types of transport. The Republic has around 1,600 km of waterways, with transport along such rivers as the Dnieper, Pripyat, Berezina, Zapadnaya Dvina, Sozh, Neman, and the Dnieprovsko-Bugsky kanal. The river fleet employs 2,000 people, largely transporting mineral and construction cargoes, as well as passengers. Oil products, as well as overweight and oversize cargoes, are also carried by water transport. The transport and technical fleet (passenger and towing vessels, barges, dredgers and support vessels) is stationed

at ten river ports (Brest, Pinsk, Mikashévichy, Mozyr, Rechica, Gomel, Babruisk, Magilev, Vitebsk, and Grodno). The river fleet annually transports around 4 million tonnes of cargo.

Pipeline transport

Three gas pipelines – Tarzhok – Ivatsevichi and farther to Western Europe, and the main gas pipeline Tarzhok – Ivatsevichi (Ukraine) pass through the territory of the Republic of Belarus. Annually these gas pipelines deliver more than 40 billion cub.m. of natural gas. The two oil pipelines, called “Druzhba” – Uniecha – Novopolotsk – Vientspils and Uniecha – Mozyr – Ukraine – annually pipeline up to 40 m. tons of oil. In addition, some Russian oil pipelines, through which petrol and diesel fuel are exported to European countries, also go through the territory of the republic.

Exercise 1. Translate the following word combinations into Russian:

- to be located at the crossroads of transit routes;
- to enhance the quality and availability of the services;
- to solve issues of export-import and transit operations for foreign carriers;
- to consist of two subsystems;
- to make possible the transshipment of cargo from one mode of transport to another;
- to be divided into business and economy classes;
- to depend on the line, class, and category of the railway car;
- to ensure a continuous year-round communication;
- to need an emergency landing;
- to introduce the National electronic toll collection system;
- to welcome international flights;
- to enjoy rich development;
- to meet the needs of the economy;
- to transport mineral and construction cargoes;
- to carry overweight and oversize cargoes.

Exercise 2. Complete the following sentences according to the text.

- 1 The country has available all major types of transportation: _____.
- 2 Transport communication of Belarus solves issues of _____.
- 3 The 2nd All-European transport corridor connects _____.
- 4 Transport infrastructure includes transport networks as well as _____.
- 5 The Belarusian Railway transports up to _____.
- 6 Interregional lines are divided into _____.
- 7 The cost of travel along Belarusian railways depends on _____.
- 8 The road infrastructure of Belarus ensures _____.
- 9 Air flights connect the Belarusian capital with _____.
- 10 Water transport meets the needs of the economy _____.
- 11 The river fleet transports _____.

12 Annually these gas pipelines deliver _____.

13 Some Russian oil pipelines go _____.

Exercise 3. Match the words with their definitions:

- | | |
|-------------------|---|
| 1) transportation | a) a person who travels in a public vehicle |
| 2) network | b) relating to the people as a whole |
| 3) vehicle | c) a tube for conveying water, gas, etc. |
| 4) public | d) a number of lines crossing each other |
| 5) corridor | e) a number of vehicles operating together |
| 6) cargo | f) things that are bought and sold |
| 7) pipeline | g) the act of moving people or goods from one place to another |
| 8) fleet | h) the metal track of parallel rails on which trains run |
| 9) passenger | i) any kind of carriage or conveyance on land |
| 10) toll | j) the goods carried in a ship or a vehicle |
| 11) goods | k) a narrow strip of territory that goes through the territory of a country |
| 12) railway | l) a tax or duty paid for some special privilege |

Exercise 4. Answer the questions:

- 1 What types of transportation are there in Belarus?
- 2 What transport corridors cross the territory of the republic?
- 3 What subsystems does Belarusian transport consist of?
- 4 What is the difference between them?
- 5 What does transport infrastructure of the republic include?
- 6 Why is the Belarusian Railway considered the leading transport service of the country?
- 7 Why is railway transport one of the most comfortable and accessible?
- 8 What does the cost of travel by train depend on?
- 9 Why does automobile transport occupy a prominent place in the Belarusian transport system?
- 10 What does the fleet of vehicles consist of?
- 11 What airport provides regular air service?
- 12 What is the national airline carrier of the country?
- 13 What navigable rivers are there in Belarus?
- 14 What does the river fleet transport?
- 15 What pipelines pass through the territory of Belarus?

Exercise 5. Read the following text and fill in the gaps with the appropriate word from the list.

| | |
|--|---|
| <p>LAND TRANSPORTATION</p> <p>Transportation is the act of moving people and 1) ... from one place to another. Transportation takes people where they need or want to go, and it brings them the goods they need or want. Without 2) ... , there could be no trade. Without trade, there could be no towns and cities. Towns and cities are traditionally the centers of civilization. Therefore, transportation helps make 3) ... possible.</p> <p>There are three main kinds of transportation: (1) land, (2) water, (3) air. Land transportation depends mainly on wheeled 4) ... , especially automobiles, trains, and trucks. Ships and boats are the most important water vehicles. Air transportation depends almost entirely on airplanes. Automobiles, buses, motorcycles, snowmobiles, trains, and trucks are the chief engine-powered land vehicles. All these vehicles except snowmobiles ride on 5) Pipelines are another important form of engine-powered land transportation.</p> <p>Unlike road vehicles, trains ride on 6) As a result, trains usually cannot 7) ... door-to-door freight service as can trucks or convenient connecting services such as buses. But train can haul far heavier loads than trucks can. They can carry many more 8) ... than buses can.</p> <p>Pipelines provide transportation, but the pipes themselves do not 9) Most pipelines are built across land, but some span rivers or other bodies of water. Pipelines transport chiefly liquids and gases, especially 10) ... and natural gas. Engine-powered 11) ... force the liquid or gas through the pipes.</p> | <p>move</p> <p>passengers</p> <p>tracks</p> <p>civilization</p> <p>provide</p> <p>petroleum</p> <p>pumps</p> <p>wheels</p> <p>transportation</p> <p>vehicles</p> <p>goods</p> |
|--|---|

Exercise 6. Points for discussion.

- 1 Belarus Transport system.
- 2 Belarusian Railways.
- 3 Automobile transport.
- 4 Air transport.
- 5 Water transport.
- 6 Pipeline transport.

Read the text and do the tasks that follow.

T e x t 1B

URBAN TRANSPORT IN BELARUS

Transportation is the act of moving people and goods from one place to another. Transportation is an integral part of life in any city. There are two main types of passenger transportation: private and public. People who use private transport operate their own vehicles. Those who use public transport pay to ride on vehicles owned and operated by private companies or the government. Any organized passenger service that is available to the general public can be classed as public transportation.

In Minsk and other towns and cities of Belarus you can use mass transit systems:

- buses (nearly in all towns and cities of the country except for the smallest one where you can reach the stop you need using intercity transport)
- trolleybuses (Minsk, Gomel, Mogilev, Vitebsk, Grodno, Brest, Bobruisk)
- trams Minsk, Vitebsk, Mozyr, Novopolotsk)
- private buses (in Minsk and major cities)
- taxi (in Minsk and major towns and cities).

Public transport in Minsk

Minsk is situated on the strategic European crossroad between East and West and is the most important international road connection between Baltic and Black Sea regions countries. All European transportation corridors cross Minsk and Belarus: Berlin – Warsaw – Brest – Minsk – Moscow, Baltic States – Minsk – Ukraine.

Minsk has all the kinds of public transport: trams, trolleybuses, buses and route taxis. One can pay for the public transport by buying a travel ticket, for example at the bus stop kiosk or at the driver's cabin and clip it during the movement. A more convenient way to pay is to buy a travel card for the period of 10, 15 days or a month for a certain kind or all kinds of transport Since 2014 an electronic paying system has been introduced in the capital.

Minsk has the only metro system in the country. Construction of the Metro was started in 1976. At present there are three main lines and 29 picturesque metro stations, which are unique works of Belarusian architecture devoted to Belarusian history and culture.

In Minsk passenger traffic vehicles fleet includes 1590 buses, 807 trolleybuses and 160 trams. It should be noted that almost all passenger vehicles used in Minsk are manufactured at national automobile plants: 1017 (53.6 %) buses have been produced by "MAZ" and "AMAZ", all trolleybuses (100 %) by "Belcommunmash", "MAZ" and "AMAZ" and 52 (32.7 %) trams by "Belcommunmash".

Public transport in Gomel

Private transportation in Gomel is provided mainly by automobiles and motorcycles. There are a lot of private cars and motorcycles in the streets of the city. The public transport in Gomel includes buses, trolleybuses, shuttle buses and taxis. At the moment, the transport network in Gomel has 105 routes. Most public transport runs to a scheduled timetable. The first type of public transport in Gomel was a bus. According to the sources the bus service was opened in 1947. Bus company № 1 was established in 1960. Now there are two bus companies and the fleet has 340 buses. Buses provide transportation on 57 routes. The first trolleybus appeared in the streets of Gomel in 1962. Thus, Gomel became the third city of BSSR with trolleybus system. Now Gorelectrotransport has 235 trolleybuses on the balance. At the present time the length of the contact network is 135 km. Trolleybuses provide transportation on 28 routes.

