



Министерство образования  
Республики Беларусь

БЕЛОРУССКИЙ НАЦИОНАЛЬНЫЙ  
ТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ

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Кафедра английского языка № 1

А.О. Боярская  
Л.В. Педько  
Е.В. Слесарёнок

ENGLISH FOR TRANSPORTATION

АНГЛИЙСКИЙ ЯЗЫК ДЛЯ СПЕЦИАЛИСТОВ  
ПО ОРГАНИЗАЦИИ ПЕРЕВОЗОК

Пособие

Минск 2009

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В пособие включены оригинальные (аутентичные) тексты и упражнения, направленные на изучение лексических и грамматических явлений, характерных для научно-технической литературы, а также упражнения, направленные на поиск нужной информации в тексте и закрепление навыков аннотирования текста.

Пособие предназначено для формирования и развития навыков и умений перевода английских научно-технических текстов и овладения профессиональной лексикой студентами старших курсов автотракторного факультета специальности «Организация перевозок и управление на автомобильном и городском транспорте».

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## Unit One: Road Transportation

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### Ex. 1. Mind the new words and expressions.

1. to assess – оценивать
2. domestication – одомашнивание(животных), приручение
3. emergence - выход; появление
4. emergency – чрезвычайное положение; авария
5. to follow - следовать за
6. hazardous – опасный, рискованный
7. lane – полоса движения
8. to maintain- поддерживать, обслуживать
9. maintenance – содержание и техническое обслуживание; уход; текущий ремонт
10. macadam -щебень
11. onwards – далее
12. pan-continental – пан-континентальный
13. to pave – мостить
14. to span - протянуться
15. stagecoach –дилижанс, почтовая карета
16. strip (air strip) - полоса (взлетно-посадочная полоса)
17. toll – пошлина, сбор, плата за проезд
18. trail – тропа, дорожка, след, временный путь
19. turnpike - главная магистраль; платная автодорога

### Ex. 2. Match the word with the appropriate definition.

**road, freeway (AmE), railway, ring road, slip road, bridge, turnpike, service road, achievement, trunk road**

1. a very wide road in the US, built for fast travel.
2. a permanent track composed of a line of parallel metal rails fixed to sleepers, for transport of passengers and goods in trains.
3. a structure that spans and provides a passage over a road, railway, river, or some other obstacle.
4. a motorway for using of which a toll is charged.
5. something that has been accomplished, especially by hard work, ability, or heroism.

6. an open way, usually surfaced with asphalt or concrete, providing passage from one place to another.
7. a main road that bypasses a town or town centre.
8. a relatively narrow road running parallel to a main road and providing access to houses, shops, offices, factories, etc., situated along its length.
9. a short road connecting a motorway, etc., to another road.
10. a main road, esp. one that is suitable for heavy vehicles.

**Ex. 3 Match the words and word combinations with the similar meaning.**

- |                 |                  |
|-----------------|------------------|
| 1. emergence    | a) to evaluate   |
| 2. hazardous    | b) importance    |
| 3. toll         | c) frame         |
| 4. to assess    | d) to connect    |
| 5. structure    | e) appearance    |
| 6. purpose      | f) dangerous     |
| 7. to require   | g) to spread out |
| 8. to link      | h) charge        |
| 9. significance | i) objective     |
| 10. to expand   | j) to demand     |

**Ex. 4. Choose the right variant for each word combination.**

- |   |  |
|---|--|
| 1) the Silk Road                        | a) трансконтинентальный торговый путь          |
| 2) fall out of favor                    | b) всепогодная трансконтинентальная магистраль |
| 3) all-weather transcontinental highway | c) дорога с твердым покрытием                  |
| 4) mail coach service                   | d) впасть в немилость                          |
| 5) stage-coach                          | e) колесное транспортное средство              |
| 6) wheeled vehicles                     | f) не скользкое покрытие                       |
| 7) pan-continental trading route        | g) работающий по расписанию                    |
| 8) interstate highway                   | h) в экстренных случаях                        |
| 9) in case of an emergency              | i) водостойкое дорожное покрытие               |

- 10) solid road
- 11) operating under a timetable
- 12) waterproof road surfaces
- 13) non-slippery pavement

- ж) шелковый путь
- к) почтовая карета, дилижанс
- й) междуштатное шоссе
- м) почтовая служба

**Ex. 5. Translate the following noun+noun construction into Russian.**

- |   |                                       |
|---|---------------------------------------|
| 1. minimum cost network flow optimization | 7. information technology development |
| 2. land transportation networks           | 8. lorry road user charge             |
| 3. road freight transport                 | 9. road transport growth              |
| 4. high-quality road transport            | 10. land transport system             |
| 5. road damage cost                       | 11. short-term decisions              |
| 6. road freight haulage                   | 12. product life cycle                |

**Ex. 6. Choose the right variant for each word combination. Mind the use of the word 'road'.**

- |                   |                                  |
|-------------------|----------------------------------|
| 1) back road      | a) кольцевая (окружная) дорога   |
| 2) country road   | b) дорога с твёрдым покрытием    |
| 3) dirt road      | c) подъездная дорога             |
| 4) feeder road    | d) вспомогательная дорога        |
| 5) macadam road   | e) просёлочная дорога            |
| 6) merging roads  | f) въезд/съезд на автомагистраль |
| 7) ring road      | g) платная дорога                |
| 8) secondary road | h) дорога местного значения      |
| 9) slip road      | i) немощёная, грунтовая дорога   |
| 10) toll road     | ж) дорога, покрытая щебнем       |
| 11) surfaced road | к) сходящиеся дороги             |

**Ex. 7. Read the text attentively, find international words, translate them into Russian. Say what you have learnt from the history of roads.**

Two major modes are composing the land transport system, roads and railways. Obviously, roads were established first, as rail technology only became available by the 18th century, in the midst of the industrial revolution. Historical considerations are important in assessing the structure of current land transportation networks. Modern roads tend to follow the structure established by previous roads, as it was the case for the modern Euro-

pean road network (especially in Italy, France and Britain) that follows the structure established by the Roman road network centuries before.

The first land roads took their origins from trails which were generally used to move from one hunting territory to another. With the emergence of the first forms of nation-states trails started to be used for commercial purposes as trade expanded and some became roads, especially through the domestication of animals such as horses, mules and camels. The use of wheeled vehicles encouraged construction of better roads. However, a road transport system requires a level of labor organization and administrative control that could only be provided by a central government offering some military protection over trade routes. By 3,000 BC the first road systems appeared in Mesopotamia and asphalt was used to pave roads in Babylon by 625 BC. The Persian Empire had a road of 2,300 km in the 5th century BC. However, the first major road system was established by the Roman Empire from 300 BC and onwards, mainly for economic, military and administrative reasons. It relied on solid road engineering methods, including the laying of foundations and the construction of bridges. This was also linked with the establishment of pan-continental trading routes, such as the Silk Road, linking Europe and Asia by 100 BC.

Following the fall of the Roman Empire in the 5th century, integrated road transportation fell out of favor as most roads were locally constructed and maintained. Because of the lack of maintenance of many road segments, land transport became a very hazardous activity. It is not until the creation of modern nation-states in the 17th century that national road transportation systems were formally established. The French, through central government efforts, build their Royal Roads system spanning 24,000 km, over which a public transport service of stage-coaches carrying passengers and mail was established. The British, mainly through private efforts, built a 32,000 km system of turnpikes where tolls have to be paid for road usage. A similar initiative was undertaken in the United States in the 19th century and by the early 20th century, a network of 3 million km of roads, most unpaved, was in operation. 1794 marks the beginning of modern road transportation with the first mail coach service between London and Bristol, operating under a timetable.

Also of high significance were technological innovations in road engineering that permitted the construction of reliable and low cost hard surface roads. One such achievement came from the Scottish engineer McAdam who developed a process (later known as macadam) where hard and waterproof road surfaces were made by cemented crushed stone, bound together either with water or with bitumen. It provided a cheaper, durable, smooth and non-slippery pavement, which considerably improved the reliability and the travel speed on roads. Many roads could now be used year round.

Road development accelerated in the first half of the 20th century. By the 1920s, the first all-weather transcontinental highway, the Lincoln Highway, spanned over 5,300 km between New York and San Francisco. The Germans were however the first to build the modern highway (autobahn) in 1932 with specifications such as restricted access and road separation. The post World War Two era represented a period of rapid expansion of road transportation networks worldwide. The most remarkable achievement is without doubt the American Interstate highway system initiated in 1956. Its strategic purpose was to provide a national road system servicing the American economy and also able to support troop movements and act as air strips in case of an emergency. Overall, about 70,000 km of four-lane and six-lane highways were constructed, linking all major American cities, coast to coast. By the 1970s, every modern nation has constructed a national highway system, which in the case of Western Europe resulted in a pan-European system. This trend now takes place in many industrializing countries. For instance, China is building a national highway system that expanded to 25,000 km, with construction taking place at a pace of about 2,000 km per year.

**Ex. 8. Answer the following questions.**

1. When did trails start to be used for commercial purposes?
2. When and where did the first road system appear?
3. Why did land transport become a very hazardous activity in the 5<sup>th</sup> century?
4. What were technological innovations of high significance?
5. When did road development accelerate?
6. Every modern nation has constructed a national highway system by the 1970s, hasn't it?



**Ex. 9. Substitute the words in Russian with their appropriate equivalents in English.**

1. (Вслед за падением) of the Roman Empire, (объединенные дорожные перевозки) fell out of favor as most roads were locally constructed and maintained. 2. The American (федеральная система скоростных автострад) was to provide a national road system servicing the American economy and also able to (поддерживать) troop movements and act as (взлетная полоса) (в экстренных случаях). 3. The use of (колесных транспортных средств) encouraged construction of better roads. 4. By the 1920s, the first (всепогодное) transcontinental (шоссе) spanned over 5,300 km between New York and San Francisco. 5. (Дорожная транспортная система) requires a level of (организация труда) and administrative control that could be (обеспечено) by a central (правительством) offering some military protection over (торговые пути). 6. The first road systems (появились) in Mesopotamia and asphalt was used (для того, чтобы мостить дороги) in Babylon by 625 BC. 7. Technological innovations in (дорожная техника) permitted the construction of (надежный) and (с низкой себестоимостью) (дороги с твердым покрытием). 8. The Germans were the first to build the modern highway (autobahn) in 1932 with specifications such as (ограниченный доступ) and (разделение дорог). 9 Overall, about 70,000 km of (4-х полосных) (магистралей) were constructed, linking all major American cities, coast to coast. 10. Historical considerations are important (при оценке) the structure of (современная сеть наземных перевозок). 11. The Scottish engineer McAdam (разработал) a process later known as (щебенка) which considerably improved the (надежность) and the (скорость передвижения) on roads and provided a cheaper, durable, (гладкий) and (не скользкую мостовую).

**Ex. 10. Fill in the blanks with the suitable prepositions.**

1. The most remarkable achievement is ... doubt the American Interstate highway system initiated ... 1956. 2. 1794 marks the beginning ... modern road transportation with the first mail coach service ... London and Bristol, operating ... a timetable. 3. The first land roads took their origins ... trails which were generally used to move ... one

hunting territory ... another. 4. The first major road system was established ... the Roman Empire and it relied ... solid road engineering methods, including the laying ... foundations and the construction ... bridges. 5. The Scottish engineer McAdam developed a process where hard and waterproof road surfaces were made ... cemented crushed stone, bound together either ... water or ... bitumen.

**Ex. 11. Translate the following sentences into Russian. Mind the use of the participles.**

1. Cars and trucks have improved in numerous respects, becoming far more reliable, safer and less polluting. 2. Being an engine of commerce, the logistics industry is fueled by the health of the overall economy. 3. Transport companies earn money being engaged in freight transportation instead of writing the accompanying documents. 4. Goods in lots which are too small for the traditional bulk transport can be moved using containers. 5. Indices showing cost developments for different kinds of road transport have to be published regularly. 6. The 1939 World Fair had exhibits indicating that almost everything in transport would operate automatically. 7. Vehicles travelling on the network include automobiles, bicycles, buses, trains, people and aircraft.

**Ex. 12. Translate the following sentences into Russian. Mind the use of the emphatic constructions.**

1. It is not until the creation of modern nation-states in the 17th century that national road transportation systems were formally established. 2. It was in the 1950s that the introduction of containerization gave massive efficiency gains in freight transport, permitting globalization. 3. It is only in recent years that traditional practices have started to be questioned in many places. 4. It is the density of development that spends on mode of transport, with public transport allowing for better special utilization. 5. It is different modes of transport that offer different levels of mobility and accessibility in different circumstances. 6. It is the inertial nature of transportation facility development and urban structure adjustments that make it difficult to keep up with a population's rapid shifts to motor vehicle.

**Ex. 13. Give the main points of the text in 4-7 sentences. Use the following clichés:**

*The text deals with... . The author points out that... . Attention is drawn to the fact that... . It is pointed out that... . It should be noted that... . The author comes to the conclusion that... . I find the text rather/very... .*

**Ex. 14. Translate the text into Russian. Use the dictionary if necessary.**

UNCTAD (United Nations Conference on Trade and Development) has suggested definitions to various types of transport so that a clear distinction could be established between multimodal transport and other forms of transport. Unimodal transport is the transport of goods by one mode of transport by one or more carriers.

Intermodal transport is the carriage of goods by several modes of transport from one point/port of origin via one or more interface points to a final port/point where one of the carriers organizes the whole transport. Depending upon the sharing of transport responsibility, different types of transport documents are issued. Under the another form of transport called segmented transport, the carrier takes responsibility for the portion it is performing itself, and accordingly issues an intermodal bill of lading.

Facilitation of trade and transport sectors calls for procedural, legal and institutional reforms to simplify, standardise and harmonise procedures and documentation that will help to achieve movement of goods at a minimum cost and time. This covers a wide spectrum of activities including human resource development, physical infrastructures, and the use of new transport and information technologies. Multimodal transport is one of highly effective and modern ways of facilitating movement of imports and exports. It is a transport logistic system based on new transport technology that ensures fast and safe movement of goods at least costs.

The rapid changes in political, economic and technological sectors in the aftermath of the Second Great War resulted in the tremendous growth in domestic production and international trade. The world started to witness ever growing competition as every country faced challenges as well as opportunities to raise one's share in the global trade. The concept of 'just-in-time' became the most wanted element in international

trader. The traditional practice of holding large stock became an obsolete practice. Consequently this triggered new developments in, inter alia, transport technologies aimed at achieving higher efficiency with reduced cost and transit time in delivering products from one part of the world to the another. In the course of its development, the multimodal transport used to be called with variety of names such as intermodal transport, through transport and combined transport.

Multimodal transport is the most popular form of transport logistic system in the international trade for efficient door-to-door delivery using single document called a multimodal transport document (MTD) under a single liability regime covering all modes of transport from the place of origin to the place of destination. In other words, multimodalism refers to a transport system to effect door-to-door movement of cargo, and therefore, reflects a logical and flexible commercial system in international trade. It also means selling direct into the overseas market as easily as at home and in terms familiar to the customers.