A shuttle bus service appeared in Gomel in 1979. At the moment of opening only two routes worked: T-1 “Station – Zalineyny” and T-2 “Station – 5 district”. As of 1999 there were 113 taxis. The first passenger taxis appeared in Gomel in 1947. Today there are 11 taxi companies in Gomel. Taxi services are available 24 hours. So Gomel citizens can get to any part of their city using public transport.

Although public transportation has its advantages, it also has a number of problems. Many public transportation vehicles in big cities of the country are crowded, especially during rush hours. Traffic capacity of many roads and streets is not enough to provide a required flow of transport vehicles and it results in congestions on main roads. Old fleet of private and public transport vehicles creates an air pollution problem in the city and outside.

Exercise 1. Match the words on the left with their equivalents on the right:

- | | |
|--------------------------|----------------------------|
| 1) располагаться | a) fleet |
| 2) перегрузка | b) create |
| 3) общественный | c) favourable |
| 4) создавать | d) management |
| 5) благоприятный | e) transportation corridor |
| 6) скопление | f) congestion |
| 7) управление | g) manufacture |
| 8) значительный | h) railway junction |
| 9) транспортный коридор | i) available |
| 10) производить | j) be situated |
| 11) железнодорожный узел | k) considerable |
| 12) парк | l) public |
| 13) доступный | m) lessen |
| 14) уменьшать | n) transshipment |
| 15) безопасность | o) safety |

Exercise 2. Translate the words and word combinations into English:

| | | |
|------------------------|------------------------|-----------|
| неотъемлемая часть | пропускная способность | маршрут |
| пассажирские перевозки | маршрутное такси | управлять |
| частный транспорт | парк машин | владеть |
| на улицах города | иметь на балансе | источник |
| общественный транспорт | заторы на дорогах | доступный |

Exercise 3. Fill in the missing words in the sentences below. Choose from the following:

| | | |
|-------------|-----------|-------------|
| destination | routes | congestions |
| fleet | available | capacity |
| operating | sources | network |
| ride | integral | corridors |

- 1 Most ... are served from 5:30h until 1:00h.
- 2 This city has a developed public ... system.
- 3 Ticket is valid for a single
- 4 According to some ... the first buses appeared in Minsk in the 20s.
- 5 Another electricity – powered means of transport ... for passenger is a train.
- 6 If you want to get to your ... faster you may use taxi.
- 7 The first trolley-bus started ... in the capital in 1952.
- 8 All European transportation ... cross Belarus.
- 9 Traffic ... of many roads is not enough to provide a required flow of vehicles.
- 10 Passenger traffic vehicles ... includes buses, trolleybuses and trains.
- 11 Sharp growth of private car results in ... on the roads.
- 12 Transportation is an ... part of civilization.

Exercise 4. Answer the questions:

- 1 What is the difference between private and public transportation?
- 2 What is the advantage of the geographical position of Minsk?
- 3 What transportation corridors cross Minsk?
- 4 What does the public transport in Minsk include?
- 5 What does passenger traffic vehicles fleet include?
- 6 What automobile plants are there in Minsk?
- 7 What is private transportation in Gomel provided by?
- 8 What is public transportation in Gomel provided by?
- 9 What was the first type of public transport in Gomel?
- 10 When did it begin operating?
- 11 What do you know about trolleybus network in Gomel?
- 12 What transport services are there in Gomel?
- 13 What are the principle problems of transport in the cities of Belarus?

Exercise 5. Points for discussion.

- 1 Public transportation in Minsk.
- 2 Public transportation in Gomel.
- 3 Transportation problems of the city.

Exercise 6. Make up dialogues on the basis of the following questions.

Student A's questions (Do not show to student B)

- 1 What comes to mind when you hear the word 'transportation'?
- 2 What's your favourite method of transportation?
- 3 What transportation problems are there in your country?
- 4 What will the transportation of the future be like?
- 5 What would life be like if all public transportation in your country stopped?
- 6 Are you happy with transportation services in your country?
- 7 What do you think of the transportation in other countries?
- 8 How many different kinds of transportation have you been on?
- 9 Will the quality of transportation in your country get better or worse?
- 10 What was transportation like when you were a kid?

Student B's questions (Do not show to student A)

- 1 If life is a highway, what mode of transportation are you using?
- 2 What do you think is the most dangerous form of transportation and why?
- 3 Which transportation do you prefer – air, sea or road?
- 4 If you were a mode of transportation, what would you be?
- 5 What form of transport is worst for the environment?
- 6 What mode of transportation would you like someone to invent?
- 7 How has international transportation changed in the past few decades?
- 8 What are the transportation needs of your country?
- 9 Do you think we are spoilt for choice these days with all the different transportation options?
- 10 What do you think will be the next big breakthrough in transportation?

Read the text.

T e x t 1C

PROSPECTS OF INFRASTRUCTURE DEVELOPMENT IN THE REPUBLIC OF BELARUS

Taking into account the geographical position of the Republic of Belarus (the junction of two economic spaces, the European Union and Eurasia), the Republic of Belarus pays great attention to the upgrading of roads and railways, airports (including regional ones), the construction of new subway stations and the development of transport infrastructure in order to strengthen its transport capacity.

However, in order to maintain the well-developed National Infrastructure Plan (NIP) 2016-30 19 PROSPECTS OF INFRASTRUCTURE DEVELOPMENT IN THE REPUBLIC OF BELARUS road network (total length is 86.6 thousand km, including national roads – 15.7 thousand km, local roads – 70.9 thousand km), it is necessary to modernize about 5 thousand km of national roads and about 30 % of bridges and overpasses, and reconstruct other transport infrastructure facilities.

So, the State program for the development and maintenance of highways of the Republic of Belarus for 2016–2030 envisages the reconstruction and construction of 992 km of national roads, including the second ring road around the city of Minsk, the sections of the highways M-5/E 271 “Minsk – Gomel”, M-6/E 28 “Minsk – Grodno – the border of the Republic of Poland (Bruzgi)”, M-8/E 95 “The border of the Russian Federation (Ezerische) – Vitebsk – Gomel – the border of Ukraine (Novaya Guta)”, M-10 “The border of the Russian Federation (Selishche) – Gomel – Kobrin”, P-20 “Vitebsk – Polotsk – the border of the Republic of Latvia (Grigorovshchina)”, P-23 “Minsk – Mikashevichi”, P-45 “Polotsk – Glubokoe – the border of the Republic of Lithuania (Kotlovka)”, the entrance to the town of Gomel from the highway M-10 “The border of the Russian Federation (Selishche) – Gomel – Kobrin”, and others.

The TOP 100 includes 15 transport infrastructure development projects totaling 1,260.1 million USD, including:

- 14 projects on construction and reconstruction of road infrastructure facilities totaling 1,075.7 million USD;

- 1 project on the creation of the infrastructure for air transport to the value of 184.5 million USD.

The largest of them include:

- reconstruction of M-10 highway: the border of Russian Federation (Selishche) – Gomel – Kobrin, km 109.9 – km 184.5;

- reconstruction of the section (54.3 km long) of the M-8/E95 highway: border of the Russian Federation (Ezerische) – Vitebsk – Gomel – border of the Ukraine (Novaya Guta), km 402.0 – km 456.3;

- development of infrastructure of the Vitebsk branch of the State Enterprise “Belavia Belarusian Airlines” (construction of transport and logistics park, hangar complex, enterprise to provide refueling complex of services).

In addition to the facilities referred to the main directions of infrastructure, the TOP 100 NIP projects also include 15 projects on construction of hotels, residential buildings, administrative buildings for a total amount of 111.9 million USD. These facilities include:

- construction of maintenance center for ships of the Republican Unitary Dnieper-Dvina Waterways Enterprise “Belvodput” upstream Grodno HPP;

– modernization of transport infrastructure of common use by the installation of the equipment (electronic) for the collection of electronic passenger fare in transport in Mogilev city.

A well-developed transport infrastructure does not only improve the country's image, but also helps reduce the prime costs of the delivery of goods. The money invested in infrastructure has an indirect influence on all the sectors of economy. Belarus pays special attention to the development and modernization of the international freight traffic infrastructure.

Exercise 1. Find the words in the text which are similar in meaning to the words below.

| | | | |
|----------------|-------|-------------|-------|
| 1 gathering | _____ | 6 progress | _____ |
| 2 saving | _____ | 7 plan | _____ |
| 3 conveniences | _____ | 8 traveller | _____ |
| 4 road | _____ | 9 machinery | _____ |
| 5 computerized | _____ | 10 building | _____ |

Exercise 2. Match the words on the left with their Russian translations on the right.

| | |
|------------------|-----------------------------|
| 1) subway | a) доставка |
| 2) maintenance | b) шоссе |
| 3) capacity | c) установка |
| 4) overpass | d) жилой |
| 5) highway | e) плата за проезд |
| 6) ring road | f) издержки |
| 7) enterprise | g) подземка |
| 8) refueling | h) переход |
| 9) residential | i) техническое обслуживание |
| 10) installation | j) груз |
| 11) fare | k) пропускная способность |
| 12) costs | l) дозаправка |
| 13) delivery | m) предприятие |
| 14) freight | n) кольцевая дорога |

Exercise 3. Complete the sentences with the verbs. Each time you have to put the verb in the correct form.

envisage be install provide reduce pay include invest

1 A well-developed transport infrastructure _____ the prime costs of the delivery of goods.

2 The Republic of Belarus _____ great attention to the development of transport infrastructure.

3 Next year the equipment for the collection of electronic passenger fare _____ in transport.

- 4 The State program _____ the reconstruction of national roads.
- 5 It _____ necessary to modernize transport infrastructure facilities.
- 6 The TOP 100 NIP projects also _____ 15 projects on construction of hotels.
- 7 In 2017 a lot of money _____ in the freight traffic infrastructure.
- 8 These enterprises _____ refueling complex of services.

Exercise 4. Answer the questions?

- 1 What does the Republic of Belarus pay great attention to?
- 2 Why is it necessary to maintain the well-developed National Infrastructure Plan?
- 3 What does the State program for the development and maintenance of highways of the Republic of Belarus envisage?
- 4 What projects does the TOP 100 include?
- 5 What are the largest projects of the NIP?
- 6 What do the facilities of the TOP 100 NIP include?
- 7 What influence on economy does a well-developed infrastructure have?

The Belarus Transport Quiz

- 1 Belarus serves as an important transit corridor for
 - a) the Mediterranean states and Baltic states region
 - b) the Europe and Central Asia region
 - c) the Asia and Pacific region.
- 2 The Belarusian Railway transports
 - a) up to 70 % of all cargoes
 - b) up to 90 % of all passengers
 - c) up to 20 % of all population.
- 3 Depending on speeds, and the number of stops, interregional rail lines are divided into
 - a) business and economy classes
 - b) public and non-public classes
 - c) freight and passenger classes.
- 4 The National electronic toll collection system – BelToll – has been operating across 1,512 km of Belarusian roads since
 - a) 2015
 - b) 2014
 - c) 2013.
- 5 The National Airport Minsk welcomes
 - a) international flights
 - b) regular domestic flights
 - c) charter flights.

- 6 The transport and technical fleet is stationed at
- eight river ports
 - ten river ports
 - six river ports.
- 7 Any organized passenger service that is available to the general public can be classed as
- private transportation
 - passenger transportation
 - public transportation.
- 8 Almost all passenger vehicles used in Minsk are manufactured at
- national automobile plants
 - European automobile plants
 - Asian automobile plants.
- 9 The public transport in Gomel includes
- buses, trolleybuses, trams
 - buses, trolleybuses, shuttle buses and taxis
 - automobiles and motorcycles.
- 10 Many public transportation vehicles in big cities of the country are crowded, especially during.
- rush hours
 - night hours
 - happy hours.
- 11 The money invested in infrastructure has an indirect influence on
- private businesses.
 - popularity of electric cars
 - all the sectors of economy.

UNIT 2

TRANSPORT IN THE UNITED KINGDOM

Vocabulary notes

network – сеть
to invent – изобретать
currently – в настоящее время
ferry – паром
to ship – перевозить груз
hire – прокат
flight – рейс
to commute – ездить
requirement – требование
safety – безопасность
shipment – груз, партия товара
van – фургон
truckload – грузовой автомобиль
delivery – поставка, доставка
vehicle – транспортное средство
density – плотность
to flatten – выравнивать
wheel – колесо
to maintain – поддерживать
tar – дёготь
macadam – щебень
terrain – ландшафт
to drain – стекать, осушать
washway – разрыв
sophisticated – изощрённый, утончённый, сложный
to involve – вовлекать, включать
to run – управлять
to ditch – бросить, избавиться
to pave – вымостить
board – зд. правление, департамент
gauge – ширина колеи
upstream – вверх по течению
fleet – парк

double-decker – двухэтажный автобус
fume – дым
deficiency – отсутствие
roll out – внедрение, реализация проекта

Text 2A

TRANSPORT IN THE UNITED KINGDOM

The United Kingdom has a developed and varied transport network. It also has a long transport history, with the first steam locomotive invented and developed in Great Britain in the early 19th century. Britain currently offers a wide range of transport choice, most notably in its big cities, public transport includes: aircrafts, trains, trams, buses, boats and ferries, car hire, newer forms of transport such as public bike hire.

Aircrafts in the United Kingdom

Air transport in the United Kingdom is the commercial carriage of passengers, freight and mail by aircraft, both within the United Kingdom (UK) and between the UK and the rest of the world.

The United Kingdom hosts many national and international airports. Most British cities have their airport, which serves local, regional, and international flights. London Heathrow Airport, is amongst the top ten busiest airports in the world. More than half of all passengers travelling by air in the UK currently travel via the five London area airports. Aircraft is one of the fastest means of transport and the most convenient if you are on a business trip in the UK. Some airlines offer discount prices on air tickets during certain periods.

Trains, trams, and the underground in the UK

The **railway system in Great Britain** is the oldest in the world. The first locomotive-hauled public railway opened in 1825, which was followed by an era of rapid expansion. The United Kingdom is a member of the International Union of Railways (UIC).

The United Kingdom's railway network is highly developed, connecting different cities to one another. Several private companies run the national and regional trains, offering comfortable and regular trains. For cheaper tickets, advance booking is required, but you can buy tickets on the day of travel. Prices are affordable but vary hugely between regions and companies. If you are commuting daily to the same location, a monthly or yearly travel pass is recommended to save you money. Travel pass rates depend on the area and the company you are using. For example, in London, the Oyster card includes all forms of public transport, however many other cities and towns have monthly cards for one form of transport only. The Eurostar links the United Kingdom and France (Paris and

Lille) and takes approximately three hours to arrive at the heart of each respective city.

The platforms in Britain are higher than in most parts of the world. They are almost on a level with the floor of the carriages. There are only two classes in Britain – first and second. A first-class ticket cost 50 % more than a second-class ticket.

Eight UK cities still have tram services, mostly modern networks rather than historical lines.

The "**Tube**" is a slang name for the **London Underground**, because the tunnels for some of the lines are round **tubes** running through the ground. Even though it is called *the Underground* about half of it is above the ground. **Rapid transit in the United Kingdom** consists of five systems in four cities: the London Underground and Docklands Light Railway, Tyne and Wear Metro, the Glasgow Subway and Merseyrail in the Liverpool City Region.

Buses in the United Kingdom

The **London Bus** is one of London's principal icons. Buses have been used on the streets of London since 1829, when George Shillibeer started operating his horse drawn *omnibus* service from Paddington to the city.

The bus is the most economical means of transport in the United Kingdom, but not necessarily the fastest. The country has many private bus companies serving different cities as well as nationwide. British buses are comfortable and regular. Rates vary per city and distance. Tickets can be purchased on board, at the bus station, or online.

Boats and ferries in the UK

You can travel to England from most European cities (and vice versa) by ferry. The most regular services are from France to the Southern England. You can travel by ferry to visit Northern Ireland or to reach the northern parts of Scotland. You can also travel by boat from one region to another along the many canals, which is a holiday form of transport and not advised if you need to arrive somewhere quickly. Rates vary but tend to be more expensive than other means of transport. If you decide to travel by ferry, you can also ship your car or motorcycle.

Taxis in the United Kingdom

You will find many different taxi companies in different British cities, ensure that when you hire a taxi that the company is registered. If you hail a taxi in the street, ensure that they have a tax registration number which is usually located in the passenger area of the vehicle. Uber is a new form of transport, basically a transport app for your smartphone that is a lot cheaper and easier than the more tradition taxi companies. The taxi drivers also come with ratings and you receive a price estimate before you accept any journey.

Bike hire in the United Kingdom

Many UK cities are now creating new bike lanes and paths, to make cycling a safer and more enjoyable travel choice and to encourage people to cycle more and ditch their cars where possible. You can rent or buy bikes from companies throughout the country at relatively affordable rates. London is leading the way in eco-friendly public transport and, like most European capitals, has set up a public bike rental service across the city, affectionately called ‘Boris Bikes’ after the Mayor who set up the system. The bike sharing culture has been growing and is currently present in several other UK cities, but is growing a lot slower than in places such as Denmark or Belgium.

Exercise 1. Answer the following questions.