## **Unit Two: Road - the Lifetime of the European Single Market**

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### **Ex. 1. Mind the new words and expressions**

1. agreement – соглашение, договор
2. allocation – размещение, распределение
3. authorization – санкционирование, разрешение
4. charge – расходы, издержки, налог, сбор
5. coach – пассажирский автобус, вагон
6. to codify – систематизировать
7. to comply – выполнять, осуществлять
8. crucial – наиболее значительный, важный
9. distorting – искажающий, деформирующий
10. to exercise - использовать, осуществлять, проявлять, применять
11. flexibility - гибкость
12. to hamper – препятствовать, мешать
13. haulage – перевозка, транспортировка
14. impact – сильное воздействие, удар, толчок

15. legislation - законодательство
16. levy (v, n) – сбор, взимание пошлин, налогов
17. in regard to – в отношении, что касается
18. saturation – насыщение
19. to settle – регулировать, устанавливать
20. to strive – бороться, прилагать усилия
21. taxation – налогообложение, размер налога
22. toll (v, n) – пошлина, облагать платой за перевозку
23. to underpin - -поддерживать, подкреплять
24. victim – жертва

**Ex. 2. Match the word with the appropriate definition.**

**legislation, operator, safety, toll, allocation, traffic, transport café**

1. a person who owns or operates an industrial or commercial establishment.
2. an inexpensive eating place on a main route, used mainly by long-distance lorry drivers.
3. the act or process of making laws.
4. an amount of money levied for the use of certain roads, bridges, etc., to cover the cost of maintenance.
5. accounting a system of dividing overhead expenses between the various departments of a business.
6. freedom from danger or risk of injury.
7. the movement of vehicles, people in a particular place or for a particular purpose.

**Ex. 3 Match the words and word combinations with the similar meaning.**

- |                 |                     |
|-----------------|---------------------|
| 1) haulage      | a) duty             |
| 2) charge       | b) critical/ urgent |
| 3) toll         | c) therefore        |
| 4) levy         | d) equality         |
| 5) in regard to | e) to classify      |
| 6) legislation  | f) to fulfill       |
| 7) consequently | g) in respect to    |
| 8) crucial      | h) tax              |

- |                        |                    |
|------------------------|--------------------|
| 9) to codify           | i) expenses, costs |
| 10) to comply          | j) law             |
| 11) non-discrimination | h) transportation  |

**Ex. 4. Choose the right variant for each word combination.**

- |                            |  |
|----------------------------|--|
| 1) absorption              | a) грузовместимость транспортного средства   |
| 2) accessorial services    | b) пропускная способность пути сообщения   |
| 3) bridge toll             | c) совместное транспортное агентство (несколько предприятий)                           |
| 4) revenue unit of service | d) дополнительное обслуживание при перевозках  |
| 5) cargo-carrying capacity | e) принятие на себя обязательств другого перевозчика без увеличения стоимости доставки |
| 6) constructive mileage    | f) плотность транспортного потока  |
| 7) joint agents            | g) мостовой сбор   |
| 8) traffic capacity        | h) расчетная [калькуляционная] единица (тонно-миля\ машино-миля)                       |
| 9) traffic density         | i) условия дальности перевозки   |

**Ex. 5. Find in the text international words and translate them into Russian.**

**Ex. 6. Read the text and say what you have learnt about European roads.**

Day and night, hundreds of thousands of lorries travel across Europe's main arteries. This mode of transport has two major and obvious advantages: its flexibility and its ability to carry goods and passengers door-to-door. This is the reason why European companies clearly prefer the road network to distribute their products throughout the Union.

Road transport is clearly an important factor underpinning the development of the European internal market. The more this market opens up and becomes unified, the more the sector benefits in terms of its own growth.

Every operator in the sector has the right to settle and freely exercise his activities throughout the Union. The specific rules governing European road transport, in particular with regard to taxation and charges, tolls and levies for the use of infrastructure, are made up by distinct national legislations. This regulatory mosaic is composed of numerous elements with unequal costs, distorting competition. It prevents the optimum allocation of resources and hampers competitiveness in this area of economic activity. The overall aim of the EU rules worked out in this sector has been to strive for clarity and open up the market in a balanced manner to the benefit of a large number of transport operators.

The road haulage sector is the victim of its own success. Its steady growth — together, of course, with that of car traffic — contributes to the increasingly frequent saturation of the capacity of Europe's roads. The need to share infrastructure with other road users also raises the important question of road safety. Another consequence of fundamental importance for the community is the impact on the environment, in particular in connection with greenhouse gas emissions and climate change. It is not that freight carried by road, using diesel, which is not the most polluting fuel, is the central element of this problem, but the ever-growing number of vehicles operating in European road transport, now over 20 million, is undeniably a contributing factor.

The sector of passenger transport by road shares with the road haulage sector a number of identical rights and obligations: freedom of establishment, access to the market, compliance with conditions of competition, vehicle safety and safe driving. Consequently, many EU rules applying to lorries also concern buses and coaches. From 1991 to 2001 their activity, measured in millions of passenger-kilometers, rose by about 10 %. Their modal share is limited to approximately 9 % of overall passenger transport (including cars, railways and air traffic). A significant percentage of these is made up of vehicles used for urban or inter-urban transport that are operated by transport companies under the supervision of the public authorities.

In a sector where safety is of crucial importance, the Union has codified and simplified the common administration procedures relating to

various passenger transport scenarios: national authorization for regular services, possession of a contract for specific regular services (school transport, personnel transport, etc.), holding a road map for occasional services and a certificate for own-account services.

The Interbus agreement is a key instrument for liberalizing the important passenger road transport market between the Union and the countries of central and Eastern Europe. The agreement comprises social, fiscal and technical measures based on non-discrimination among the various contracting parties. It governs not only traffic between the EU and non-member countries but also among the nonmember countries themselves. As such, it is a major step towards harmonising, within the Europe the rules and procedures which transport operators have to comply with.

Road transport plays a direct role in developing the European internal market. Moreover road transport also has to meet challenges connected with its success: network safety and saturation impact on the environment. The future of road haulage should therefore be viewed in the framework of an overall medium-term vision of the Union's transport policy as analyzed in the White Paper (European Transport Policy for 2010).

**Ex. 7. Answer the following questions.**

1. What are the major advantages of lorries?
2. What problems does the road sector have?
3. What procedures has the Union codified?
4. What is the Interbus agreement?
5. What challenges does road transport have to meet?

**Ex. 8. Substitute the words in Russian with their appropriate equivalents in English.**

1. The steady growth of ( сектора дорожных перевозок) contributes to the (насыщенность) of the capacity of Europe's roads.
2. The Union has (систематизировал) and simplified the (обычные) administration procedures in a sector where (безопасность) is of (чрезвычайно важна)
3. The specific (правила) governing European road transport include (налогообложение) and charges, (пошлины) and (сборы) for the use of infrastructure,
4. Many EU (правила) applying to (грузовики) also concern buses and (пассажирские автобусы)
5. The ever-growing number



of (транспортные средства) operating in European road transport, now over 20 million, is a contributing factor of the (воздействие) on the (окружающая среда), in particular in connection with (парниковый) gas (выбросы) and climate (изменение). 6. The Interbus (соглашение) comprises social, (финансовые и технические меры) based on non-discrimination among the various (договаривающиеся стороны), it is a major step towards harmonizing, within the Europe (правила и процедуры) which transport operators have to (выполнять). 7. The sector of (пассажирский транспорт) by road shares with the road (перевозки) sector a number of identical (права и обязательства): (доступ) to the market, (безопасность транспортного средства) and (безопасное вождение). 8. The need to (делить) infrastructure with other road (пользователи) raises the important question of (дорожная безопасность).

### Ex. 9. Fill in the blanks with the suitable prepositions.

1. The aim of the EU rules worked ... in this sector has been to strive ... clarity and open up the market in a balanced manner to the benefit ... a large number of transport operators. 2. Day and night, hundreds of thousands ... lorries travel ... Europe's main arteries. 3. Road transport has the capacity ... carrying goods door ... door. 4. The Interbus agreement is a key instrument ... liberalizing the important passenger road transport market ... the Union and the countries ... central and Eastern Europe. 5. This agreement governs not only traffic ... the EU and non-member countries but also ... the nonmember countries themselves. 6. The Interbus agreement is a major step ... harmonising, ... the Europe the rules and procedures which transport operators have to comply with. 7. The modal share ... EU rules is limited to approximately 9 % ... overall passenger transport (including cars, railways and air traffic). 8 The need to share infrastructure ... other road users raises the important question ... road safety. 9. A significant percentage ... overall passenger transport is made up ... vehicles used ... urban or inter-urban transport that are operated ... transport companies ... the supervision ... the public authorities. 10. European companies prefer the road network to distribute their products ... the Union.

**Ex. 10. Make up questions, the answers to which are given in the right-hand column.**

What...?	Flexibility and ability to carry goods and passengers door to door.
Why...prefer the road network...?	To distribute their products throughout the Union.
What...specific rules concerned to?	Taxation and charges, tolls and levies for the use of infrastructure.
What...?	Open up the market to the benefit of transport operators.
How many....?	Over 20 million.
What...?	National authorization for regular services, possession of a contract, holding a road map and a certificate.
What...?	The Interbus agreement.
What....?	The impact on the environment in connection with greenhouse gas emissions and climate change.
Why...the victim...?	Saturation of the capacity of Europe's roads.
When... by about 10 %.	From 1991 to 2001.

**Ex. 11. Translate the following sentences into Russian. Mind the use of the modal verbs.**

1. Quality assurance must be built into the system, deviations must be detected and corrected before the consignee recognizes the problem, not afterwards. 2. The transport operator has to be able to predict and keep to time windows at both pick-up and delivery locations. 3. The transport market may be characterized as a highly regulated market with primitive mechanisms to match supply and demand. 4. There is little information on how road users might respond to a complex structure of charges and hence how effective a complex system might be. 5. In order to know where you need to get to, you must know where you were presently situated. 6. The challenge is to develop a masterplan on European transport,

containing an overall vision on what should be achieved and how it should be achieved. 7. The shift from private car to public transport can be encouraged by a more efficient and comfortable transport system. 8. The role of the taxi in avoiding traffic jams should and could be enlarged.

**Ex. 12. Translate the following sentences into Russian. Mind the use of the passive voice.**

1. Changes in the supply of transport services are affected by human technologies, customer demand and external cost. 2. Many characteristics of transport demand are influenced by a multitude of simultaneously occurring tendencies. 3. In Helsinki the road dust problem is mainly blamed on winter sanding and has been addressed since the 1980s. 4. Transport and transporters are influenced by the changes in political and public opinion, by the rapid development of telecommunications and so on. 5. The capacity of existing European waterways is not fully utilized. 6. The need for sustainable mobility and alternative land use policies has recently been recognized. 7. For some agro industries the cost of the raw material waiting at the reception area is affected by the deterioration of the perishable products transported by trucks.

**Ex. 13. Give the main points of the text in 4-7 sentences. Use the following clichés:**

*The text deals with... The author points out that... It should be remembered that... The author comes to the conclusion that...*

**Ex. 14. Translate the text into Russian. Use the dictionary if necessary.**

### **About the International Road Federation**

The International Road Federation is a non-governmental, not-for-profit organisation with over 650 members worldwide from both the public and private sector. It was founded in 1948. The mission of the IRF is to encourage and promote the development and maintenance of better and safer roads and road transport systems worldwide.

The IRF promotes education and understanding of the social and economic benefits to be derived from developing modern road networks, transport systems and traffic control; encourages and supports the planning and execution of economically and environmentally sound pro-

grammes to improve and extend road networks and allied systems; provides education and training programmes; cooperates with, advises and exchanges experiences with international, national and local organisations with goals similar to those of the IRF; advises on, assists and promotes the creation of national and regional road federations; collects, collates and distributes statistical, technical, economic, educational and other road-related material; stimulates and supports regional and global harmonisation of standards; supports road research; encourages and promotes improvements in road safety.

The IRF also publishes World Road Statistics, the only global compilation of road and vehicle statistics. It is based on data from official sources within national statistics offices and national road administrations in more than 200 countries. It also benefits from increased IRF cooperation with major international institutions such as Eurostat and Afristat, and the UN Economic Commissions for Europe and for Africa.

Since it first appeared in 1958, World Road Statistics has been an indispensable reference tool for road professionals, statisticians, economists, journalists and development specialists around the world.

It is used by such agencies as the United Nations Development Programme, the World Bank, the European Commission and the CIA for their own publications: for example, the World Bank uses World Road Statistics to prepare a part of its own publication World Development Indicators.

## **Unit Three: London's Congestion Charge**

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### **Ex. 1. Mind the new words and expressions**

1. bus occupancy – загруженность (вместимость) автобуса
2. clamp (v, n) – фиксировать, зажим
3. congestion – затор, пробка на дороге
4. flat fee – фиксированная оплата
5. fine – штраф, плата
6. fossil fuel – ископаемое топливо
7. enforcement – принудительное применение закона
8. net revenue – чистый годовой доход

9. persistent - стойкий, постоянный, продолжительный
10. ridership – (ж. д) пассажирские перевозки
11. surveillance - наблюдение
12. to track – следить, прослеживать
13. transponder – ретранслятор, радиомаяк

**Ex. 2. Match the word with the appropriate definition.**

**route, congestion charging, cost, to levy, profit, congestion, revenue**

1. the state of being overcrowded, especially with traffic or people.
2. a way of reducing traffic in city centres by charging drivers money to enter.
3. the price paid or required for acquiring, producing, or maintaining something, usually measured in money, time, or energy.
4. to say officially that people must pay a tax or charge.
5. excess of revenues over outlays and expenses in a business enterprise over a given period of time, usually a year.
6. money that a business or organization receives over a period of time, especially from selling goods or services.
7. a way between two places that buses, planes, ships, etc. regularly travel.

**Ex. 3 Match the words with the similar meaning.**

- |                 |                |
|-----------------|----------------|
| 1) fine         | a) decrease    |
| 2) fee          | b) charge      |
| 3) track        | c) trace       |
| 4) reduce       | d) release     |
| 5) emission     | e) observation |
| 6) payment      | f) revenue     |
| 7) income       | g) penalty     |
| 8) surveillance | h) expense     |

**Ex. 4. Give the Russian equivalents of the following expressions.**

- |                                       |                            |
|---------------------------------------|----------------------------|
| 1. congestion charge                  | 10. noise level            |
| 2. journey time reliability           | 11. the charged area       |
| 3. efficiency of freight distribution | 12. persistent non-payers  |
| 4. during working hours               | 13. displaced car users    |
| 5. flat once-a-day fee                | 14. road traffic emissions |

- |  |                             |
|--|-----------------------------|
| 6. an electronic road pricing system             | 15. fossil fuel consumption |
| 7. road-side transponders or on-board units      | 16. inner ring road         |
| 8. video-surveillance cameras                    | 17. (average) bus occupancy |
| 9. automatic number plate recognition technology | 18. traffic flow            |

**Ex. 5. Choose the right variant for each word combination. Mind the use of the word "charges".**

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| 1) all charges borne              | a) комиссионные                    |
| 2) all charges included           | b) транспортные расходы            |
| 3) back charges                   | c) накладные расходы               |
| 4) basis for charges              | d) расходы на погрузку и разгрузку |
| 5) bill of charges                | e) обратные расходы                |
| 6) capital (depreciation) charges | f) плата за хранение               |
| 7) charges for delivery           | g) расходы будущих лет             |
| 8) charges from salary            | h) включая все затраты             |
| 9) commission charges             | i) за покрытием всех расходов      |
| 10) contracting charges           | j) плата за перевозку груза        |
| 11) customary charges             | k) основание для платежей          |
| 12) deferred charges              | l) затраты на доставку             |
| 13) freight charges               | m) расходы, оговоренные договором  |
| 14) handling charges              | n) обычные расходы                 |
| 15) overhead charges              | o) счет расходов                   |
| 16) storage charges               | p) амортизационные отчисления      |
| 17) transport charges             | q) удержания из зарплаты           |

**Ex. 6. Look through the text and find the derivatives from the following verbs : *to rely, to distribute, to surveil, to enforce, to pay, to indicate, to signify, to improve, to occupy.***

**Ex. 7. Read the text for more information about technology described.**

London's Congestion Charge was introduced on 17 February 2003 with the aims of reducing congestion, improving bus services, improving journey time reliability and improving the efficiency of freight distribution and other services. Drivers entering the centre of the city during working hours must pay a flat, once-a-day fee. It is an electronic road pricing system which operates without road-side transponders or on-board units. Vehicles are tracked entering the charged area by video-surveillance cameras, using automatic number plate recognition technology.