1 When was the first locomotive invented? 2 What does public transport in Britain include? 3 Aircraft is one of the fastest means of transport, isn't it? 4 What is the busiest airport in Britain? 5 What do travel pass rates depend on? 6 How can you get cheaper tickets? 7 What is the most economical means of transport in the UK? 8 Where can you buy bus tickets? 9 What are the most regular ferry services? 10 Can you ship your car by ferry? 11 What should you do if you hail a taxi in the street? 12 What is Uber? 13 What is eco-friendly public transport in the UK? 14 Why is a public bike rental service across London called ‘Boris Bikes’?

Exercise 2. Translate from English into Russian.

Varied transport network; a wide range of transport choice; discount prices; advance booking; travel pass rates; a holiday form of transport; vice versa; the company is registered; a transport app; a price estimate; bike hire; bike lanes and paths; to make cycling a safer; to encourage people to cycle; to ditch their cars where possible; affordable rates; eco-friendly public transport; a business trip; newer forms of transport; local, regional, and international flights; monthly cards, horse-drawn omnibus.

Exercise 3. Find the right translation in column B.

| A | B |
|--------------------------|---|
| 1) развитый | a) current b) developed c) thick d) general |
| 2) транспортное средство | a) lorry b) railway c) vehicle d) direction |
| 3) управлять | a) to introduce b) to run c) to charge d) to vary |
| 4) прокат | a) hire b) ferry c) ticket d) price |
| 5) рейс | a) network b) service c) flight d) boat |
| 6) создавать | a) to ship b) to arrive c) to book d) to create |
| 7) зависеть от | a) to look for b) to depend on c) to refer to d) to send for |
| 8) фургон | a) van b) truck c) vehicle d) ferry |

- | | |
|---------------|--|
| 9) сеть | a) path b) price c) network d) steam |
| 10) удобный | a) convenient b) local c) expensive d) fast |
| 11) колесо | a) wheel b) range c) lane d) link |
| 12) требовать | a) to grow b) to require c) to run d) to share |

Exercise 4. Complete the sentences using the information from the text.

- 1 The United Kingdom has a developed transport
- 2 Britain currently ... a wide range of transport choice.
- 3 The United Kingdom ... many national and international airports.
- 4 The ... is a slang name for the **London Underground**.
- 5 **Rapid transit in the United Kingdom** ... five systems.
- 6 The bus is the means of transport in the United Kingdom, but not necessarily the
- 7 You can travel to England from most European cities (and vice versa) ... ferry.
- 8 If you decide to travel by ferry, you can also ... your car or motorcycle.
- 9 Ensure that when you ... a taxi that the company is registered.
- 10 If you ... a taxi in the street, ... that they have a tax registration number.
- 11 Many UK cities are now creating new bike ... and
- 12 You can ... or ... bikes from companies throughout the country at relatively affordable rates.
- 13 London is leading the way in ... public transport.

Exercise 5. Pay attention to the word- formation. Translate all the words.

Use the dictionary if necessary.

Transport – transportation

Require – required – requirement

Safe – safely – unsafely

Separate – separately – separation – separable

Industry – industrial – industrious

Depend – dependence – independence – dependent – independent

Develop – developer – development

Weigh – weight

Ship – shipping – shipment – shipper

Deliver – delivery

Vary – various – variety – variant – variation – variable

Create – creation – creative – creativity – creator – creature

Pave – pavement

Exercise 6. Find the synonyms.

Goods, traffic, transportation, lorry, movement, commodity, track, category, shipping, truck, apart, state, trail, type, cargo, humans, point, separately, country, to extend, load, to pave, to consider, to increase, to cover, people, to think, place.

Read the text and do the tasks that follow.

T e x t 2B

HISTORY OF ROAD TRANSPORT

Transportation

Transport on roads can be grouped into two categories: transportation of goods and transportation of people. In many countries licensing requirements and safety regulations ensure a separation of the two industries.

The nature of road transportation of goods depends, apart from the degree of development of the local infrastructure, on the distance the goods are transported by road, the weight and volume of an individual shipment, and the type of goods transported. For short distances and light, small shipments a van or pickup truck may be used. For large shipments even if less than a full truckload a truck is more appropriate. In some countries cargo is transported by road in horse-drawn carriages, donkey carts or other non-motorized mode.

Delivery services are sometimes considered a separate category from cargo transport. In many places fast food is transported on roads by various types of vehicles. For inner city delivery of small packages and documents bike couriers are quite common.

People (passengers) are transported by roads either in individual cars or automobiles or in mass transit/public transport by bus/coach vehicle.

History of road transport

The first earth tracks were created by humans carrying goods and often followed trails. Tracks would be naturally created at points of high traffic density. As animals were domesticated, horses, oxen and donkeys became an element in track-creation. With the growth of trade, tracks were often flattened or widened to accommodate animal traffic. Later, the travois, a frame used to drag loads, was developed. Animal-drawn wheeled vehicles were probably developed in the Ancient Near East in the 4th or 5th millennium BC and spread to Europe and India in the 4th millennium BC and China in about 1200 BC. The Romans had a significant need for good roads to extend and maintain their empire and developed Roman roads.

In the medieval Islamic world many roads were built throughout the Arab Empire. The most sophisticated were those of Baghdad, Iraq, which were paved with tar in the 8th century. Tar was derived from petroleum accessed from oil fields in the region though the chemical process of destructive distillation.

In the Industrial Revolution, John Loudon McAdam (1756–1836) designed the first modern highways, using inexpensive paving material of soil and stone aggregate (macadam), and he embanked roads a few feet higher than the surrounding terrain to cause water to drain away from the surface. With the development of motor transport there was an increased need for hard-topped roads to reduce washways, bogging and dust on both urban and rural roads, originally using cobblestones and wooden paving in major western cities and in the early

20th century tar-bound macadam (tarmac) and concrete paving were extended into the countryside.

The modern history of road transport also involves the development of new vehicles such as new models of horse-drawn vehicles, bicycles, motor cars, motor trucks and electric vehicles.

Exercise 1. Find in the text English equivalents to Russian ones given below.

Автотранспорт, перевозка товаров, лицензионные требования, правила безопасности, развитие инфраструктуры, расстояние, объём перевозок, немоторизованные виды транспорта, услуги по доставке, различные типы транспортных средств, общественный транспорт, во время промышленной революции, первое современное шоссе, городские и сельские дороги, развитие новых видов транспортных средств.

Exercise 2. Complete the following sentences using the information from the text.

- 1 Road transport is grouped into 2 categories:
- 2 The nature of road transportation of goods depends on
- 3 For short distance and light and small shipments ... are used.
- 4 For large shipments ... is more appropriate.
- 5 In some countries cargo is transported by road in
- 6 Delivery services are sometimes separated from
- 7 People are transported by roads either in individual cars or in
- 8 The first earth tracks were created by people to
- 9 Tracks are created at points of
- 10 Domesticated animals became an element in
- 11 The most sophisticated roads in Arab Empire were paved with
- 12 John Loudon McAdam designed
- 13 He embanked roads a few feet higher to cause water to
- 14 With the development of motor transport there was an increased need for
- 15 The modern road transport history involves the development of

Exercise 3. Carry out the following assignments.

- 1 Find in the text all types of non-motorized modes.
- 2 Enumerate all types of passenger transport.
- 3 Name other kinds of motor vehicles.

Exercise 4. Answer the questions.

- 1 How many categories can road transport be grouped?
- 2 What are these categories?
- 3 What does the nature of road transportation depend on?

- 4 Does the degree of the local infrastructure development influence road transportation?
- 5 What kinds of transport are used for short distance and light and small shipments?
- 6 For large shipments a truck is more appropriate, isn't it?
- 7 Are small packages and documents delivered by bike couriers or velotaxis?
- 8 Passenger transportation is made only by individual cars, isn't it?
- 9 Who created the first earth tracks?
- 10 Were the tracks created at points of animal traffic?
- 11 Where were animal-drawn wheeled vehicles developed?
- 12 When did it happen?
- 13 Why did the Romans have a significant need for good roads?
- 14 What roads were the most sophisticated in the medieval Islamic world?
- 15 Where were these roads located?
- 16 What was John McAdams famous for?
- 17 What was the peculiarity of his design?
- 18 What materials were used in road construction that time?

Exercise 5. Put the items of the text in the proper order.

- 1 The development of motor transport.
- 2 Passenger transportation.
- 3 The development of roads.
- 4 The need for roads.
- 5 Modern highways.

Exercise 6. Speak on the following:

- 1 Ancient roads.
- 2 Modern roads.
- 3 Animal-drawn vehicles.

Text 2C

THE LONDON UNDERGROUND

The London Underground is the oldest underground railway system in the world. It consists of 11 lines. The Metropolitan Railway is the oldest and the Jubilee Line which opened in 1979 is the youngest.

The network is often referred to as "The Tube" but strictly speaking the Metropolitan, District, Circle and Hammersmith & City lines are not deep-level tubes but sub-surface lines, just below street level, reached by stairs rather than by escalators or lifts. The City and South London Railway was the first deep-level railway. The first "tube" was the Tower Subway across the Thames just upstream from Tower Bridge. It was a cable operated railway, opened in 1870. It

was not a commercial success and was soon adapted to convey water pipes and power cables beneath the Thames, as it still does.

Each line, except Victoria and Jubilee Lines, began life as a separate company, often in bitter rivalry with others. By 1933 all except the Metropolitan Railway had come under the management of the Underground Group and in that year the whole network, along with the Metropolitan and the bus companies, was absorbed by the London Passenger Transport Board.

22 million individuals use the Underground each year, making over 1.5 billion journeys. 4 million journeys are made each weekday. The Central Line is the busiest, carrying about 261 million passengers each year. Waterloo is the busiest station overall, handling just under 90 million passengers each year.

Metropolitan track had three rails in place of the usual two. Two were for standard gauge trains (4 feet 8.5 inches); the third was to accommodate the Great Western's 7-foot gauge so that its trains could run direct from Bristol and Reading to the City. One hundred and fifty five years later, this is what Crossrail will do from 2018.

Crossrail is a new fast, high frequency, high capacity railway. It is the most ambitious project in the history of London's transport system since the electrification of the network in the early twentieth century. It opened in 2018, linking Reading and Heathrow to the west of London with Shenfield in Essex and Abbey Wood in Kent. Of its 85 miles, 26 will be in new tunnels between Paddington, Stratford and Canary Wharf. The tunnels will accommodate main line trains (including freight trains) and, besides enabling passengers to travel from Berkshire to Essex and Kent without changing, will relieve pressure on the Central, District and Circle Lines.

Exercise 1. Translate the following word combinations into Russian.

The oldest underground railway system, strictly speaking, deep-level tubes, sub-surface lines, in bitter rivalry, high capacity railway, the most ambitious project, the electrification of the network, freight trains, enabling passengers, in place, standard gauge trains.

Exercise 2. Fill in the missing words in the sentences below. Choose from the following:

Busiest, journeys, railway, deep-level, absorbed, frequency, relieve, ambitious, referred, gauge, absorbed, capacity, track, carrying

1 The London Underground is the oldest underground ... system in the world.

2 But strictly speaking the lines are not ... tubes.

3 4 million ... are made each weekday.

4 The Central Line is the busiest, ... about 261 million passengers each year.

5 Metropolitan ... had three rails.

6 Two rails were for standard ... trains.

- 7 Crossrail is a new fast, high ... , high ... railway.
- 8 It is the most ... project in the history of London's transport system.
- 9 Waterloo is the ... station overall.
- 10 The network is often ... to as "The Tube".
- 11 The whole network, along with the Metropolitan and the bus companies, was ... by the London Passenger Transport Board.
- 12 The tunnels will ... pressure on the Central, District and Circle Lines.

Exercise 3. Answer the questions.

- 1 How many lines does the London Underground consist of?
- 2 What was the first deep-level railway?
- 3 When was the first cable operated railway opened?
- 4 Was it a commercial success?
- 5 Metropolitan track had two rails, hadn't it?
- 6 What is Crossrail?
- 7 When was it opened?
- 8 What places does it link?
- 9 What are the advantages of this project?

Exercise 4. Read the following text and fill in the gaps with the appropriate word from the list.

| THE JUBILEE LINE | |
|--|---|
| <p>The name "Jubilee Line" was ... in 1977, the year of the Queen's silver Jubilee. It was ... in 1979 between Charing Cross and Baker Street. It was later ... to serve the major new developments in London's Docklands. It was the first line to use sliding glass doors on platforms to give ... to the trains. This ... made the Jubilee Line much quieter than other Underground lines. It ... about 214 million passengers each year. The Jubilee Line ... 27 stations over 23 miles of The Jubilee is the only line which ... at some points with all the others on the London Underground</p> | <p>track adopted in place carries connects opened serves access network extended innovation</p> |

Exercise 5. Complete the dialogue.

- Excuse me. tell us the best way to Richmond Station, please? We are tourists from Belarus and we don't know the city.
- Oh, No problems. That's easy. Take the Circle Line, it's the yellow one on the map. Then ... 4 stops and get off at South Kensington Station. Then ... to the District Line. It's green.
- But which direction?

- Westbound. The train will ... you towards Richmond Station. It will be the terminal station, by the way.
- Fine. Is it ... to change? Isn't there some direct route?
- Unfortunately there isn't. You have to ... I guess it will take you about 40 minutes to get ... your place in total.
- All right. Which way shall we go now? How do we get down to the trains?
- Go straight down those stairs, then turn right at the bottom. You will ... the escalators. Take the escalator on your left.
- OK. Which platform do we want then?
- Well. Follow the signs. You won't get wrong.
-
- Good luck! Have a good ...!

Exercise 6. Make up your own conversations.

Text 2D

THE LONDON BUS

Buses in London haven't always been red, they haven't always been double-deckers, and they haven't always been powered by internal combustion engines. Yet the archetypal London bus is all of these things. In fact, the archetypal London bus is no more, having been swept away by the tide of progress. There are still red double-deckers plying London's streets, but they are no longer owned by a single company and are no longer built to a degree of standardisation that was once the envy of bus operating companies around the world. They have even been joined by large numbers of single-deckers, which were once to be found only on low-demand routes in outer suburbs of the metropolis. Fortunately, some of London's iconic double-deckers still run on what are called "heritage" routes, to the delight of tourists and older Londoners alike.

To explain where the London double-deckers came from, we have to go back to the later part of the nineteenth century, when public transport was provided by horse buses. Nearly half of these were owned by the London General Omnibus Company (LGOC, or the "General"), which had been established in 1855. London's first horse-bus service was opened in 1829 by George Shillibeer, who had brought the idea over from Paris.

All the early horse buses were single-deckers, but before long their operators began to look for ways of packing more passengers into them. Without a major increase in size, the only way was to provide seats on the roof of the bus, stage-coach fashion, and so double-decker was born.

A revolution in public transport is turning London's red buses green as the city spearheads the largest roll out of eco-friendly buses in Europe. By 2009 the fleet of hybrids had reached fifty-six. They will run on two different green tech-

nologies. Firstly, there are the diesel/electric hybrids, and secondly, the hydrogen fuel cell buses driven by an electric motor. Both are considerably cleaner in comparison with conventional diesel buses. The diesel/electric hybrid is so named because it combines two types of engines.

The former Mayor of London, Boris Johnson, was an enthusiastic supporter of these green initiatives, describing the new technologies as, “A wonderful alliance of fuel efficiency and fume deficiency”.

Exercise 1. Read the text “The London bus”. What is the main idea of each paragraph?

Exercise 2. Match the words on the left with their equivalents on the right:

- | | |
|-------------------------|------------------|
| 1) двигатель | a) fuel |
| 2) двухэтажный автобус | b) to establish |
| 3) владеть | c) roll out |
| 4) степень | d) double-decker |
| 5) присоединять | e) efficiency |
| 6) маршрут | f) eco-friendly |
| 7) наследие | g) size |
| 8) основывать | h) to own |
| 9) искать | i) stagecoach |
| 10) размер | j) to look for |
| 11) дилижанс | k) to join |
| 12) возглавлять | l) heritage |
| 13) внедрение | m) to spearhead |
| 14) экологически чистый | n) engine |
| 15) топливо | o) degree |
| 16) эффективность | p) route |

Exercise 3. Fill in the chart , using the example.

| Kinds of transport | Advantages | Disadvantages |
|--------------------|--|--|
| Cars | <ul style="list-style-type: none"> – You can stop where you want. – You can see the nature. – You can make your own timetable. – You don't need to carry bags. | <ul style="list-style-type: none"> – There are traffic jams. – The price of petrol is high. – If the traveling is long, it is uncomfortably to sleep. |
| Buses | | |
| Planes | | |
| Underground | | |
| Boats and ferries | | |
| Bikes | | |

Exercise 4. Use the right words: *efficiency, horse-bus, public transportation, taxis, deficiency, double-deckers, hybrid, tube, underground, heritage, single-deckers, taxi- drivers.*

- 1 Buses, tube, trains are _____ .
- 2 _____-_____ have got two floors.
- 3 _____ are black in London.
- 4 _____-_____ must take a test to have a right of driving and carrying passengers around London.
- 5 Londoners call their metro _____ or _____.
- 6 Fortunately, some of London's iconic double-deckers still run on what are called _____ routes.
- 7 London's first _____ service was opened in 1829.
- 8 The diesel/electric _____ is so named because it combines two types of engines.
- 9 All the early horse buses were _____ .
- 10 "A wonderful alliance of fuel _____ and fume _____".

Exercise 5. A) Read and act the following dialogues. B) Make up your dialogues.