This technology is employed for enforcement in urban and truck charging systems. Drivers entering the charged area between 7 a.m. and 6:30 p.m. Monday to Friday must pay 5 pounds (7 Euro), in advance or before the end of the day. Over half a million payments are made each week. Payments may be made by Internet, mobile phone SMS messages or at some petrol stations and shops. On payment, the vehicle's registration number is entered onto a computerized list and cross-checked against the video camera records. Fines are sent out to drivers of cars entering the zone without payment. Persistent non-payers are identified and their vehicles clamped, or in a few extreme cases their vehicles have been crushed.

The impacts of the system have been carefully monitored. The main results reported after the first complete year of operation are as follows, and closely in line with the results of the modeling on which the system was designed:

- Congestion within the zone has reduced by 30%, and the volume of traffic within the zone has reduced by 15%;
- Public transport is successfully accommodating displaced car users;
- There have been significant improvements to bus services in the zone and more widely throughout London;
- Comparative analysis of the many influences on the central London economy suggests that the direct impact of congestion charging on business activity has been small;
- Road traffic emissions and fossil fuel consumption in the zone have been reduced.

- Traffic entering the charging zone during charging hours has been reduced by 18%, and traffic circulating within the zone has been reduced by 15% (vehicles with four or more wheels). As predicted, there have been small increases in traffic on the inner ring road, just outside the charging zone, but this is being managed without significant additional congestion. There are no indications of significant increases in traffic outside the charging zone

Improvements to the bus network made in conjunction with the charging scheme have seen increased ridership both inside the charging zone and more widely. Reduced congestion on the roads has enabled more busses to be run with much more reliable journey times. Average bus occupancy has increased but over-crowding has been avoided. Most of the net revenues generated by the charge are being invested in bus services.

By reducing overall volumes of traffic within the charging zone, and smoothing traffic flows, charging is estimated to be directly responsible for an approximate 12% reduction in emissions of both NO<sub>x</sub> and fine particles (PM<sub>10</sub>) from road traffic.. The reduction in CO<sub>2</sub> emissions from traffic is estimated to be 19%.No significant changes in noise levels have been recorded.

Generally the congestion charge has been accepted by the public and by business. The success of the charge has resulted in the Mayor proposing to extend the charged area to cover all of central London. The charging system and level of charge would stay the same and be applied to a single zone roughly double the size of the present charging area.

**Ex. 8. Answer the following questions.**

1. Why was London's Congestion Charge introduced?
2. What technology is employed for enforcement in urban and truck charging systems?
3. What were the main results after the first year of charging system operation?
4. How has the ecological situation been improved within the charging zone?
5. What has the success of charge resulted in?



**Ex. 9. Substitute the words in Russian with their appropriate equivalents in English.**

1. Road (выбросы транспорта) and fossil (потребления топлива) in the zone have been reduced. 2. (Водители) entering the centre of the city during (в рабочее время) must pay a (фиксированную однодневную плату). 3. Generally the (затоп) charge has been accepted by the public and by business. 4. The (влияние) of the electronic (система дорожных сборов) have been carefully monitored. 5 Vehicles are (отслеживаются) entering the (платная область) by (камеры видео наблюдения) using automatic (технология распознавания номерного знака). 6. Reducing (затопов на дорогах) has enabled more busses to be run with much more (надежный) journey times. 7. No (значительных изменений) in (уровень шума) have been recorded. 8. (Затоп) and the (интенсивность движения) within the zone has (уменьшены). 9. (Штрафы) are sent out to drivers of cars entering the zone (без оплаты). 10. Average (наполняемость автобусов) has increased but (переполненность) has been avoided. 11. Most of the (чистая прибыль) generated by the charge are being invested in (автобусной службы). 12. By (уменьшения) overall volumes of (движения) within the charging zone, and (сглаживания) traffic (потоков), charging is estimated to be directly (ответственный) for (уменьшение выбросов) from road traffic.

**Ex. 10. Translate the following sentences into Russian. Mind the use of the gerund.**

1. For traffic management, there is a great deal of monitoring and an increase in the amount and reliability of information given to users. 2. Varying the charge by distance travelled within the UK ensures that all vehicles contribute equally irrespective of their country of registration or where they last refueled. 3. By easing traditional impediments (препятствия) to the international movement of goods, the TIR system encourages the development of international trade. 4. A market observation system for monitoring the transport market in case of disturbances enabling adequate interventions is needed. 5. There is little scope for reducing the annual tax on vehicle ownership further. 6. The extent of feeling unsafe when using public transport is relatively high. 7. Multimodal transport is one of highly effective and modern ways of facilitating movement of imports and exports. 8. Whatever the mode of transport, getting

round in certain urban areas is becoming an increasingly time-consuming, difficult, uncomfortable, hazardous and stressful activity.

**Ex. 11. Translate the following sentences into Russian. Mind the use of participle II.**

1. Air pollution caused by intensive car, lorry and air traffic is finally starting to worry those who are most exposed to it. 2. One of the main measures considered by logistics managers of agro industries with continuous process is related to truck waiting times in the reception area. 3. The total journey time by public transport consists of the time taken to get to or from bus-stop, the waiting time and the time on board the vehicle. 4. The distribution services offered included warehousing, administration, order processing and the control of the goods flowing via the transport network. 5. Transport services provided in return for money can immediately be classed as third-party operations. 6. Based on a literature study and laboratory tests, full scale tests should be carried out on existing roads. 7. The investigation carried out is based on the data from the road surface measurements made on stale roads and accidents reported by the police.

**Ex. 12. Give the main points of the text in 4-7 sentences. Use the following clichés:**

*The text deals with... . The author points out that... . Attention is drawn to the fact that... . It is pointed out that... . It should be noted that... . The author comes to the conclusion that... . I find the text rather/very... .*

**Ex. 13. Translate the following text into Russian. Use the dictionary if necessary.**

United Kingdom plans to introduce a satellite based electronic km charge for trucks and trials of the technology began in 2004 on the motorways around the city of Leeds. Road infrastructure costs have been closely examined in the UK over many years and the existing fixed annual vehicle tax for trucks is differentiated according to axle weight and type of suspension in order to promote road friendly vehicles. This knowledge is expected to be used to differentiate the new electronic km

charge to a relatively high degree, and this is the reason for preferring a satellite based system.

The information on the external costs of transport shows that these costs vary significantly by time of day, road type and area type.

The British Government proposes to start with a relatively simple structure of charges which succeeds in meeting the main objectives of the policy. These are: to ensure fairness and efficiency, so that all users contribute equally and at a level which reflects the costs they impose on the road network; to deliver environmental and other benefits by setting the rates so as to reflect the environmental performance of the vehicle paying the charge. The charge is expected to vary according to the distance traveled, vehicle type and road type.

Varying the charge by distance travelled within the UK ensures that all vehicles contribute equally irrespective of their country of registration or where they last refueled. Distinguishing by vehicle type ensures that the charge relates both to road damage costs and to environmental costs, with the heaviest vehicles with the fewest axles paying most and vehicles with more environmentally friendly emission standards paying less. The charge will also encourage operators to upgrade their fleets and make better use of their vehicles so as to reduce vehicle kilometers. Variation by road type further reflects the significant differences in costs between modern, high quality roads usually constructed to provide for freight traffic and other roads where road damage, environmental and safety costs are higher.

Using a satellite based system to levy the charge will allow for further variation to be implemented. There is likely to be the potential for varying the charge by time of day, so as to encourage operators to schedule their trips at times when they impose the lowest costs because the inter-urban network is less congested. A further option is a charge that varies by area type, to reflect the higher costs that heavy vehicles typically impose when operating in close proximity to people and their homes in urban areas. Both these options are unlikely to feature in the system when first implemented. The aim is to ensure that it is sufficiently flexible for it to be enhanced later.

The Government does not intend the new charge to increase the overall cost of road freight haulage for domestic operators in the UK. The aim is to reduce other taxes on UK road haulage so as to leave the over-

all costs broadly unchanged. There is little scope for reducing the annual tax on vehicle ownership (Vehicle Excise Duty) further. It is already highly graduated to encourage the purchase of environmentally friendly vehicles.

The Government concluded to repay part of the fuel duty paid by hauliers when they purchase fuel in the UK. Most fuel purchased by goods vehicle operators is either supplied directly to their depots or purchased in the course of a journey by drivers using special fuel cards. In both cases it would be a relatively simple matter for the suppliers of the fuel to claim a rebate from the tax authority and pass this on to the purchaser. There would also need to make arrangements whereby direct purchasers of fuel could claim back the tax against a receipt from an authorised service station.

## Unit Four: Rush Hours

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### Ex. 1. Mind the new words and expressions

1. approach – подход; подъезд
2. avoidance – избегание, уклонение
3. to back – поддерживать, подкреплять
4. collision – столкновение
5. to encourage – поощрять, поддерживать
6. to enforce – обязывать, вводить в действие
7. grade – уровень, степень
8. image-recognition – распознавание изображений
9. interchange – пересечение (дорожно-транспортное)
10. intersection – перекресток, пересечение
11. grade-separated intersection – дорожная развязка в двух уровнях
12. junction – перекресток, пересечение дорог
13. grade junction – пересечение дорог на одном уровне
14. lane – полоса движения;
15. HOV – High Occupancy Vehicle – машина, в которой едут два и более человека, включая водителя;  
HOV lane – полоса движения, выделенная для машин, в которых едут два и более человека включая водителя

16. obstruction – препятствие, затруднение продвижению
17. offending - нарушающий
18. rush hour – час пик
19. ticket –(зд): квитанция за нарушение правил уличного движения
20. to issue ticket - печатать квитанцию
21. time-consuming – отнимающий много времени
22. turnpike road – главная магистраль
23. underneath - под
24. underpass – подземный переход, тоннель, путепровод
25. overtake – обгонять

**Ex. 2. Match the word with the appropriate definition.**

**highway (AmE), rush hour, junction, collision, motorway (BrE), ticket**

1. a wide main road that joins one town to another.
2. a main road for fast-moving traffic, having limited access, separate carriageways for vehicles travelling in opposite directions, and usually a total of four or six lanes.
3. a period at the beginning and end of the working day when large numbers of people are travelling to or from work.
4. a violent impact of moving objects; crash.
5. a piece of paper, cardboard, etc., showing that the holder is entitled to certain rights, such as travel on a train or bus, entry to a place of public entertainment, etc.
6. a point on a motorway where traffic may leave or join it.

**Ex. 3. Match the words and word combinations with the similar meaning.**

- |                  |                     |
|------------------|---------------------|
| 1) to back       | a) crash            |
| 2) to ride       | b) offending driver |
| 3) intersection  | c) to drive         |
| 4) ticket        | d) to support       |
| 5) license plate | e) coach            |
| 6) business day  | f) carpool lane     |
| 7) to encourage  | g) receipt          |
| 8) HOV lane      | h) working day      |

- 9) collision
- 10) bus
- 11) speeding driver

- i) junction
- j) number plate
- k) to cheer

**Ex. 4. Choose the right variant for each word combination.**

- |                                  |   |
|----------------------------------|---|
| 1) limited access road           | a) зеленая волна                          |
| 2) collision avoidance           | b) интенсивность движения в час пик       |
| 3) speed-measuring device        | c) отнимающий много времени               |
| 4) green wave                    | d) дорога с ограниченным движением        |
| 5) posted limit                  | e) разметка полос                         |
| 6) business days                 | f) установленные ограничения              |
| 7) traffic congestion            | g) дорожная развязка в двух уровнях       |
| 8) four-way flashing lights      | h) пересечение дорог в одном уровне       |
| 9) rush-hour traffic intensity   | i) избежание столкновения                 |
| 10) lane marking                 | j) устройство измерения скорости          |
| 11) grade-separated intersection | k) пробки на дорогах                      |
| 12) grade junction               | l) рабочие дни                            |
| 13) minimum speed signs          | m) знаки ограничения минимальной скорости |
| 13) time-consuming               | n) аварийная сигнализация                 |

**Ex. 5. Choose the right variant for each word combination. Mind the use of the word "way".**

**A)**

- |                          |                              |
|--------------------------|------------------------------|
| 1) under way             | a) во многих отношениях      |
| 2) no two ways about it  | b) кстати                    |
| 3) in many ways          | c) полным ходом              |
| 4) in some ways          | d) в некоторой степени       |
| 5) by way of             | e) ради, с целью             |
| 6) by the way            | f) наоборот                  |
| 7) no way                | g) ничего не выйдет          |
| 8) the other way (round) | h) двух мнений быть не может |

## B)

- |                        |  |
|------------------------|--|
| 1) way bill            | a) обочина                                     |
| 2) way cargo           | b) попутный пассажир                           |
| 3) way fare            | c) пункт назначения согласно<br>путевому листу |
| 4) way passenger       | d) накладная                                   |
| 5) way side            | e) попутный груз                               |
| 6) way train           | f) пригородный поезд                           |
| 7) waybill destination | g) местный тариф                               |

**Ex. 6. Look at the title and say what information the text gives. Read the text attentively for the details.**

### Rush Hours

The higher the speed of a vehicle, the more difficult collision avoidance becomes and the greater the damage if a collision does occur. Therefore, many countries of the world limit the maximum speed allowed on their roads. Vehicles are not supposed to be driven at speeds which are higher than the posted maximum.

To enforce speed limits, two approaches are generally employed. In the USA, it is common for the police to patrol the streets and use special equipment (Typically a RADAR Gun) to measure the speed of vehicles, and "pull over" any vehicle found to be in violation of the speed limit. In Brazil and some European countries, there are computerized speed-measuring devices spread throughout the city, which will automatically detect speeding drivers and take a photograph of the license plate (or number plate), which is later used for applying and mailing the ticket.

Another interesting mechanism that was developed in Germany is the Grüne Welle, or green wave, which is an indicator that shows the optimal speed to travel for the synchronized green lights along that corridor. This encourages drivers to travel at the posted limit in order to minimize stopping.

During business days in most major cities, traffic congestion reaches great intensity at predictable times of the day due to the large number of vehicles using the road at the same time. This phenomenon is called rush hour, although the period of high traffic intensity may exceed one hour.

Some cities adopt policies to reduce rush-hour traffic and pollution and encourage the use of public transportation. For example, in São Paulo, Brazil each vehicle has a specific day of the week in which it is forbidden from traveling the roads during rush hour. The day for each vehicle is taken from the license plate number, and this rule is enforced by traffic police and also by hundreds of strategically positioned traffic cameras backed by computerized image-recognition systems that issue tickets to offending drivers.

In the United States and Canada, several expressways have a special lane (called an "HOV Lane" - High Occupancy Vehicle Lane) that can only be used by cars carrying two (some locations-three) or more people, and several cities offer a public telephone service where citizens can arrange rides with others depending on where they live and work. The purpose of these policies is to reduce the number of vehicles on the roads and thus reduce rush-hour traffic intensity. Uncontrolled traffic occurs in the absence of lane markings and traffic control signals. On roads without marked lanes, drivers tend to keep to the appropriate side if the road is wide enough. Drivers frequently overtake others. Obstructions are not uncommon.

In large cities, moving from one part of the city to another by means of ordinary streets and avenues can be time-consuming since traffic is often slowed by at-grade junctions, tight turns, narrow marked lanes and lack of a minimum speed limit. Therefore, it has become common practice for larger cities to build expressways or freeways, which are large and wide roadways with limited access, that typically run for long distances without at-grade junctions.

The words expressway and freeway have varying meanings in different jurisdictions and in popular use in different places; however, there are two different types of roads used to provide high-speed access across urban areas:

The freeway (in USA usage) or motorway (in UK usage) is a divided multi-lane highway with fully-controlled access and grade-separated intersections (no stops). Some freeways are called expressways, super-highways, or turnpikes, depending on local usage. Access to freeways is fully controlled; entering and leaving the freeway is permitted only at grade-separated interchanges.



The expressway (when the name does not refer to a freeway or motorway) is usually a broad multi-lane avenue, frequently divided, with some grade-level intersections (although usually only where other expressways or arterial roads cross).

Motor vehicle drivers wishing to travel over great distances within the city will usually take the freeways or expressways in order to minimize travel time. When a crossing road is at the same grade as the freeway, a bridge (or, less often, an underpass) will be built for the crossing road. If the freeway is elevated, the crossing road will pass underneath it.

Minimum speed signs are sometimes posted (although increasingly rare) and usually indicate that any vehicle traveling slower than 40 mph (~65 km/h) should indicate a slower speed of travel to other motor vehicles by engaging the vehicle's four-way flashing lights. Alternative slower-than-posted speeds may be in effect, based on the posted speed limit of the highway/freeway.

**Ex. 7. Provide answers to the questions below.**

1. What is the first approach employed in the USA?
2. What mechanism was developed in Germany to enforce speed limits?
3. How do the authorities in São Paulo, Brazil reduce rush-hour traffic and pollution?
4. What is HOV Lane?
5. What is difference between freeway and expressway?

**Ex. 8. Replace the words in Russian with their appropriate equivalents in English.**

1. (Цель) of these policies is to (уменьшить) the number of vehicles on the roads and thus reduce (интенсивность движения в час пик).
2. (Знаки о ограничении минимальной скорости) are sometimes posted and usually indicate that any (транспортное средство) traveling slower than 40 mph (~65 km/h) should indicate a slower (скорость) of travel to other motor vehicles by engaging the vehicle's (аварийные огни).
3. In some European countries there are (компьютеризированные устройства измерения скорости) spread throughout the city, which will automatically (определяют) speeding drivers and take a photograph of the (номерной знак) which is later used (для предъявления квитанции).
4. The freeway is a divided (многополостная) highway (с полностью

контролируемым доступом) and (с дорожной развязкой в двух уровнях) (no stops). 5. Many countries of the world (ограничивают) the maximum (разрешенная скорость) on their roads. 6. The police patrol the streets and use special (оборудование) to detect any vehicle found to be in (нарушение скоростного режима). 7. Uncontrolled traffic occurs (при отсутствии разметки) and traffic control signals. 8. When a crossing road is (на том же уровне) as the freeway, (мост) or (тоннель, путепровод) will be built for the crossing road. 9. (Зеленая волна) or the Grüne Welle in Germany is an indicator that shows (оптимальная скорость движения) for the synchronized green lights along that corridor. 10. This rule is enforced by traffic police and also by hundreds of (стратегически расположенными) traffic cameras (поддерживаемые) computerized image-recognition systems that (печатает квитанция) to (нарушающим) drivers. 11. (Доступ) to freeways is fully controlled; (въезд и выезд с автострады) is permitted only at grade-separated interchanges. 12. In large cities, moving from one part of the city to another by means of ordinary streets and (проспектами) can be (отнимающим много времени) since traffic is often (замедляется) by at-grade (перекрестках), tight (поворотках), narrow marked lanes and lack of a minimum (ограничение скорости).

### Ex. 9. Fill in the blanks with the appropriate prepositions.

1. Several cities offer a public telephone service where citizens can arrange rides .... others depending ..... where they live and work. 2. Vehicles are not supposed to be driven ..... speeds which are higher than the posted maximum. 3. Freeways are large and wide roadways ..... limited access, that typically run ..... long distances ..... at-grade junctions. 4. Motor vehicle drivers wishing to travel ..... great distances ..... the city will usually take the freeways or expressways in order to minimize travel time. 5. If the freeway is elevated, the crossing road will pass ..... it. 6. .... business days ..... most cities, traffic congestion reaches great intensity ..... predictable times .....the day ..... the large number ..... vehicles using the road ..... the same time. 7. In some cities each vehicle has a specific day ..... the week ..... which it is forbidden ..... traveling the roads ..... rush hour.

**Ex. 10. Translate the sentences into Russian, paying attention to the different meanings of 'that'.**

1. Distinguishing by vehicle type ensures that the charge relates both to road damage costs and to environmental costs. 2. Manufacturers will use EDI (electronic data interchange) to link their distribution more closely with those of internal and external partners. 3. A balance needs to be struck between the requirements of the Customs authorities on the one hand and those of the transport operators on the other. 4. The great disadvantage of the bus is that it must share roads with other vehicle. 5. It is a well-known fact that men in general drive more than women. 6. One of the reasons why the original TIR system had to be modified was that in the early 1960's a new transport technique emerged: the marine container. 7. Transport is such a visible activity and such a politically sensitive one that is important public policy questions.

**Ex. 11. Translate the following sentences into Russian. Mind the use of the infinitive.**

1. Vehicles are not supposed to be driven at speeds which are higher than the posted maximum. 2. To enforce speed limits, two approaches are generally employed. 3. This encourages drivers to travel at the posted limit in order to minimize stopping. 4. Some cities adopt policies to reduce rush-hour traffic and pollution and encourage the use of public transportation. 5. The purpose of these policies is to reduce the number of vehicles on the roads and thus reduce rush-hour traffic intensity. 6. The tonnage transported is expected to decrease due to lighter products, and the average distance of transport is expected to increase due to the exploitation of scale economy in production costs. 7. For this traffic information to be of most value it must be accurate, up-to-the minute and communicated immediately to drivers already on the road. 8. The government does not intend the new charge to increase the overall cost of road freight haulage for domestic operators in the UK.

**Ex. 12. Translate the sentences into Russian. Mind the use of the modal verbs.**

1. If EU wants to have an integrated and prosperous economy, it has to build up an effective transport system. 2. An international haulage is cha-

racterized by the use of the so-called quota system meaning that haulers have to obtain the permit to be able to undertake international journeys. 3. Individual public transport users must be prepared to change buses. 4. Transport may not be the top energy-consuming sector but it still eats up a massive 30% of EC energy budgets. 5. Drastic measures should be taken to reduce the rate of 50,000 dead and 1,500,000 injured on European roads every year. 6. A set of high standard rules to protect the environment should be implemented for emissions, noise, clean engines, clean fuels, energy consumption, etc. 7. Small investments in the structure of some East European ports could improve the transport potential between East and West. 8. Enterprises that move freight to commercial facilities such as factories, stores and warehouses usually need to operate in coordination with operations and resource availability at receiving locations.

**Ex. 13. Give the main points of the text in 4-7 sentences. Use the following clichés:**

*The text deals with... . The author points out that... . Attention is drawn to the fact that... . It is pointed out that... . It should be noted that... . The author comes to the conclusion that... . I find the text rather/very... .*

**Ex. 14. Translate the following text into Russian. Use the dictionary if necessary.**

In Verona, Italy, in November 2008, the International Association of Public Transport (UITP) and the Italian Public Transport Association (ASSTRA) joined the forces with Veronafiere to launch a new biennial event dedicated to the topic of public transport in small and medium-sized cities and rural areas. "Often when we think about mobility and public transport, we automatically imagine a large city with crowded metros, trams and buses running at a high frequency. This however is only a part of the picture. Smaller cities have a different reality. They represent a significant part of the population and we should ensure that their mobility is given the attention it deserves," stated UITP Secretary General, Hans Rat.

Providing sustainable transport solutions in small cities and rural areas is not without its own special challenges. There are quite difficult

conditions for public transport operators, with lower and more heterogeneous demand than in large cities (fewer people dispersed over a large area). Travelers are less captive to public transport than in larger urban areas. Public transport is generally limited to surface transport, in particular buses, which usually run in traffic alongside private modes. In this context it is not surprising that public transport is seen as less attractive option, and that the level of public transport usage is relatively low. indeed this can be a vicious cycle. "A number of cities worldwide have proven that it is possible to break out of this vicious cycle and make public transport a preferred choice amongst many inhabitants of smaller cities," explained Mr. Rat.

Speed is a key factor to the success of public transport, and a number of smaller cities have shown that it is possible to perform well in this regard. 'Buses of high level of service' or 'bus rapid transit' can provide a popular high-profile and rapid mode that combines the speed and image of light rail with the cost and flexibility of the bus.

A solution to low demand that has been tried in a number of cities is demand-responsive transport. Faced with the difficult challenge of low passenger numbers and high costs of scheduled lines, the city of Delemont in Switzerland opted for the introduction of a demand-responsive bus line, which proved to be hugely successful. In fact, the implementation of this alternative transport service made it possible to identify and re-launch demand and thus to return to a vastly improved normal line service. Economies of scale and better customer service can be achieved where there is good integration between neighbouring areas within one region, for instance in terms of services and ticketing. For instance in the Austrian city Graz, the introduction of an integrated ticketing system for the region led to a reduction in the user cost of public transport. In Freiburg im Breisgau, in Germany a successful integrated ticketing system unites 75 towns and municipalities around Freiburg, serving a population of 625,000 inhabitants.

## Unit Five: Transport, Energy and Environment

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### Ex. 1. Mind the new words and expressions

1. to account for- объяснять, служить причиной
2. aquatic - водный
3. consumption - потребление, расход, издержки, затраты
4. controversial – спорный, сомнительный
5. feasible – вероятный, возможный, осуществимый
6. fluid – подвижный, изменчивый, нестабильный
7. to guzzle –потреблять что-либо чрезмерно
8. incentive – стимул, мотив
9. to offset – возмещать, компенсировать
10. particulate – твёрдая частица
11. payout – выплата
12. performance – эксплуатационные характеристики
13. to plug in - подключать, включать в сеть
14. powertrain - силовая передача, трансмиссия
15. regenerative braking - рекуперативное торможение
16. runoff – отходы(промышленные)
17. sprawl – разрастание города ( застройка прилегающих территорий)  
urban sprawl - неконтролируемая застройка прилегающих к городу территорий
18. soot – сажа, копоть
19. streamline – (гл) упрощать, модернизировать, рационализировать; (сущ) линия обтекания, линия воздушного потока, обтекаемая форма
20. utility – полезность, выгода
21. vehicle fleet – парк транспортных средств

### Ex. 2. Match the word with the appropriate definition.

**impact, pollution, fuel, environment, contribute, infrastructure, shortage**

1. a deficiency or lack in the amount needed, expected, or due; deficit.
2. the external surroundings in which a plant or animal lives, which tend to influence its development and behavior.

3. the force with which one thing hits another or with which two objects collide.
4. harmful or poisonous substances introduced into an environment.
5. to give (support, money, etc.) for a common purpose or fund.
6. any substance burned as a source of heat or power, such as coal or petrol.
7. the stock of fixed capital equipment in a country, including factories, roads, schools, etc., considered as a determinant of economic growth.

**Ex. 3. Match the words with the similar meaning.**

- |                  |                  |
|------------------|------------------|
| 1) pollution     | a) questionable  |
| 2) consumption   | b) use           |
| 3) controversial | c) motive        |
| 4) feasible      | d) effectual     |
| 5) incentive     | e) impulse       |
| 6) to offset     | f) waste         |
| 7) runoff        | g) to compensate |
| 8) impact        | h) possible      |
| 9) propulsion    | i) contamination |
| 10) efficient    | j) influence     |

**Ex. 4. Choose the right variant for each word combination.**

- |                                |  |
|--------------------------------|--|
| 1) traffic fluidity            | a) глобальное изменение климата                |
| 2) traffic flow                | b) КПД двигателя                               |
| 3) storage capacity of battery | c) водные экосистемы                           |
| 4) global climate change       | d) содержание углерода                         |
| 5) toxic runoff                | e) установка дорожных знаков                   |
| 6) aquatic ecosystems          | f) токсичные отходы                            |
| 7) carbon content              | g) обновление парка машин                      |
| 8) battery pack                | h) поток транспорта                            |
| 9) water supplies              | i) время в пути                                |
| 10) environmental regulations  | j) нормативы по окружающей среде               |
| 11) installing road signs      | k) выбросы газов, вызывающих парниковый эффект |
| 12) journey times              | l) блок батарей                                |
| 13) fleet renewal              | m) подвижность транспортно-                    |

- 14) lowering sulfur content
- 15) engine output
- 16) greenhouse gas emission
- 17) plant-based fuel

- го потока
- п) емкость аккумулятора
- о) водоснабжение
- р) снижение содержания серы
- q) растительное топливо

**Ex. 5. Look up the Russian equivalents of chemical terms in the dictionary.**

petroleum  
carbon monoxide  
hydrocarbon fuels  
nitrous oxides  
carbon dioxide

hydrogen  
sulfur  
CO<sub>2</sub> emissions  
fossil fuels  
gasoline-ethanol blend

**Ex. 6. Read the text attentively and learn how scientists try to solve ecological problems produced by transport.**

Transport is a major use of energy, and transport burns most of the world's petroleum. Transportation accounts for 2/3 of all U.S. petroleum consumption.

The transportation sector generates 82 percent of carbon monoxide and 56 percent of NO<sub>x</sub> emissions and over one-quarter of total US greenhouse gas emissions. Hydrocarbon fuels also produce carbon dioxide, a greenhouse gas widely thought to be the chief cause of global climate change, and petroleum-powered engines, especially inefficient ones, create air pollution including nitrous oxides and particulates (soot).

Although vehicles in developed countries have been getting cleaner because of environmental regulations, this has been offset by an increase in the number of vehicles and more use of each vehicle.

Other environmental impacts of transport systems include traffic congestion and automobile-oriented urban sprawl, which can consume natural habitat and agricultural lands. Toxic runoff from roads and parking lots can also pollute water supplies and aquatic ecosystems.

Alternative propulsion can reduce pollution. Low pollution fuels may have reduced carbon content, and thereby contribute less in the way of carbon dioxide emissions, and generally have reduced sulfur, since sulfur exhaust is a cause of acid rain. The most popular low-pollution fuels at this time are biofuels: gasoline-ethanol blends and biodiesel. Hydrogen



is an even lower-pollution fuel that produces no carbon dioxide, but producing and storing it economically is currently not feasible. Plug-in hybrids are energy-efficient vehicles that are going to be in the mass-production.

Another strategy is to make vehicles more efficient, which reduces pollution and waste by reducing the energy use. Electric vehicles use efficient electric motors, but their range is limited by either the extent of the electric transmission system or by the storage capacity of batteries. Electrified public transport generally uses overhead wires or third rails to transmit electricity to vehicles, and is used for both rail and bus transport. Battery electric vehicles store their electric fuel onboard in a battery pack. Another method is to generate energy using fuel cells, which may eventually be two to five times as efficient as the internal combustion engines currently used in most vehicles. Another effective method is to streamline ground vehicles, which spend up to 75% of their energy on air-resistance, and to reduce their weight. Regenerative braking is possible in all electric vehicles and recaptures the energy normally lost to braking, and is becoming common in rail vehicles. In internal combustion automobiles and buses, regenerative braking is not possible, unless electric vehicle components are also a part of the powertrain; these are called hybrid electric vehicles.

To achieve real environmental objectives, attention should be focused on all motor vehicles, not just new vehicles. Features such as on board diagnostics systems can monitor engine output, while regular technical inspection reveals if vehicles are well-maintained and operating under optimal conditions.

It takes about ten years for the national vehicle fleet to be renewed. Providing incentives to replace old gas-guzzling vehicles with newer, fuel-efficient models, for instance payouts to scrap old vehicles, would speed up the process of fleet renewal and help reduce carbon gas emissions.