- When does the London train leave, please?
- 9.25. Platform 3.
- What time does it reach London?
- You should be there at 11.31, but you may be a bit late.
- Do I have to change?
- Yes. You change at Lewes and East Croydon.

Peter: Good morning. I want to go to London. Could you tell me if there is a train today or tomorrow?

Travel agent: There is a train every evening at 22.30.

Peter: What time does it arrive in London, please?

Travel agent: The train leaving today arrives at 11.40 on Wednesday.

Peter: How much does it cost?

Travel agent: The single fare is 100 pounds first class and 70 pounds second class.

Peter: Sleeping accommodation is there?

Travel agent: Well, it depends on whether you travel first or second class.

Peter: I'll have to think about it first. I'll call back to book tickets. Thank you.

Travel agent: Thank you, sir.

Exercise 6. Topics for discussion.

- 1 British railways.
- 2 Underground in the UK.
- 3 Water transport in the UK.
- 4 Air transport in the UK.

UNIT 3

NEW TRANSPORT TRENDS

Vocabulary Notes

anticipate – предвидеть, ожидать, предвосхищать
collision – столкновение, противоречие (интересов)
wheel – колесо
obstacle – препятствие, помеха
kerb – край тротуара, бордюр
satellite – спутник
destination – место назначения
process – обрабатывать
accelerate – ускорять, прибавлять скорость
brake – тормозить
steer – направлять (автомобиль)
efficient – эффективный, рациональный
reduce – сокращать, уменьшать, снижать
distract – отвлекать
obey – соблюдать
emergency – критическая ситуация, чрезвычайное положение
driving license – водительские права
redundant – лишний
be convinced – быть убежденным
affordable – возможный, допустимый, по средствам
commonplace – банальный, заурядный
driverless – машина без водителя
mass transit – массовая перевозка
enhance – увеличивать, усиливать
facilities средства обслуживания
reliability – надежность
congested – переполненный, перегруженный
overcrowded – переполненный
efficiency – эффективность
road sign – дорожный знак
insurance – страхование, страховка
sensor – датчик
science fiction – научная фантастика

Read and translate the text and do the following exercises.

T e x t 3A

AUTONOMOUS DRIVING

Have you ever seen a car without a driver? It sounds crazy, but these computer-driven driverless cars will soon be filling roads near us. Companies like Google and Tesla have been designing and testing these cars, and the technology is there – they just need to see if they're value for money, work out insurance issues, and run final tests to check they can run alongside human-driven cars on the road.

So how do they work? The cars have sensors all around which can detect other cars and obstacles in the road. Sensors on the wheels also help when parking, so the car knows how far it is from the kerb or other parked cars. Road signs are read by cameras, and satellite navigation systems are used so the car knows how to get to your destination. All you have to do is type in the address! Finally, a central computer system takes in all the information it receives from the sensors and cameras and processes this to work out when to accelerate, brake and steer.

Autonomous driving will change our daily routine in the future. Sound like your idea of heaven? Sitting back, looking out of the window and even watching a film or reading a book while "driving" would be possible with this new technology. You wouldn't have to worry about remembering directions to where you're going. In addition, computers are generally more efficient drivers than humans, meaning emissions would be reduced. Using these technologies, we can reduce carbon emissions anywhere from 20 to 50 percent. They would also drive more safely than people – they don't get distracted by music or friends, they would obey the speed limit and they have quicker reaction times in case of an emergency.

Many senior citizens put their hope in the next vehicle generation or the one after that because their sensor systems can make up for their own declining abilities. This promises to increase the mobility radius for millions of people who previously had been severely limited by old age, illness or disability.

Although being driven around by a machine would perhaps mean that no one needs a driving license, saving money for everyone, many people would be put out of a job by the dawn of driverless cars. Bus, taxi, train and tram drivers as well as driving instructors would be made redundant.

I'm not convinced I'd want a driverless car – but it's only a matter of time before they'll become more affordable and commonplace on our roads.

Exercise 1. Translate the following words and word combinations from English into Russian.

Computer-driven driverless cars, to be value for money, to work out insurance issues, to run final tests, to run alongside human-driven cars, to detect obstacles, to remember directions, to drive more safely, to get distracted by, to obey the speed limit, in case of an emergency, a driving license, the dawn of driverless cars, to be made redundant, a matter of time, to become more affordable and commonplace, to be convinced, to sound crazy.

Exercise 2. Complete the following sentences according to the text.

- 1 Computer-driven driverless cars will soon be filling ...
- 2 Sensors can detect other cars and ...
- 3 Road signs are read by ...
- 4 Satellite navigation systems are used so the car knows how ...
- 5 You wouldn't have to worry about remembering ...
- 6 Computers are generally more efficient drivers than humans, meaning emissions would be ...
- 7 Computers drive more safely than people – they don't get ... by music or friends.
- 8 Computers obey the ... limit.
- 9 Driverless cars have quicker reaction times in case of an ...
- 10 Bus, taxi, train drivers as well as driving instructors would be made ...

Exercise 3. Match the verbs with nouns and other expressions

- | | |
|-------------------|--------------------------------------|
| 1) to sound | a) by old age, illness or disability |
| 2) to run | b) information |
| 3) to detect | c) final tests |
| 4) to receive | d) about remembering directions |
| 5) to look | e) our daily routine |
| 6) to worry | f) carbon emissions |
| 7) to change | g) the mobility radius |
| 8) to reduce | h) out of the window |
| 9) to increase | i) other cars and obstacles |
| 10) to be limited | j) crazy |

Exercise 4. Match the words with their definitions.

- | | |
|---|----------------|
| 1) to make smaller, cheaper, etc. | a) wheel |
| 2) to do what one is asked or ordered to do | b) destination |
| 3) to (cause to) move faster | c) reduce |
| 4) an unexpected and dangerous happening which must be dealt with quickly | d) kerb (curb) |
| 5) a line of raised stones separating the footpath from the road | e) obey |
| 6) to direct the course of a ship or vehicle | f) steer |

- | | |
|---|----------------------|
| 7) a circular object with an outer frame which turns round an inner part | g) efficient |
| 8) ordinary, common | h) accelerate |
| 9) a place which is set for the end of a journey | i) emergency |
| 10) a heavenly body or man-made object which moves around a larger one | j) commonplace |
| 11) working well, quickly, and without waste | k) licence (license) |
| 12) an official paper, card, etc., showing that permission has been given to do something | l) satellite |
| 13) to slow or stop | m) insurance |
| 14) the business of making an agreement by contract to pay money in case of a misfortune | n) brake |

Exercise 5. Go over the list of nouns derived from verbs and group them according to the suffixes used.

| | |
|-----------------------|------------------------|
| drive – driver | add – addition |
| detect – detector | distract – distraction |
| invent – invention | instruct – instructor |
| navigate – navigation | inform – information |
| react – reaction | operate – operation |

Exercise 6. Answer the following questions using the information from the text or from any other sources.

- 1 Have you ever seen a car without a driver?
- 2 Have you ever read about driverless cars? When? Where?
- 3 How do driverless cars work?
- 4 What is the role of a central computer system?
- 5 Why do driverless cars drive more safely than people?
- 6 Do they have quicker reaction times in case of an emergency?
- 7 Do driverless cars get distracted by road signs and satellite navigation systems?
- 8 What do drivers get distracted by?
- 9 When will driverless cars become affordable and commonplace on our roads?
- 10 Would you like to buy a driverless car?

Exercise 7. Points for discussion.

- 1 Why do we use cars more than any other means of land transport in our everyday life?
- 2 What will the car of the future be like?
- 3 How much Web connectivity does a car need and how much is desirable?
- 4 Can a networked vehicle ensure a more environmentally friendly driving style?
- 5 Driverless cars: a great or problematic invention?
- 6 How quickly can new Web services be incorporated into vehicles?

- 7 Despite the danger of distraction, visualization with displays is here to stay. How will the driver communicate with all of the associated systems and services?
- 8 Who will be able to use driverless cars – a few selected researchers and some well heeled people?
- 9 Are self-driving vehicles within reach or still a far-out vision?
- 10 Most cars today are designed for long distance and high-speed driving. However, we use them mostly for city driving. Why?

Read and translate the text and do the following exercises.

T e x t 3B

WORLD TRENDS IN PUBLIC TRANSPORT

In many cities, public transport continues to be one of the biggest challenges that city authorities face. Many are seeking to transform congested and polluted metropolises into liveable cities with a good range of transport options.

It is often said that great cities are built on great transit systems. This is certainly true in Asia. The way that highly-efficient new metros have helped to transform cities such as Hong Kong, Shanghai, Singapore and Seoul in just the last generation or two is incredible. These railways are among the very best in the world in terms of efficiency, reliability, safety and customer service. They have laid important foundations for economic growth and have made the lives of the people they serve much more convenient.