Oil companies are improving their petrol and diesel products, such as lowering sulfur content, to increase fuel efficiency, comply with the new environmental regulations and respond to new developments in engine technology.

Alternative fuels such as natural gas produce lower CO<sub>2</sub> emissions.

On the other hand, some experts think that plant-based fuels may not provide the answer to CO<sub>2</sub> emissions because of their negative overall energy and environmental performance from cultivation to final use.

Motor vehicles achieve optimal performance where traffic flow is most fluid. Ways of improving traffic fluidity, reducing congestion and hence lowering fuel consumption are:

- building new road infrastructure where necessary;
- improving current infrastructure;
- installing road signs providing both directions and information on the road network to allow tourists to choose the best route.

In the United States, for example, Intelligent Transport Systems (ITS) are being installed in 75 of the largest urban areas, an investment that should help reduce journey times by 15%.

Shifting travel from automobiles to well-utilized public transport can reduce energy consumption and traffic congestion.

Walking and bicycling instead of traveling by motorized means also reduces the consumption of fossil fuels. While the use of these two modes generally declines as a given area becomes wealthier, there are some countries (including Denmark, Netherlands, Japan and parts of Germany, Finland and Belgium) where bicycling comprises a significant share of trips. Some cities with particularly high modal shares of cycling are Copenhagen (33%) and Groningen (50%). A number of other cities, including London, Paris, New York, Sydney, Bogotá, Chicago and San Francisco are creating networks of bicycle lanes and bicycle paths, but the value of such devices for utility cycling is highly controversial.

#### **Ex. 7. Answer the following questions.**

1. What is thought to be the chief cause of global climate change?
2. What are the other environmental impacts of transport system?
3. How can pollution be reduced?
4. What are the most popular low-pollution fuels?
5. What is another strategy to make vehicle more efficient?
6. What is the most effective way to generate energy?
7. How can real environmental objectives be achieved?
8. What are the major ways of improving traffic fluidity?
9. Do you know any other alternative ways to reduce the consumption of fossil fuels?

**Ex. 8. Substitute the words in Russian with their appropriate equivalents in English.**

1. Shifting travel from automobiles to well-utilized public transport can reduce (потребление энергии) and (пробки на дорогах). 2. Although vehicles in (развитых странах) have been getting cleaner because of (нормативы по окружающей среде), this has been (компенсировать) by an (увеличение) in the number of vehicles. 3. Ways of improving (подвижность трафика), (уменьшение заторов) and lowering (потребление топлива) include building new (дорожная инфраструктура), (улучшение) current infrastructure and (установка дорожных знаков). 4. (Характеристики) such as on board diagnostics systems can (контролировать) (КПД двигателя). 5. (Нефтяные) companies are (улучшают) their (бензиновый) and diesel products, such as (снижение содержания серы), to (увеличить эффективность топлива) and respond to new (разработки) in engine technology. 6. Hydrocarbon (топливо) produce carbon dioxide, a (парниковый газ) thought to be the chief (причина) of (глобальное изменение климата), and (бензиновые двигатели) create (загрязнение воздуха). 7. (Для достижения) real environmental (целей), (внимание) should focus on all (моторные транспортные средства), not just new vehicles. 8. Motor vehicles achieve optimal (эксплуатационных характеристик) where (транспортный поток) is most (оживленный).

**Ex. 9. Fill in the blanks with the appropriate prepositions.**

1. To achieve real environmental objectives, attention should be focused .... all motor vehicles. 2. Regular technical inspection reveals if vehicles are well-maintained and operating ..... optimal conditions. 3. Electric vehicles use efficient electric motors, but their range is limited ..... either the extent .... the electric transmission system or .... the storage capacity .... batteries. 4. Toxic runoff ..... roads can pollute aquatic ecosystems. 5. It takes .... ten years .... the national vehicle fleet to be renewed. 6. Installing road signs providing both directions and information ..... the road network allows tourists to choose the best route. 7. Shifting travel ..... automobiles ..... well-utilized public transport can reduce energy consumption and traffic congestion. 8. A number .... cities are creating

networks ..... bicycle lanes, but the value ..... such devices ..... utility cycling is highly controversial.

**Ex. 10. Translate the following sentences into Russian. Mind the use of the participle.**

1. All papers mentioned provided valuable insight into the car rental business. 2. The costs of idle drivers and wasted fuel of the trucks while wafting in the lines are all important, but in second place if compared to the storage costs. 3. Changes in the manufacturing flow process lead to shorter cycle times, meaning improved responsiveness and efficiency of demand to customers. 4. The containers used in the beginning of the 19<sup>th</sup> century were much smaller than those we see today. 5. Increasing volumes of traffic mean an increased safety risk. 6. The form of public transport chosen by the individual passenger depends on comfort, information and personal general preference for the form of transport. 7. The longer the journey time, the greater the disadvantage which passengers experience when changing buses. 8. Obviously, this deterioration is most marked in highly industrialized and densely populated areas.

**Ex. 11. Translate the following sentences into Russian. Mind the use of the passive voice.**

1. In mass production industries, most of the production plans are based on the estimation of market demand. 2. The project, Noise Innovation Program is being carried out by the Dutch Road Laboratory, which is expected to cost 55 million Euro. 3. Importance is placed on making use of each others' expertise and special equipment. 4. Voices are now heard calling for a significant and lasting way to reduce the consumption of energy by transport. 5. Transport is not viewed in isolation, but is closely linked with policies including those covering the environment, energy and safety. 6. Most seaport, inland waterways and pipelines networks are designed and realized specifically for movement of freight. 7. A comparison has been made between the transportation of containers by rail in the US and in Europe.

**Ex. 12. Translate the following sentences into Russian. Mind the use of the compound prepositions and conjunctions.**

1. Both passenger and goods transport have rapidly increased in the past years. 2. The poor state of road equipment, which has clearly been a cause of accidents, is not at all acceptable either in social or economic terms. 3. The management of car deployment is highly complex due to the connection of car availability across time, the station network and different car groups. 4. It is neither possible nor rational to develop a public transport system where all passengers can travel from door-to-door without exchanging buses. 5. Traffic signs and management systems are deteriorating due to intensive use, in part through damage and by poor maintenance. 6. A corporate station operates by means of staff and cars that are both part of the car rental company.

**Ex. 13. Give the main points of the text in 4-7 sentences. Use the following clichés:**

*The text is concerned with... . ... are considered . It should be noted that... . The fact that ... is stressed. It should be remembered that... . The author draws the following conclusion that... .*

**Ex. 14. Translate the following text into Russian. Use the dictionary if necessary.**

Cars and trucks are major sources of noise pollution in most cities. Most developed countries have had vehicle noise emission regulations since 1970s. Technological progress in engines and exhaust systems has made these vehicles considerably quieter. For example, the EU allowable noise level of a modern truck is approximately equivalent to that of the typical car in 1970. Nonetheless, the noise created by motorized transportation remains a significant impact on urban residents' health and quality of life. Noise is often cited as the main nuisance in urban areas, and traffic noise is the worst offender (a German study suggests that 65% of the population is adversely affected by road traffic noise, with 25% seriously affected).

As an indication, residential property values are measurably lower near noise-producing main roads, highways and railroad tracks. A recent study of Austrian schoolchildren found that the low but continuous noise

of everyday local traffic can cause stress in children and raise blood pressure, heart rates. The research, conducted by US and European researchers, was the first major study of the nonauditory health effects of typical ambient community noise.

Besides vehicle engines and exhaust pipes, much of the noise produced by vehicles today, especially in highway operations, results from the movement of vehicles through the air, and the contact of tires with the road. The former can be reduced by aerodynamic vehicle body designs (which also have the effect of improving fuel efficiency and reducing emission). The latter can be reduced through tire thread designs and improvements in pavement surface textures (which also have the effect of draining water more effectively and so reducing the risks of accident).

Noise barriers can also minimize the impact of vehicle noise. Aircraft are another important source of noise. Major airports typically handle hundreds of thousands of aircraft arrivals and departures per year. Most of these aircraft are jet-propelled. In most of the developed world, increasingly stringent aircraft engine noise regulations have succeeded in reducing the total noise exposure at most large airports. This is much less true, however, for the developing world. In many cases, aircraft that can no longer meet developed-world noise standards are sold to developing-world operators and continue their noisy existence.

## Unit Six: Transport in Cities

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### Ex. 1. Mind the new words and expressions

1. adverse - неблагоприятный, вредный
2. to affect - наносить вред, влиять
3. to cancel out - свести на нет
4. constraint - ограничение
5. to drive apart - отдалять друг от друга
6. dormitory - спальный пригород (район)
7. hazardous - опасный, рискованный
8. to hinder - мешать, препятствовать, задерживать, затруднять
9. intersection - перекресток, пересечение
10. log-jam - узкое место

11. node – узел, узловaя точка
12. to play down – преуменьшать, умялять
13. relevant – существенный, важный
14. substantial – существенный, важный, значительный
15. smoothing – сглаживание, выравнивание
16. threshold – порог; ворота, вход
17. throughput – пропускная способность

**Ex. 2. Match the word with the appropriate definition.**

**congestion, cost, agent, rush hour, interstate, transport, traffic jam.**

1. a person who acts on behalf of another person, group, business, government, etc.; representative.
2. the state of being overcrowded, especially with traffic or people.
3. the amount of money that you have to pay in order to buy, do or produce something.
4. a wide road that goes between states, on which cars can travel fast.
5. the time of day, when the roads, buses, trains etc are most full, because people are travelling to or from work.
6. the business or system of transporting goods or people.
7. a long line of vehicles on a road that cannot move or can only move very slowly.

**Ex. 3. Match the words with the similar meaning.**

- |                 |                              |
|-----------------|------------------------------|
| 1. hazardous    | a) prerequisite              |
| 2. substantial  | b) unfavourable              |
| 3. impact       | c) insufficient              |
| 4. inadequate   | d) crossing                  |
| 5. condition    | e) dangerous                 |
| 6. play down    | f) substantial               |
| 7. intersection | j) influence                 |
| 8. relevant     | h) underestimate, understate |
| 9. adverse      | i) essential, important      |

**Ex. 4. Choose the right variant for each word combination.**

- |                         |                         |
|-------------------------|-------------------------|
| 1) combined transport   | a) грузовой транспорт   |
| 2) commercial transport | b) сухопутные перевозки |

- |                             |   |
|-----------------------------|---|
| 3) cost of transport        | с) грузовой автомобильный транспорт   |
| 4) inland transport         | д) транспортные издержки  |
| 5) intercity transport      | е) внутренний транспорт, перевозки внутри страны  |
| 6) outwards transport       | ф) комбинированные перевозки  |
| 7) overland transport       | г) перевозки из страны  |
| 8) facilities for transport | h) международный транспорт  |
| 9) urban mass transport     | и) технологическая оснащённость транспорта  |
| 10) goods transport         | ж) транспорт для пассажирских и грузовых перевозок (грузовые автомобили, автобусы, троллейбусы) |
| 11) road freight transport  | к) городской общественный транспорт   |

**Ex. 5. Scan the text to find answers to the following questions.**

1. What is the origin of the term 'transportation'?
2. What aspects does the field of transportation have?
3. What is important in cities to help public transport perform properly?
4. What are the main problems of urban transport sector?

**Ex. 6. Read the text attentively for more information about different aspects of transport and transportation.**

Transport or transportation is the movement of people and goods from one place to another. The term is derived from the Latin *trans* ("across") and *portare* ("to carry"). Industries which have the business of providing equipment, actual transport, transport of people or goods and services used in transport of goods or people make up a large broad and important sector of most national economies, and are collectively referred to as transport industries.

Transport is more than just another sector of the economy. Transport is the core of society. It gives a structure to space and our concept of space. It shapes and reflects our ways of life and our cultures. It contributes to economic development, whereas the economy depends on goods transportation. The functioning of society largely depends on the quality



and design of the transportation system. A defective system will hurt society badly.

The field of transport has several aspects: infrastructure, vehicles, and operations. Infrastructure includes the transport networks (roads, railways, airways, waterways, canals, pipelines, etc.) that are used, as well as the nodes or terminals (such as airports, railway stations, bus stations and seaports).

An automobile is a wheeled passenger vehicle that carries its own motor. Different types of automobiles include cars, buses, trucks, and vans. Some include motorcycles in the category, but cars are the most typical automobiles. As of 2002 there were 590 million passenger cars worldwide (roughly one car for every ten people), of which 170 million in the U.S (roughly one car for every two people).

The automobile was thought of as an environmental improvement over horses when it was first introduced in the 1890s. In 2006, the automobile was recognized as one of the primary sources of world-wide air pollution and a cause of substantial noise pollution and adverse health effects.

Because of the much higher densities of people and activities, environmental, economic, public health, social and quality of life considerations and constraints are important in cities.

Urban transport has been led by professional transport planners and traffic experts. This has led in most cities to a substantial overbuilding of the road and supporting infrastructure, which has maximized throughput in terms of the numbers of vehicles and the speeds with which they pass through and move around in the built-up areas.

Too much infrastructure and too much smoothing for maximum vehicle throughput means that in many cities there is too much traffic and many - if not all - of the negative impacts that come with it.

The situation is most critical in the urban transport sector. Here, it is not just a matter of constraints on comfort and freedom to choose the means of transport – human safety and even freedom of movement are involved. Although urban networks are neither permanently nor totally log-jammed, congestion is a general phenomenon affecting all types of traffic and means of transport. Traffic jams – now inseparable from the urban scene – complicate the use of cars, buses and trams. Whatever the mode of transport, getting round in certain urban areas is becoming an increasingly time-consuming, difficult, uncomfortable, hazardous and

stressful activity. Congestion is a daily fact on major roads, motorways, and at important traffic intersections. Although statistics shows a fall in accidents, the absolute numbers involved are still unacceptably high. In reality, the theoretically faster ride on the motorway is frequently cancelled out by congestion. Moreover, safety conditions created to cope with fewer and slower vehicles are inadequate to deal with present conditions. The quality of freight and passenger transportation and the economic function are affected.

The most common negative factors here are:

**Lack of safety:** The safety aspect in transportation is often – and wrongly – played down. It is highly relevant, particularly to road transport. Every year, 50,000 people are killed and a further 1,500, 000 are injured on European roads. The economic cost aside, this is totally unacceptable in human and social terms. Although figures have fallen in the long term, the annual body count is still far too high. The quality of safety on European roads is low.

**Noise:** Transport is a prime source of noise and vibration. These factors grow fast with traffic volume. In certain areas the noise levels now hinder normal work and living. Hence, instead of uniting people, transport can actually drive them apart. Indeed, it has actually transformed some residential areas into human deserts, particularly where these adjoin major urban arteries, highways, railway lines and airports. The quality of life in dormitory towns is affected.

**Traffic density:** Paradoxically, above a certain threshold, traffic density also hinders social relations. Very busy roads through villages and built-up areas can make trip hazardous and actually restrict free movement.

**Ex. 7. Substitute the words in Russian with their appropriate equivalents in English.**

1. (Затор) is a daily fact on major roads, (автомагистралях), and at important traffic (перекрестках). 2. The quality of (безопасности) on European roads is low. 3. Getting round in certain (городских) areas is becoming an increasingly (отнимающий много времени), difficult, uncomfortable, (опасный) and stressful activity. 4. The (качество) of life in (спальных районах) is affected by. 5. The (качество) of (грузоперевозок) and passenger transportation and the economic function are (на-

носитя вред). 6. The (безопасность) aspect in transportation is highly (существенный) particularly to road transport. 7. In 2006, the automobile (был признан) as one of the primary sources of world-wide (загрязнение воздуха) and a (причина) of (существенное) noise pollution and (вредное влияние на здоровье). 8. Transport is a prime (источник шума) and vibration. 9. (Городские транспортные пробки) – now (неотделимы) from the (городских) scene – (усложняют) the use of cars, buses and trams. 10. In reality the theoretically faster ride on the motorway is frequently (сводится на нет) by congestion. 11. Too much infrastructure and too much smoothing for maximum (пропускной способности автомобилей) means that in many cities there is too much traffic and many negative (воздействия).