Today the world is becoming increasingly urban. The cities of tomorrow will be even larger and more complex than the cities of today and this great urbanization can only succeed if the infrastructure is in place to support it.

So what are the visionary ideas for rail industry? If we think about the motor car, the visionary idea is that cars will drive themselves. Google is already testing self-driving cars and several manufacturers are developing similar vehicles. Driverless trains will not be a game-changer for its industry. The next breakthrough will not be about how to move people. It will be about how to engage the customer. The next big thing is personalizing the service that is provided to each passenger. There was a time when that idea was ridiculous. But with the technology we have today it is possible to go from serving a group of 5 million indistinguishable passengers to treating each one as an individual. The goal is to establish a connection with customers that is similar to the way a car might be guided in the future.

Railways already have the data to help the passenger at the micro level. By taking our mobile device apps and communications to the next level, railways will be able to let you know if the station lift that you use every day is not working. They could tell you which part of the train is crowded or even redirect you

in real time. If your usual route has become overcrowded or if trains are not running, railways could suggest an alternative even before you enter the station.

There are also exciting developments in the ways railways use their station space. In South Korea, passengers waiting for a train use their phones to snap photos of groceries on virtual shopping walls, and the food is delivered to their homes at the end of the day. In Hong Kong a virtual wall is provided to sell household products. These spaces are flexible and dynamic enough that they can be adapted to sell books, furniture, or anything that meets the needs of the passengers in a given station, or at a given time of a day. The station environment can be personalized.

Station design and facilities can also be enhanced to better cater to the needs of different groups of customers. Senior citizens and people with disabilities are a lot more active than they used to be, so more station lifts and platform seating are added to make their journeys more comfortable and convenient.

From personalized communication to creating a more personalized environment, railway industry is on the right track to create a truly personalized service. This is a people business. By improving the daily travel experience and enriching the lives of customers, it is possible to take the ‘mass’ out of mass transit.

Exercise 1. Translate the following words and word combinations from English into Russian.

the biggest challenge, congested and polluted metropolises, liveable, highly-efficient, generation, incredible, efficiency, reliability, safety, customer service, increasingly, lay foundations for economic growth, urban, urbanization, succeed, visionary ideas, breakthrough, indistinguishable, to snap photos of groceries, facilities, enhance, environment, be on the right track, enrich, mass transit, in terms of, treat, disability, senior citizens, groceries, personalized communication, meet the needs.

Exercise 2. Complete the following sentences according to the text.

- 1 Public transport continues to be one of the biggest ... that city authorities face.
- 2 City authorities are seeking to transform congested and polluted metropolises into ...
- 3 Great cities are built on great ...
- 4 These railways have laid important foundations for economic ...
- 5 Today the world is becoming increasingly ...
- 6 This great urbanization can only succeed if the infrastructure is in place ...
- 7 Railways could tell you which part of the train is ... or even redirect you in real time.
- 8 In South Korea, passengers waiting for a train use their phones to ...
- 9 In Hong Kong a virtual wall is provided to sell ...

10 Station design and facilities can also be enhanced to better cater to the needs of different groups of ...

Exercise 3. Match the verbs with nouns and other expressions

- | | |
|----------------|--|
| 1) to put | a) passengers in real time |
| 2) to test | b) on great transit systems |
| 3) to engage | c) important foundations for economic growth |
| 4) to redirect | d) each one as an individual |
| 5) to be built | e) the needs of a new generation |
| 6) to lay | f) photos of groceries on virtual shopping walls |
| 7) to add | g) self – driving cars |
| 8) to meet | h) more station lifts and platform seating |
| 9) to treat | i) much effort |
| 10) to snap | j) the customer |

Exercise 4. Answer the following questions using the information from the text or from any other sources.

- 1 What makes Hong Kong, Shanghai, Singapore and Seoul railways the best in their region?
- 2 What challenges do city authorities face in many cities?
- 3 What are the visionary ideas for future rail industry?
- 4 How do Asian railways use modern technologies?
- 5 What does ‘a more personalized railway environment’ in Asia mean?
- 6 How can railways enrich the lives of their customers?
- 7 Is it possible to transform all congested and polluted metropolises into liveable cities with a good range of transport options?

Exercise 5. Read the following text and fill in the gaps with the appropriate word from the list.

| | |
|---|---|
| <p>Sustainable Mobility Cars are going to evolve into hybrid vehicles. The proportion of vehicles that run on electricity will slowly increase. Combustion engines will become less important as a result, and oil consumption will Large cars will probably never be powered solely by ... , because they require excessively large and expensive We can get close to a carbon-free mobility system by exploiting ... energy sources to generate power for electric cars and by increasing the use of alternative fuels like bio-methane. The latter can be obtained from ... landfills, for example. Fuel cells offer yet another option; the hydrogen they require can be obtained from renewable However, this costs time and That’s why we also have to ... our driving behavior particularly in terms of the number of miles driven per person. Put simply, a higher-quality transportation system that is less dependent on cars is a realistic possibility.</p> | <p>alter sources renewable decrease electricity garbage money batteries</p> |
|---|---|

Read and translate the text and do the following exercises.

T e x t 3B

SATELLITE-SUPPORTING LOGISTICS

Car2go is a pioneering system of urban mobility that exemplifies the highly flexible nature of today's transportation solution. Car2go allows customers in various European and North American cities to rent a smart fortwo on the spur of the moment. Special parking spaces for these vehicles are provided only in exceptional cases; customers simply rent an available vehicle in the respective part of the city and return it somewhere else after the drive. This "free-floating" system ensures a high level of flexibility, because users set off on their journey without having to plan when or where they will eventually return the car. The rental fee is calculated by the minute, and users can search for currently available vehicles via a computer or – even more conveniently – via a smartphone app.

Car2go is also cooperating with myTaxi in several German cities. MyTaxi makes it amazingly easy to order and pay for a taxi with a smartphone. A few issues must still be settled with regard to the future of carsharing. That is why car2go is conducting a study in Germany jointly with the Institute for Applied Ecology and the Institute for Social-Ecological Research in order to examine the mobility behavior of car2go users and find out how attractive electric vehicles are to carsharing customers.

The innovative networking of personal and local public transport has also enabled the development of a new mobility platform known as moovel. On a smartphone, the platform's app displays the services offered by various mobility providers. Smart fortwo electric drive models from car2go will also be an integral component of moovel in the future. A moovel user only has to enter the starting point and the destination of a trip. After that, the system graphically displays all the possible routes for the trip, taking into account every available transport mode in the area. Moovel is currently online in Stuttgart and Berlin and will be gradually expanded into other cities and regions, including locations outside of Germany.

Car2gether has a history and a future as a carsharing community for short trips. Initially operated as a pilot project in Ulm and Aachen, car2gether used smartphones to link people who were looking for a ride with drivers who had space in their vehicles – and it did this within seconds. The pilot project has now been successfully completed – but car2gether's intelligent ridesharing concept lives on in the moovel platform.

Exercise 1. Translate the following words and word combinations from English into Russian.

urban mobility, transportation solution, rent an available vehicle, on the spur of the moment, "free-floating" system, efficiency, a high level of flexibility, via a smartphone app, the future of carsharing, mobility providers, an integral component, to take into account, a pilot project, to link people, to look for a ride with drivers, ridesharing concept, lay foundations for economic growth.

Exercise 2. Complete the following sentences according to the text.

- 1 Car2go is a pioneering system of urban mobility that exemplifies ...
- 2 Special parking spaces for these vehicles are provided only in ...
- 3 This "free-floating" system ensures a high level of flexibility, because users ...
- 4 The rental fee is calculated by ...
- 5 MyTaxi makes it amazingly easy to order and pay for a taxi with a ...
- 6 The innovative networking of personal and local public transport has also enabled the development of a new mobility platform known as ...
- 7 A moovel user only has to enter ...
- 8 This system graphically displays all the possible routes for the trip, taking into account every available ...
- 9 Car2gether has a history and a future as a ...
- 10 Initially operated as a pilot project, car2gether used smartphones to ...

Exercise 3. Match the words with their definitions.

- | | |
|---------------|--|
| 1) solution | a) able to be got, obtained, used, seen, etc. |
| 2) to rent | b) to supply something needed or useful |
| 3) to ensure | c) the way in which soldiers can be moved, supplied with food, etc. |
| 4) fee | d) an answer to a difficulty or problem |
| 5) to search | e) a way planned or followed from one place to another |
| 6) available | f) a short journey from one place to another |
| 7) to provide | g) to pay money for the use of a car, boat, etc. for a short time |
| 8) route | h) to look through or examine thoroughly or carefully to try to find something |
| 9) trip | i) to make something certain to happen |
| 10) logistics | j) a sum of money paid for professional services to a doctor, lawyer, private school, etc. |

Exercise 4. Answer the following questions using the information from the text or from any other sources.