**Ex. 8. Fill in the blanks with the appropriate prepositions.**

1. Transport contributes ..... economic development, as the economy depends ..... good transportation. 2. Very busy roads ..... villages and built-up areas can make trip hazardous. 3. Transport or transportation is the movement ..... people and goods ..... one place ..... another. 4. Traffic jams are now inseparable ..... the urban scene and complicate the use ..... cars, buses and trams. 5. Safety conditions created to cope ..... fewer and slower vehicles are inadequate to deal ..... present conditions. 6. Paradoxically, ..... a certain threshold, traffic density hinders social relations. 7. Congestion is a daily fact ..... major roads, motorways, and ..... important traffic intersections 8. Transport has actually transformed some residential areas ..... human deserts.

**Ex 9. Translate the sentences into Russian, paying attention to the multifunctional word “term”.**

1. The economic cost aside, this is totally unacceptable in human and social terms. 2. Although figures have fallen in the long term, the annual body count is still far too high. 3. The term CIP - CARRIAGE AND INSURANCE PAID TO may be used for any mode of transport including multimodal transport. 4. The main goal of producers and sellers is to minimize costs for transportation and logistics and deliver goods to customers in possibly shorter terms. 5. Substantial overbuilding of the road and supporting infrastructure has maximized throughput in terms of the numbers of vehicles and the speeds with

which they pass through and move around in the built-up areas. 6. Different configurations have different advantages and disadvantages in terms of smoothness, manufacturing cost and shape characteristics.

**Ex. 10. Translate the sentences into Russian. Mind the different meanings of the verb *to be*.**

1. Efficiently operating transport networks in the former segmented European space-economy are critical success factors for the competitive edge of Europe. 2. Competitive efficiency is in the centre of current European transport policy. 3. There is a major more recent policy concern on the question whether transport will be devastating for environmentally sustainable development. 4. The purpose of production logistics is to ensure that each machine and workstation is being fed with the right product in the right quantity and quality at the right point of time. 5. It is also through the physical distribution process that the time and space of customer service become an integral part of marketing, thus it links a marketing channel with customers. 6. Transport is more than just another sector of the economy. 7. It is not just a matter of constraints on comfort and freedom to choose the means of transport. 8. Congestion is a daily fact on major roads, motorways, and at important traffic intersections. 9. Another strategy is to make vehicles more efficient, which reduces pollution and waste by reducing the energy use.

**Ex. 11. Translate the sentences into Russian. Mind the use of the verbs in passive voice.**

1. The automobile was thought of as an environmental improvement over horses when it was first introduced in the 1890s. 2. In 2006, the automobile was recognized as one of the primary sources of world-wide air pollution and a cause of substantial noise pollution and adverse health effects. 3. Urban transport has been led by professional transport planners and traffic experts. 4. Production logistics can be applied in existing as well as new plants. 5. The term is primarily intended to be used when goods are to be carried by rail or road, but it may be used for any mode of transport. 6. The term DDP - Delivered Duty Paid may be used irrespective of the mode of transport.

**Ex. 12. Give the main points of the text in 4-7 sentences. Use the following clichés:**

*The text deals with... . The author points out that... . Attention is drawn to the fact that... . It is pointed out that... . It should be noted that... . The author comes to the conclusion that... . I find the text rather/very... .*

**Ex. 13. Translate the following text into Russian. Use the dictionary if necessary.**

### **Traffic Control**

Nearly all roadways are built with devices meant to control traffic. Most notable to the motorist are those meant to communicate directly with the driver. Broadly, these fall into three categories: signs, signals or pavement markings. They help the driver navigate; they assign the right-of-way at intersections; they indicate laws such as speed limits and parking regulations; they advise of potential hazards; they indicate passing and no passing zones; and otherwise deliver information and to assure traffic is orderly and safe.

200 years ago these devices were signs, nearly all informal. In the late 19<sup>th</sup> century signals began to appear in big cities at a few highly congested intersections. They were manually operated, and consisted of semaphores, flags or paddles, or in some cases colored electric lights, all modeled on railroad signals. In the 20<sup>th</sup> century signals were automated, at first with electromechanical devices and later with computers. Signals can be quite sophisticated: with vehicle embedded in the pavement, the signal can control and coordinate the turning movements of heavy traffic in the most complex of intersections. In the 1920s traffic engineers learned how to coordinate signals along a thoroughfare to increase its speeds and volumes. In the 1980s, with computers, similar coordination of whole networks became possible.

In the 1920s movement markings were introduced. Initially they were used to indicate the road's centerline. Soon after they were coded with information to aid motorists in passing safely. Later, with multilane roads they were used to define lanes. Other uses, such as indicating permitted turning movements and pedestrian crossing soon followed.

In the 20<sup>th</sup> century traffic control devices were standardized. Before then every locality decided on what its devices would look like and where they would be applied. This could be confusing, especially to traffic from outside the locality. In the United States standardization was first taken at the state level, and late in the century at the federal level. Each country has a Manual of Uniform Traffic Control Devices (MUTCD) and there are efforts to blend them into a worldwide standard.

Besides signals, signs and markings, other forms of traffic control are designed and built into the roadway. For instance, curbs and rumble strips can be used to keep traffic in a given lane and median barriers can prevent left turns and even U-turns.

## **Unit Seven: Transportation and Logistics**

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### **Ex. 1. Mind the new words and expressions**

1. auction – аукцион, торг; продавать с аукциона;
2. to accomplish – выполнять, совершать
3. carrier – транспортное средство, перевозчик
4. destination – пункт назначения;
5. to facilitate – содействовать, способствовать, облегчать
6. implementation – выполнение, реализация, внедрение
7. inventory – материально-техническая база
8. item – продукт, изделие, отдельный предмет, пункт, статья
9. life cycle – жизненный цикл (изделия), период эксплуатации
10. logistics – материально-техническая база
11. notably – особенно, в особенности
12. probability – вероятность. возможность
13. repositioning – изменение положения, переустановка
14. reverse auction – обратный аукцион (аукцион, в котором участвует один покупатель и несколько конкурирующих продавцов)
15. simultaneously – одновременно, совместно
16. supply chain – логистическая цепочка, цепочка поставок, сеть поставок
17. transaction – сделка, соглашение
18. warehousing – складирование

**Ex. 2. Match the word with the appropriate definition.**

**consumer, producer, auction, client, contract, carrier**

1. a person or business enterprise that generates goods or services for sale.
2. a person, thing, or organization employed to carry goods, passengers, etc.
3. someone who gets services or advice from a professional person, company or organization.
4. someone who buys and uses products and services.
5. an official agreement between two or more people, stating what each will do.
6. a public sale of goods or property, esp. one in which prospective purchasers bid against each other until the highest price is reached.

**Ex. 3. Match the words and word combinations with the similar meaning.**

- |                   |                     |
|-------------------|---------------------|
| 1) goal           | a) usual            |
| 2) to facilitate  | b) partaker         |
| 3) to benefit     | c) rivalry          |
| 4) simultaneously | d) at the same time |
| 5) decrease       | e) forwarder        |
| 6) conventional   | f) aim              |
| 7) competition    | g) to profit        |
| 8) participant    | h) realization      |
| 9) implementation | j) to assist        |
| 10) carrier       | k) decline          |
| 11) transaction   | l) storehouse       |
| 12) warehouse     | m) deal             |

**Ex. 4. Choose the right variant for each word combination.**

- |   |   |
|---|---|
| 1) open and fair competition            | a) в возможно короткие сроки            |
| 2) to minimize costs                    | b) реализация новых технологий          |
| 3) unprecedented amount of participants | c) поставка товаров до места назначения |
| 4) in possibly shorter terms            | d) снизить затраты                      |
| 5) at possibly lower costs              | e) в данной ситуации                    |

- 6) implementation of new technologies
- 7) deliver the goods to the destination
- 8) decrease of costs of transportation
- 9) in the current situation
- 10) supply chain

- f) снижение затрат на перевозки
- g) открытая и честная конкуренция
- h) беспрецедентное количество участников
- i) цепочка поставок
- j) по наименьшей цене

**Ex. 5. Look up the meaning of the word combination in a dictionary.**

At large...and...in particular  
 It is worthy to note  
 As a rule  
 As a result  
 It is necessary to point out

Consequently  
 Moreover  
 Furthermore  
 Primarily  
 It is logical to wonder

**Ex. 6. Scan the text to find answers to these questions.**

1. What does logistics management do?
2. What are the main functions of a qualified logistician?
3. What are the goals of producers and sellers in transportation?
4. What are the advantages of electronic reverse auctions compared to conventional auctions?
5. What is the effect of open competition in electronic reverse auctions?

**Ex. 7. Read the text attentively and say what you have learnt about transportation, logistics and electronic auctions.**

Logistics is the art and science of managing and controlling the flow of goods, energy, information and other resources like products, services and people from the source of production to the marketplace. It is difficult or nearly impossible to accomplish any international trading, global export/import processes, international repositioning of raw materials/products and manufacturing without a professional logistical support. It involves the integration of information, transportation, inventory, warehousing, material handling, and packaging. The operating responsibility of logistics is the geographical repositioning of raw materials,



work in process and finished inventories where required at the lowest cost possible.

Logistics is an idea considered to have transformed from the military's need to supply them as they moved from their base to a forward position.

Logistician is the profession in the logistics & transport sectors, including sea, air, land and rail modes.

Logistics management is that part of the supply chain which plans, implements and controls the efficient, effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers' requirements. A professional working in the field of logistics management is called a logistician.

Supply Chain can be defined as having the right item in the right quantity at the right time at the right place for the right price and is the science of process and incorporates all industry sectors. The goal of logistics work is to manage the fruition of project life cycles, supply chains and resultant efficiencies.

The main functions of a qualified logistician include inventory management, purchasing, transportation, warehousing, consultation and the organizing and planning of these activities. Logisticians combine a professional knowledge of each of these functions so that there is a coordination of resources in an organization. There are two fundamentally different forms of logistics. One optimizes a steady flow of material through a network of transport links and storage nodes. The other coordinates a sequence of resources to carry out some project.

\*\*\*\*\*

Traditionally, logistics and transportation are extremely important for successful operating of any company as well as the whole market at large. As a rule, the main goal of producers and sellers, as well as buyers, is to minimize costs for transportation and logistics and deliver goods to customers in possibly shorter terms. In the current situation, a variety of tools is used to achieve this goal. Innovative technologies, especially IT, computing, Internet, etc., are playing increasingly more important role and are commonly used to facilitate transportation and logistics.

As a result, auctions, using an electronic reverse auction platform, are growing to be popular and widely spread. It is necessary to point out that electronic reverse auctions have a lot of advantages compared to conven-

tional auctions. Primarily, electronic reverse auctions may lead to a successful cooperation between producers of different goods to transport to various destinations and carriers. It is logical to wonder what both producers and carriers benefit from such cooperation which may lead to increasing of speed of transactions since producers receive not only the possibility to sell their goods but, at the same time, they have got a possibility to find a carrier that can deliver the goods to the destination. In such a way, two operations could be run simultaneously that seems to be extremely beneficial for sellers, i.e. producers.

Furthermore, the reverse auction provides producers with the possibility to choose from a large amount of carriers. In such a situation, the essential conditions for open and fair competition are created since producers can choose carriers on the basis of objective principles identical for all participants of the auction. On the other hand, carriers can supply their services to a large number of sellers and, consequently, can also easily find their potential customer.

Moreover, the open competition stimulates carriers to the improvement of their services and it may also result in certain decrease of costs of transportation for producers. Implementation of new technologies, notably electronic reverse auctions leads to the implementation of high technologies in transportation and logistics at large. It also opens new perspectives for reverse auctions since, being based on electronic platform, they can involve unprecedented amount of participants. Consequently, the probability that producers will find their clients and carrier, which will transport the goods to the destination at possibly lower costs, increases.

Thus, taking into account all above mentioned, it is possible to conclude that the implementation of electronic reverse auctions leading to better cooperation between producers and carriers perfectly demonstrates the possibilities of new technologies applied to business at large and transportation and logistics in particular.

**Ex. 8. Substitute the words in Russian with their appropriate equivalents in English.**

1. Logistics management is that part of the (цепочки поставок) which implements and controls (прямой и обратный поток товаров) between the point of origin and (пунктом потребления) in order to meet (запросы потребителей). 2. It is necessary to point out that electronic reverse

auctions have a lot of (преимуществ) compared to (обычный) auctions. 3. The main (цель) is to minimize (затраты) for transportation and logistics and deliver goods to customers (в возможно короткие сроки). 4. The main functions of a qualified (логиста) include inventory management, (покупку), transportation, (складирование), consultation and the organizing and planning of these activities. 5. (Внедрение) of electronic reverse auctions leads to better (сотрудничество) between producers and carriers. 6. The open (конкуренция) stimulates carriers to the (улучшение) of their services and it may also result in certain (уменьшение расходов) of transportation for producers. 7. Two operations could be run (одновременно) that seems to be extremely (выгодно) for sellers. 8 The essential conditions for (открытая и честная) competition are created. 9. (Перевозчики) can (поставлять свои услуги) to a large number of sellers and, (следовательно), can also easily find their potential (потребителя). 10. Professional (логистическая поддержка) involves the integration of information, transportation, (материально-техническая база), material handling, and packaging. 11.(Логистическая цепочка)can be defined as having the (соответствующий предмет) in the ( соответствующем количестве) at the (соответствующее время) at the (соответствующем месте) for the ( соответствующую цену) and is the science of process and incorporates all industry sectors. 12. It is difficult or nearly (невозможно) to (совершать) any international (торговлю) global export/import process, international (изменения положения) of (сырьевых) materials and manufacturing without professional (логистическая поддержка).

#### **Ex. 9. Fill in the blanks with the appropriate prepositions.**

1. The reverse auction provides producers .... the possibility to choose ..... a large amount of carriers. 2. Carrier will transport the goods .... the destination ..... possibly lower costs. 3. Producers can choose carriers ..... the basis of objective principles identical ..... all participants of the auction. 4. Both producers and carriers benefit ..... such cooperation. 5. Logistics is the art and science of managing and controlling the flow of goods... the source of production ... the marketplace. 6 It is difficult to accomplish any international trading .... a professional logistical support.. 7. Logistics management plans the flow and storage of goods ... the point of origin and the point of consumption. 8. Supply Chain can be

defined as having the right item ... the right quantity ... the right time ... the right place ... the right price.

**Ex. 10. Choose the right variant for each word combination.**

- |                                      |   |
|--------------------------------------|---|
| 1) available inventory               | a) сезонный запас   |
| 2) book inventory                    | b) запасы в пути (на момент учета находящиеся в процессе перевозки)   |
| 3) finished goods inventory          | c) максимальный запас (сумма текущих, подготовительных, страхового запасов при превышении которых образуются излишки) |
| 4) lot-size inventory                | d) уровень запасов  |
| 5) replenishment of inventories      | e) запас вспомогательных материалов   |
| 6) projected inventory turnover rate | f) запасы готовой продукции   |
| 7) supply inventory                  | g) наличные запасы  |
| 8) taking inventory                  | h) затраты на формирование и хранение запасов   |
| 9) target inventory level            | i) прогнозируемый коэффициент оборачиваемости запасов   |
| 10) seasonal inventory               | j) восстановление уровня запасов  |
| 11) in-transit inventory             | k) инвентарный учет товарно-материальных запасов)   |
| 12) inventory and valuation policy   | l) страховой полис с описью и оценкой   |
| 13) inventory balance                | m) текущие запасы   |
| 14) inventory carrying charge rate   | n) стоимость хранения запасов   |
| 15) inventory carrying costs         | o) проведение инвентаризации  |

**Ex. 11. Translate the following sentences into Russian. Mind the use of the infinitive.**

1. In order to respond to random orders from consumers and to stabilize the production process, inventories are maintained at sections of the pro-

duction process. 2. The ability to communicate almost instantaneously, large amounts of information and data to suppliers, customers and transport providers has allowed firms to operate with increased efficiency. 3. It is critical to predict how a particular shift in logistics will affect the demand for transport services and how a shift in transport production will affect the infrastructure system. 4. To keep costs down and avoid an increase in the number of trucks on the roads, shipments must be consolidated. 5. For the European economy to operate as a single market there has to be presence of common transport policy. 6. The purpose of the cooperation is to make it possible to support research and development activities on road traffic noise of common interest to the two parties. 7. To protect their own market share the national companies will not complete with other smaller and regional companies.

**Ex. 12. Translate the sentences into Russian, paying attention to the emphatic construction.**

1. It is a transport logistic system based on new transport technology that ensures fast and safe movement of goods at least costs. 2. It was not until the 1980's that environmental impacts were considered. 3. It is the aim of the Danish Road Institute that pavements cause as little noise as possible for the sake of the neighbors and yet are safe to use for the road users. 4. It was in the early 1900s that closed container boxes designed for movement between road and rail were adopted. 5. It was Harvard University economist Benjamin Chinitz predicted that containerization would benefit New York by allowing it to ship industrial goods produced there more cheaply to the Southern United States than to other areas. 6. It was not until the 1950s that containers started to revolutionize freight transportation.

**Ex. 13. Give the main points of the text in 4-7 sentences. Use the following clichés:**

*The text is about... . It is shown that... . In the opinion of the author it is ... . Of special interest is his argument that... . The author concludes by saying that... .*

**Ex. 14. Translate the following text into Russian. Use the dictionary if necessary.**

Multimodal transport is one of highly effective and modern ways of facilitating movement of imports and exports. It is a transport logistic system based on new transport technology that ensures fast and safe movement of goods at least costs.

Facilitation of trade and transport sectors calls for procedural, legal and institutional reforms to simplify, standardise and harmonise procedures and documentation that will help to achieve movement of goods at a minimum cost and time. This covers a wide spectrum of activities including human resource development, physical infrastructures, and the use of new transport and information technologies. Multimodal transport is one of highly effective and modern ways of facilitating movement of imports and exports. It is a transport logistic system based on new transport technology that ensures fast and safe movement of goods at least costs.

The United Nations Convention on International Multimodal Transport of Goods of 1980 defines multimodal transport as " the carriage of goods by at least two different modes of transport on the basis of a multimodal transport contract from a place in one country at which the goods are taken in charge by the multimodal transport operator (MTO) to a place designated for delivery situated in a different country". The definition has clearly identified four basic characteristics of multimodal transport such as the use at least two modes of transport, transfer of goods between two countries, issuance of a transport contract and the performance by a multimodal transport contractor taking in charge of whole movement of cargo.

A multimodal transport contract is a contract whereby a multimodal transport operator undertakes against payment of freight, to perform, or to procure the performance of international multimodal transport. This is performed through the issuance of an MTD as an evidence of the multimodal transport contract, taking in charge of the goods with an undertaking by the MTO, to deliver the goods in accordance with the contract terms.

## Unit Eight: FIATA

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### Ex.1. Mind the new words and expressions.

1. barcode – штрих код
2. to bring forward – выдвигать ( предложение)
3. dissemination, - распространение
4. distribution - распространение
5. distinctive – отличительный, характерный
6. distinguishable – различимый, отличимый
7. to enhance – увеличивать, улучшать, усиливать
8. to evaluate – оценивать
9. to familiarise – ознакомлять
10. forwarder (forwarding agent) –экспедитор, перевозчик
11. freight - груз, фрахт
12. HQ headquarter - штаб
13. institute – (зд.) ассоциация
14. liability insurance – страхование ответственности
15. logo (сокр.от logotype) – логотип, фирменный или товарный знак
16. objective, target – цель
17. to submit – представить на рассмотрение
18. synergy – совместная деятельность (успешная)

### Ex. 2. Match the word with the appropriate definition.

**container, logistics, agent, toll, carrier, barcode**

1. a person or company that represents another person or company especially in business.
2. a group of thin and thick lines printed on products you buy in a shop and which a computer can read. It contains information such as the price.
3. a company that moves goods or passengers from one place to another.
4. a large cargo-carrying standard-sized box that can be loaded from one mode of transport to another.
5. the management of materials flow through an organization, from raw materials through to finished goods.
6. the money you have to pay to use a particular road, bridge, etc.

**Ex. 3. Match the words with the similar meaning.**

- |                       |                    |
|-----------------------|--------------------|
| 1. benefit            | a) appreciate      |
| 2. advisor            | b) expeditor       |
| 3. objective          | c) load, cargo     |
| 4. freight            | d) association     |
| 5. freight dispatcher | e) trade mark      |
| 6. freight forward    | f) shipper         |
| 7. distribution       | g) distinguishing  |
| 8. bring forward      | h) advantage       |
| 9. distinctive        | i) realization     |
| 10. logo              | j) goal, target    |
| 11. implementation    | k) dissimilation   |
| 12. forwarder         | l) consultant      |
| 13. institute         | m) come forward    |
| 14. evaluate          | n) freight prepaid |

**Ex. 4. Choose the right variant. Pay attention to the use of the word "freight".**

- |                             |                                |
|-----------------------------|--------------------------------|
| 1. freight advance          | a) условие об оплате           |
| 2. freight agent            | b) товарная узловая станция    |
| 3. freight charge           | c) грузооборот                 |
| 4. freight clause           | d) доход от грузовых перевозок |
| 5. freight dispatcher       | e) аванс фрахта                |
| 6. freight flow             | f) обратный фрахт              |
| 7. freight home             | g) условие об оплате фрахта    |
| 8. freight-handling company | h) грузоотправитель            |
| 9. freight note             | i) грузопоток                  |
| 10. freight rate            | j) агент по фрахтовке операций |
| 11. freight receiver        | k) стоимость перевозки грузов  |
| 12. freight release         | l) грузовой парк               |
| 13. freight revenue         | m) фирма грузообработчик       |
| 14. freight terminal        | n) разрешение на выдачу груза  |
| 15. freight turnover        | o) фрахтовая ставка            |
| 16. freight yard            | p) грузополучатель             |



**Ex. 5. Scan the text to give the answers to the following questions.**

1. What does the abbreviation FIATA stand for?
2. What does FIATA represent today?
3. What are the main objectives of FIATA?
4. Why has FIATA created several documents and forms?
5. There are five Advisory Bodies of FIATA, aren't they? Name them.

**Ex. 6. Read the text attentively for more information about FIATA.**

FIATA, in French "Fédération Internationale des Associations de Transitaires et Assimilés", in English "International Federation of Freight Forwarders Associations" was founded in Vienna/Austria on May 31, 1926.

FIATA, a non-governmental organisation, represents today an industry covering approximately 40,000 forwarding and logistics firms, also known as the "Architects of Transport", employing around 8-10 million people in 150 countries.

FIATA has consultative status with the Economic and Social Council (ECOSOC) of the United Nations, the United Nations Conference on Trade and Development (UNCTAD), and the UN Commission on International Trade Law (UNCITRAL).

It is recognised as representing the freight forwarding industry by many other governmental organisations, governmental authorities, private international organisations in the field of transport such as the International Chamber of Commerce (ICC), the International Road Transport Union (IRU), the World Customs Organization (WCO), the World Trade Organization (WTO), etc.

In summary FIATA is the largest non-governmental organisation in the field of transportation. Its influence is worldwide.

**Objectives**

FIATA's main objectives are: to unite the freight forwarding industry worldwide; to represent, promote and protect the interests of the industry by participating as advisors or experts in meetings of international bodies dealing with transportation; to familiarise trade and industry and the public at large with the services rendered by freight forwarders through the dissemination of information, distribution of publications, etc.; to improve the quality of services rendered by freight forwarders by developing and promoting uniform forwarding documents, standard trading conditions, etc.;

to assist with vocational training for freight forwarders, liability insurance problems, tools for electronic commerce including electronic data interchange (EDI) and barcode.

### **Congresses**

Each year, FIATA holds a World Congress. This international event brings together the freight forwarding industry and transport world. It serves to conduct the business of the Federation, is a social occasion and last but not least acts as a meeting place to conduct business. Participation is between 800 - 1500 persons.

Organisation FIATA is structured into Institutes, Advisory Bodies, and Working Groups each in their turn dealing with every aspect that affects the international movement of freight.

The Institutes, which usually meet twice a year, carry out the technical work of the Federation. Currently FIATA has three, namely the Airfreight Institute (AFI); Customs Affairs Institute (CAI); Multimodal Transport Institute (MTI).

Some of the Institutes have some permanent Working Groups; e.g. the MTI has three for Sea, Rail and Road Transport, and the AFI one for IATA matters. Working Groups report to their respective Institutes and meet according to necessity.

For matters that affect the whole of the freight forwarding industry there are five Advisory Bodies:

- Advisory Body Dangerous Goods (ABDG)
- Advisory Body Information Technology (ABIT)
- Advisory Body Legal Matters (ABLM)
- Advisory Body Public Relations (ABPR)
- Advisory Body Vocational Training (ABVT)

They co-operate with the Institutes and Working Groups, if required, and meet according to necessity.

### **Regional Meetings**

FIATA National Association members are divided into 4 regions worldwide. These are: Africa/Middle East, Americas, Asia/Pacific, Europe.

Each Region meets twice every year; during the HQ Session in Zurich and at the FIATA World Congress. The prime target of these regional meetings is to bring forward the specific issues of regional concern and interest, and if necessary submit them to the Institutes and Advisory Bodies of FIATA, the intention being to identify and assist regional members

in solving the local difficulties. Another important topic is to gain synergies between the member countries of the regions and to import and export these benefits to other national associations.

### **Documents**

FIATA has created several documents and forms to establish a uniform standard for use by freight forwarders worldwide. The documents are easily distinguishable as each has a distinctive colour and carries the FIATA logo.

- FIATA FCR (Forwarders Certificate of Receipt) - сертификат экспедитора о получении груза

- FIATA FCT (Forwarders Certificate of Transport) - сертификат экспедитора о транспортировке груза

- FWR (FIATA Warehouse Receipt) – складское свидетельство

- FBL (negotiable FIATA Multimodal Transport Bill of Lading) - мультимодальный транспортный коносамент

- FWB (non-negotiable FIATA Multimodal Transport Waybill)- не-оборотная мультимодальная транспортная накладная

- FIATA SDT (Shippers Declaration for the Transport of Dangerous Goods) - декларация грузоотправителя о транспортировке опасных грузов

- FIATA SIC (Shippers Intermodal Weight Certificate) - интермодальный весовой сертификат грузоотправителя

- FFI (FIATA Forwarding Instructions) – форма экспедиторских инструкций

FIATA documents have an excellent reputation and are recognised as documents of tradition and trust. They have greatly contributed in the past to the facilitation of international exchanges and will continue in the future to be valuable instruments in the service of world trade.

### **Ex. 7. Substitute the words in Russian with their appropriate equivalents in English.**

1. FIATA's main (цель) is to unite (транспортно экспедиционную) industry worldwide. 2. FIATA is structured into Institutes, (консультативные органы) and working groups dealing with the international (движение грузов). 3. FIATA assists with (проблемами страховой ответственности) and electronic (обмен данными) and (штрих кодами). 4. FIATA documents are easily (отличимые) as each carries the FIATA (фирменный знак) at the head of the page. 5. The prime

(цель) of the HQ Session held in Zurich twice every year is to (выдвигать) specific (вопросы) and (предоставлять на рассмотрение) them to (консультативные органы) of FIATA. 6. FIATA tries to (улучшить) the quality of services rendered by (экспедиторами) by promoting uniform (экспедиторские) documents. 7. FIATA documents are recognized as documents of tradition and (доверие) which have contributed to the (облегчение международных обменов).

**Ex. 8. Fill in the blanks with the suitable prepositions.**

1. FIATA represents and protects the interests .... the industry .... participating as advisors or experts .... meetings of international bodies dealing ..... transportation. 2. FIATA is structured ..... Institutes which usually meet twice per year and carry ..... the technical work of the Federation. 3. The prime target..... regional meetings is to bring ..... and submit ..... the Institutes the specific issues of regional concern and interest. 4. FIATA documents have contributed .....the facilitation of international exchanges. 5. FIATA has consultative status ..... ECOSOC of the UN and the UN Commission ..... International Trade Law. 6. FIATA aims to familiarize trade and industry..... the services rendered ..... freight forwarders through the dissemination ..... information, distribution ..... publications.

**Ex. 9. Make up questions, the answers to which are given in the right-hand column.**

What for....?

To establish a uniform standard for use by freight forwarders worldwide

Where and when...?

In Zurich twice every year

How many...?

40 000 forwarding firms

When and where...?

In Vienna in 1926

What organizations...?

ICC, IRU, WCO

What... for?

Its influence is worldwide

**Ex. 10. Match the right variants.**

1. Y.A.R. - York-Antwerp Rules

a) по доверенности

2. w., wt. - weight

b) прошлого месяца

3. urgt. - urgent

c) ограничительная деловая

- |  |   |
|--|---|
| 4. ult. - ultimate                         | практика                                    |
| 5. UCC - Uniform Commercial Code           | d) вес                                      |
| 6. SNA - System of National Accounts       | e) международное депозитарное свидетельство |
| 7. RBP - Restrictive Business Practice     | f) единый коммерческий кодекс               |
| 8. per pro. - per procurationem            | g) совместное предприятие                   |
| 9. n.r.t. - net register tonnage           | h) Йорк-Антверпенские правила               |
| 10. JV - Joint Venture                     | i) эмбарго, запрет                          |
| 11. IDR - International Depository Receipt | j) срочный                                  |
| 12. emb. - embargo                         | k) система национальных счетов              |
|  | l) чистый регистровый тоннаж                |

**Ex. 11. Translate the following sentences into Russian. Mind the use of the infinitive.**

- The aim of the advanced logistics is to decrease the costs of production and distribution.
- The management system or the organization responsible for the business transactions within the production system and the physical distribution has to be adapted to the new concept.
- High-quality road transport is expected to increase while general haulage will decrease.
- The success of express transport is likely to be more dependent on the quality of the service offered than on speed.
- Automatic vehicle identification will be used to help track vehicles and shipments.
- The charge is expected to vary according to distance travelled, vehicle type and road type.
- In order to reduce the extent of feeling unsafe on journeys by public transport it may be necessary to implement measures.
- Logistics is the management of the flow of goods, information and other resources, including energy and people, between the point of origin and the point of consumption in order to meet the requirements of consumers.

**Ex. 12. Translate the sentences into Russian. Mind the use of the modal verbs.**

1. A balance needs to be struck between the requirements of the Customs authorities on the one hand and those of the transport operators on the other. 2. Transport is such a visible activity and such a politically sensitive one that important public policy questions. 3. Sweden has to separate companies, one for the rail infrastructure and one for the rolling stock and operations. 4. Quality programmes have to be as important in distribution as they are now for leading manufacturing companies. 5. The transport operator has to be able to predict and keep to time windows at both pick-up and delivery locations. 6. Users also can create shipment status reports and then electronically e-mail them to anyone who needs to know.