- 1 What does car2go system exemplify?
- 2 What does car2go allow customers?
- 3 What does this "free-floating" system (car2go system) ensure?

- 4 How is rental fee calculated?
- 5 What system is car2go cooperating with?
- 6 What do you know about a new mobility platform known as moovel?
- 7 What does a new mobility platform (moovel) graphically display?
- 8 Do you use car2go and moovel systems? Why? Why not?

Exercise 5. Read the following text and fill in the gaps with the appropriate word from the list

| | |
|--|---|
| <p>The Safety Connection</p> <p>They understand each other: Vehicles that coincidentally happen to be at the same place at the same time ... autonomously with one another and pass on important information. This makes roads safer and improves the quality of life on the move. What may sound like ... fiction is, in fact, currently being extensively tested in a “car-to-x” communication system.</p> <p>Brussels currently holds the dubious distinction of being the “Traffic Jam Capital of Europe”, ahead of such heavily congested cities as Paris, London, and Warsaw. However the number of rear-end ... and traffic jams will probably decline substantially over the next 15 years. That’s because vehicles in the future will immediately register obstacles and dangerous ... on any road, even at great distances, and will then make the necessary information available to drivers. They will do this by “talking” to one another with the help of state-of-the-art ... technologies. The engineers who develop this form of technical communication refer to it as “car-to-x”. Car-to-x systems enable a vehicle to exchange information with other cars and with stationary roadside</p> <p>Car-to-x communication will create numerous new opportunities to supplement the vehicle sensors that are already being used, so as to make new driving comfort and safety features possible. One day the vehicle sensors will be able to ... events. Such a vehicle will adjust to the traffic situation several kilometers down the road. Its precise knowledge of how such situation develops will make it possible for its “mobility intelligence” to look into the future in order to prepare for potential ... s. This would also take engineers a theoretical step further towards the vision of an optional “autopilot”. This autopilot will allow ... to benefit from the knowledge of the current situation that is gained by the car ahead and then adapt their behavior accordingly.</p> | <ul style="list-style-type: none"> risks wireless communicate anticipate devices drivers situations collisions science |
|--|---|

SUPPLEMENTARY READING

BUS RAPID TRANSIT

Bus Rapid Transit Systems (BRT) are flexible bus transport systems that offer solutions to transport-related challenges including congested roads all the way up to total gridlock, overburdened public transport systems, and environmental pollution.

Demand for transportation services is rising dramatically in big cities and regions with rapidly growing populations. Bus Rapid Transit (BRT) offers efficient solutions to overcome these challenges.

1) This system consists of one or more trunk lines that have regular-service buses traveling at frequent intervals and are fed by several feeder lines coming from all areas of a city.

2) With the help of an intelligent computer-controlled traffic management system, separate bus lanes enable the vehicles to transport large numbers of passengers quickly and efficiently. Like rail-based systems, Bus Rapid Transit systems can speedily and comfortably transport large numbers of people through inner cities. However, BRT systems can be implemented in less time and at far less expense than rail systems.

3) Another of BRT's strengths is that it can be precisely adapted to a city's specific needs and local conditions. The primary aim here is to integrate existing means of transportation into a comprehensive local public transit system.

4) BRT systems employ pre-boarding ticketing, which means passengers buy their tickets before boarding the bus and admission is controlled, so less time is spent on each pickup.

5) Depending on transport requirements, BRT systems can use vehicles with more or less capacity at the intervals required. The avoidance of unnecessary trips without passengers is another important contribution to reducing environmental pollution.

BRT is ideally suited for emerging markets with megacities like Sao Paulo, Mexico City, Bogota, and Pune. However, Mercedes-Benz buses are also being used in BRT systems in European cities such as Istanbul and Nantes. More than 15,000 buses are currently being used in Bus Rapid Transit systems worldwide.

BUS RAPID TRANSIT (BRT) SYSTEM IN ISTANBUL

Istanbul is the only city in the world that extends over two continents. Its location on the Bosphorus is both a blessing and a curse, since its two sides are only linked by two bridges. With 13 million inhabitants – some sources list as

many as 15 million – Istanbul’s population is larger than those of 105 countries. More and more people are moving to Istanbul. According to some predictions 25 million people will be living in Istanbul by 2023, commuting between Asia and Europe, between home and workplace.

And all this with only two bridges? Impossible, say city planners and transport researchers, who are feverishly developing schemes to prevent the traffic from coming to a complete standstill. Everyone wants to extend the rail network, but the construction of new lines would not be possible in some areas in view of Istanbul’s hilly topography.

Urbanization poses tremendous challenges to city planners and operators of local public transport systems. The rapidly growing metropolis of Istanbul (Turkey) has found a fast and efficient mobility concept to cope with this development (BRT).

Bus Rapid Transit (BRT) systems try to link all transport modes and makes more efficient use of existing roads. BRT systems, a versatile transport solution for congested cities with tight budget, are currently the focus of intensive discussions among market experts the world over. BRT is already in urban operation in practically every Latin American country. In particular, rapidly growing economies as India are now considering introduction.

BRT systems provide dedicated traffic lanes for buses. With short departure intervals, barrier-free entrances at bus stops, pre-ticketing and traffic prioritization, BRT systems make for brief stopping times and smooth operation. Buses can therefore rush past the lines of cars and trucks uninterruptedly, thus significantly increasing the effective volume of the public transport system and reducing travel times and emissions.

MASDAR CITY

Masdar City is an extraordinary urban development project in the United Arab Emirates. The city is being constructed 17 kilometers south-east of the city of Abu Dhabi, beside Abu Dhabi International airport. This planned city is being built by Masdar, owned by the government of Abu Dhabi. The basic idea for this city, which sets out to establish a low-carbon environment, was developed by the British architects Foster + Partners.

A dense and compact city structure was implemented in Masdar City to shorten distances between buildings, points of interest, etc. The resulting narrow streets have been introduced in order to create a microclimate that, despite the harsh Abu Dhabi climate, invites people to walk or cycle. The architects want to encourage the use of public transportation or emission-free individual transportation vehicles. The metro and LRT (light railway system) lines are a crucial part of the sustainable mobility concept, which aims to reduce the reliance on private cars for Masdar City’s residents and commuters.

Another means of transport here is Personal Rapid Transit (PRT). How does it work? This is a fully automated vehicle, completely driverless, which is guided on a virtual track. The car follows small magnets in the ground and is centrally controlled. In addition the car has sensors in the front and in the back which detect obstacles in the lane of traffic and can automatically stop the car if necessary. This very safe technology works like a horizontal elevator. The passenger chooses the destination and the vehicle finds the best and fastest route. With the central control system, such approach is more efficient than cars driven by individuals.

There is another pilot project with conventional electric cars in Masdar City. The scientists are exploring how they can introduce these electric cars into the city and what kind of service they can actually offer: car clubs, car sharing schemes or electric taxis. They are looking into the technology needed for charging and how far they can drive on one battery charge.

TRANSPORT AND ENVIRONMENT

The biggest polluter today is the car. Exhaust fumes are the main cause of bad air quality, which can make people feel ill and have difficulty breathing. This problem is especially bad in big cities where, on days when there is not much wind, a brown layer of smog hangs in the air. There are millions of cars on the road today. And the number of cars is increasing every year. This causes serious congestion. Government build new roads trying to improve the situation, but this means that they cut down trees and destroy more of the countryside.

One of the main problem with cars is that they cause a lot of pollution and often carry only one person. Public transport is more environmentally friendly because buses and trains can carry large numbers of people at the same time. Even cleaner solutions are electric cars and bicycles.

Some cities have found really interesting solutions to their traffic problems. Here are some of them.

The London Congestion Charge is likely the world's best known toll. It has reduced the traffic volume in the British capital by 15 per cent. The congestion charge must be paid for all vehicles driven into the center of London – except for electric vehicles. The British capital is often called the only bona fide "global city" all of Europe.

In November 2011 Amsterdam became the sixth location to offer car2go. The city's 300 smart fortwo electric drives represent one of the world's biggest all-electric car-sharing fleets. At the charging stations, the emission-free city cars are exclusively recharged with electricity from renewable sources.

Curitiba has very few traffic jams, even though it has more cars per person than any other Brazilian city except Brasilia. This is because the authorities have developed an efficient bus network to transport people rapidly around the city

(Bus Rapid Transit). Main roads have special lanes for buses only, so that they do not get caught in traffic jams.

The town of Delft in Holland has solved its traffic problems by encouraging people to cycle. Government rules require all shops and offices to provide parking spaces for bicycles.

Another interesting version is being studied nowadays – that is electric vehicle on two wheels. With its unusual design, city-oriented functionality, and efficient drive system, the smart ebike combines everything that makes the smart so special, and does so on two wheels. This vehicle, which will enter series production in 2012, is equipped with a 0,25 kW electric motor that has a range of 100 kilometers. The rider can activate the motor as needed by pedaling.

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