**Ex. 13. Translate the sentences into Russian. Mind the use of emphatic constructions.**

1. It is the aim of the Danish Road Institute that pavements cause as little noise as possible for the sake of the neighbors and yet are safe to use for the road users. 2. It is also through the physical distribution process that the time and space of customer service becomes an integral part of marketing, thus it links a marketing channel with customers. 3. It is a transport logistic system based on new transport technology that ensures fast and safe movement of goods at least costs. 4. It is the emergence of intermodalism that has been brought about in part by technology and requires management units for freight such as containers, swap bodies, pallets or semi-trailers. 5. It is the container that limits the risks for goods it transports because it is resistant to shocks and weather conditions.

**Ex. 14. Give the main points of the text in 4-7 sentences. You may use the following clichés:**

*The text is devoted to ... . Attention is drawn to the fact that... . It is pointed out that... . It should be noted that... . The author concludes by saying that ... . I find the text rather/very... .*

**Ex. 15. Translate the following text into Russian. Use the dictionary if necessary.**

**CFR - COST AND FREIGHT (... named port of destination).** "Cost and Freight" means that the seller must pay the costs and freight necessary to bring the goods to the named port of destination but the risk of loss of or damage to the goods, as well as any additional costs due to events occurring after the time the goods have been delivered on board the vessel, is transferred from the seller to the buyer when the goods pass the ship's rail in the port of shipment. The CFR term requires the seller to clear the goods for export. This term can only be used for sea and inland waterway transport. When the ship's rail serves no practical purpose, such as in the case of roll-on/roll-off or container traffic, the CPT term is more appropriate to use.

**CIF - COST, INSURANCE AND FREIGHT (... named port of destination).** Cost, Insurance and Freight" means that the seller has the same obligations as under CFR but with the addition that he has to procure marine insurance against the buyer's risk of loss of or damage to the goods during the carriage. The seller contracts for insurance and pays the insurance premium. The buyer should note that under the CIF term the seller is only required to obtain insurance on *minimum coverage*. The CIF term requires the seller to clear the goods for export. This term can only be used for sea and inland waterway transport. When the ship's rail serves no practical purposes such as in the case of roll-on/roll-off or container traffic, the CIP term is more appropriate to use.

**FCA - FREE CARRIER (... named place).** "Free Carrier" means that the seller fulfils his obligation to deliver when he has handed over the goods, cleared for export, into the charge of the carrier named by the buyer at the named place or point. If no precise point is indicated by the buyer, the seller may choose within the place or range stipulated where the carrier shall take the goods into his charge. When, according to commercial practice, the seller's assistance is required in making the contract with the carrier (such as in rail or air transport) the seller may act at the buyer's risk and expense. This term may be used for any mode of transport, including multimodal transport. "Carrier" means any person who, in a contract of carriage, undertakes to perform or to procure the performance of carriage by rail, road, sea,

air, inland waterway or by a combination of such modes. If the buyer instructs the seller to deliver the cargo to a person, e.g. a freight forwarder who is not a "carrier", the seller is deemed to have fulfilled his obligation to deliver the goods when they are in the custody of that person. "Transport terminal", means a railway terminal, a freight station, a container terminal or yard, a multi-purpose cargo terminal or any similar receiving point. "Container" includes any equipment used to unitise cargo, e.g. all types of containers and/or flats, whether ISO accepted or not, trailers, swap bodies, ro-ro equipment, igloos, and applies to all modes of transport.

**FAS - FREE ALONGSIDE SHIP (... named port of shipment).** "Free Alongside Ship" means that the seller fulfils his obligation to deliver when the goods have been placed alongside the vessel on the quay or in lighters at the named port of shipment. This means that the buyer has to bear all costs and risks of loss of or damage to the goods from that moment. The FAS term requires the buyer to clear the goods for export. It should not be used when the buyer cannot carry out directly or indirectly the export formalities. This term can only be used for sea or inland waterway transport.

**FOB - FREE ON BOARD (... named port of shipment).** "Free on Board" means that the seller fulfils his obligation to deliver when the goods have passed over the ship's rail at the named port of shipment. This means that the buyer has to bear all costs and risks of loss of or damage to the goods from that point. The FOB term requires the seller to clear the goods for export. This term can only be used for sea or inland waterway transport. When the ship's rail serves no practical purpose, such as in the case of roll-on/roll-off or container traffic, the FCA term is more appropriate to use.

## Unit Nine: TIR

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### Ex. 1. Mind the new words and expressions

1. accession – вступление, доступ
2. assessment - оценка
3. to avoid – избегать , отклонять



4. auspices-покровительство, протекция, содействие;  
(under the auspices of – при содействии, под покровительством)
5. bond – таможенная закладная
6. carnet – карнет (таможенная лицензия на проезд автомашины через границу )
7. contracting parties – контрагенты, договаривающиеся стороны
8. compartment – купе, отделение, отсек, камера
9. to cover – включать в себя, охватывать, относиться к ч-л
10. customs – таможенные пошлины, налог
11. delay – задержка, препятствие
12. to devise – разрабатывать
13. to dispense with - обходиться без чего либо
14. duty – налог, пошлина
15. expenses –расходы, издержки, затраты
16. facilitation – облегчение, помощь
17. frontier – граница
18. flexible - гибкий
19. impediment – преграда, препятствие
20. imposition – наложение, обложение
21. interference – вмешательство
22. to involve – включать в себя
23. issue – выпуск, публикация
24. legislation – законодательство, закон
25. load – груз, партия груза
26. maritime – морской
27. obvious – очевидный
28. provision – положение, условие ( договора)
29. revenue – доход
30. routine - стандартный, текущий
31. sine qui non – (латинск.) обязательное, неременное условие
32. seal – печать, пломба
33. swap-body – сменный кузов для смешанных автомобильно-железнодорожных перевозок
34. to utilize – использовать, употреблять

**Ex. 2. Match the word with the appropriate definition.**

**commerce, consignment, capacity, freight, carriage (BrE), container, costs, carnet**

1. a customs license authorizing the temporary importation of a motor vehicle.
2. the amount of space a container, room etc has to hold things or people.
3. the act of moving goods from one place to another or the cost of moving them .
4. the buying and selling of goods and services.
5. an object used for or capable of holding, esp. for transport or storage, such as a carton, box, etc .
6. a quantity of goods that are sent somewhere, especially in order to be sold.
7. the money that you must regularly spend in order to run a business, a home, a car.
8. goods that are carried by ship, train or aircraft and the system of moving these goods.

**Ex. 3. Match the words and word combinations with the similar meaning.**

- |                 |                      |
|-----------------|----------------------|
| 1) customs      | a) costs             |
| 2) impediment   | b) help, aid         |
| 3) auspices     | c) formulate, invent |
| 4) accession    | d) protection        |
| 5) expenses     | e) law               |
| 6) legislation  | f) toll, duty        |
| 7) facilitation | g) obstacle          |
| 8) frontier     | h) admission         |
| 9) obvious      | i) evident           |
| 10) to utilize  | j) to include        |
| 11) to cover    | k) to use            |
| 12) to devise   | l) boundary          |

**Ex. 4. Choose the right variant for each word combination.**

- |  |                                       |
|--|---------------------------------------|
| 1) swap body                           | a) наложение требований безопасности  |
| 2) imposition of security requirements | b) морской транспорт                  |
| 3) a sine qua non                      | c) непременное условие                |
| 4) contracting parties                 | d) национальное законодательство      |
| 5) maritime transport                  | e) единый транспортный документ       |
| 6) secure loading unit                 | f) оценка риска                       |
| 7) inland container                    | g) процедура пересечения границы      |
| 8) international movement of goods     | h) безопасный грузовой отсек          |
| 9) transit regime                      | i) внутренний контейнер               |
| 10) border crossing procedures         | j) проверка груза                     |
| 11) load compartment                   | k) сменный контейнер                  |
| 12) single transit document            | l) международное передвижение товаров |
| 13) national legislation               | m) контрагенты                        |
| 14) risk assessment                    | n) грузовой отсек                     |
| 15) inspection of load                 | o) транзитный режим                   |

**Ex. 5. Choose the right variant for each word combination. Mind the meaning of the word 'customs'.**

- |                        |   |
|------------------------|---|
| 1) customs duties      | a) квитанция таможи об уплате пошлины               |
| 2) customs official    | b) уплата таможенной пошлины                        |
| 3) customs revenue     | c) очистка от таможенных пошлин; таможенный досмотр |
| 4) customs declaration | d) импортная таможенная стоимость                   |
| 5) customs supervision | e) таможенные пошлины                               |
| 6) customs facilities  | f) таможенные льготы                                |
| 7) customs tariff      | g) таможенная декларация                            |

- |                             |  |
|-----------------------------|--|
| 8) customs clearance charge | h) таможенный досмотр                          |
| 9) customs receipt          | i) таможенная заявка                           |
| 10) customs clearance       | j) таможенные денежные поступления             |
| 11) customs seal            | к) таможенная печать, таможенная пломба        |
| 12) customs application     | l) таможенная стоимость                        |
| 13) customs survey          | м) таможенный инспектор; представитель таможни |
| 14) customs import value    | н) таможенный тариф                            |
| 15) customs value           | о) таможенный контроль                         |

**Ex. 6. Look at the headline of the article and try to guess what information it contains. Skim the article to check your guess.**

**Ex. 7. Read the article attentively for more detailed information about the TIR Customs transit system.**

The TIR Convention of 1975 came into force in 1978. Since that time the TIR Convention has proved that it is one of the most successful international transport conventions and is in fact the only universal Customs transit system in existence. The idea behind the TIR Convention and its transit regime has formed the basis for many regional transit systems and has thus, directly and indirectly, contributed to the facilitation of international transport, especially international road transport, not only in Europe and the Middle East, but also in other parts of the world, such as Africa and Latin America.

Anyone who has ever traveled on European roads will recognize the familiar blue and white TIR plate borne by thousands of lorries and semi-trailers using the TIR Customs transit system. For the driver, the transport operator and the shipper, this plate stands for fast and efficient international transportation by road. Work on the TIR transit system started soon after the Second World War. The first TIR Agreement was concluded in 1949 between a small number of European countries.

The experience gained in the first 10 to 15 years of operating the system was thus used to make the TIR system more efficient, less complex and at the same time more Customs secure. Another reason why the original TIR system had to be modified was that in the early 1960's a new transport tech-

nique emerged: the maritime container. It was followed a little later by the inland container used by the European railways and by the swap-body introduced for improving the efficiency of road/rail transport.

These new combined or multimodal transport techniques necessitated the acceptance of the container, under certain conditions, as a Customs secure loading unit. It meant also that TIR regime no longer only covered road transport, but was extended to rail, inland waterways and even maritime transport, although at least one part of the total transport operation still has to be made by road.

The advantages of the TIR Convention to commerce and transport interests are obvious. Goods may travel across national frontiers with a minimum of interference by Customs administrations. By easing traditional impediments to the international movement of goods, the TIR system encourages the development of international trade. By reducing delays in transit, it enables significant economies to be made in transport costs.

The TIR Convention has proved to be one of the most effective international instruments prepared under the auspices of the United Nations Economic Commission for Europe (UNECE). To date, it has 65 Contracting Parties, including the European Community. It covers the whole of Europe and reaches out to North Africa and the Near and Middle East. Countries in Asia have been informed about the facilities of this global Customs transit system and their interest has shown that they may well join the TIR Convention in the not too distant future. Already today, the United States of America and Canada are Contracting Parties as well as Chile and Uruguay in South America. The success of the TIR system may also be judged by the number of TIR Carnets distributed and issued every year. As a result of the expanding East-West European trade, corresponding tremendous increase in international road transport, the number of TIR Carnets issued has now reached 3.2 million (2004) which represents the start of nearly 10,000 TIR transports every day in more than 50 countries and well over 50,000 TIR border crossing procedures daily.

The accession of a number of Central European countries to the European Community in 2004 may lead to a decrease in the number of TIR transport operations in this part of Europe, as, TIR Carnets cannot be used for Customs transit operations within the member countries. But the development may well be compensated by an increase in TIR transport operations in and to the countries of the Middle East and Asia.

The tremendous increase in the use of the TIR Customs transit system can be explained by the special features of the TIR regime which offer transport operators and Customs authorities a simple, flexible, cost-effective and secure Customs regime for the international transport of goods across frontiers.

The TIR Convention also provides, through its international guarantee chain, relatively simple access to the required guarantees which are a sine qua non (necessary conditions) for the transport and trade industry to benefit from the facilities of Customs transit systems.

Finally, in reducing the impediments to international traffic by road caused by Customs controls, it enables exporters and importers to select more easily the form of transport most suitable for their needs.

Traditionally when goods crossed the territory of one or more States in the course of an international transport of goods by road, the Customs authorities in each state applied national controls and procedures. These varied from State to State, but frequently involved the inspection of the load at each national frontier and the imposition of national security requirements (guarantee, bond, deposit of duty, etc.) to cover the potential duties and taxes at risk while the goods were in transit through each territory. These measures, applied in each country of transit, led to considerable expenses, delays and interferences with international transport.

In an attempt to reduce these difficulties experienced by transport operators and, at the same time, to offer Customs administrations an international system of control replacing traditional national procedures, whilst effectively protecting the revenue of each State through which goods were carried, the TIR system was devised.

As regards Customs control measures at frontiers, the TIR system clearly has advantages for Customs administrations as it reduces the normal requirements of national transit procedures. At the same time the system avoids the need - expensive in manpower and facilities - for physical inspection in countries of transit other than checking seals and the external conditions of the load compartment or container. It also dispenses with the need to operate national guarantees and national systems of documentation.

In addition, advantages arise from the fact that the international transit operation is covered by a single transit document, the TIR Carnet,

which reduces the risk of presenting inaccurate information to Customs administrations.

In case of doubt, Customs authorities have the right to inspect the goods under Customs seal at any time and, if necessary, to interrupt the TIR transport and/or to take adequate measures in accordance with national legislation. In view of the strict provisions of the TIR Convention and the interest of all Customs authorities and transport operators to apply these provisions, such interventions should remain exceptional. Customs authorities can therefore reduce routine administrative Customs procedures to a minimum and devote their limited resources to specific control measures based on risk assessment and intelligence information.

**Ex. 8. Provide the answers to the questions given below.**

1. What has the TIR Convention contributed to?
2. What does blue and white TIR plate stand for?
3. What is the main aim of TIR system?
4. What are the advantages of TIR to commerce and transport?
5. What countries are the members of TIR Convention?
6. How can the increase in the use of the TIR Customs transit system be explained?
7. What measures led to considerable expenses, delays and interferences with international transport?
8. Why was the TIR system devised?
9. What are the advantages of TIR Carnet?
10. What rights do Customs authorities have?

**Ex. 9. Substitute the words in Russian with their appropriate equivalents in English.**

1. (В случае сомнения) Customs authorities have the right to inspect the (товары) under Customs (таможенная пломба) at any time and, if necessary (принимать соответствующие меры) in accordance with national (законодательство). 2. (Таможенные) procedures involve the inspection of the (груз) at each national (граница) and the imposition of national (требования безопасности), guarantee, (таможенная накладная), (депозитная пошлина), etc. to cover duties and taxes at risk. 3. National controls and procedures applied by (таможенные власти) in each country of transit led to (значительные расходы), (задержки) and

(вмешательство) with international transport. 4. (Что касается) Customs control measures at frontiers, the TIR system (избегает) the need for physical inspection in countries of transit other than (проверка пломб) and the (внешних) conditions of the (грузовой вагон) or container. 5. (Товары) may travel across national (границы) with a minimum of (вмешательство) by (таможенный) administrations. 6. In reducing the (препятствий) to international traffic by road caused by Customs controls the TIR Convention provides relatively simple (доступ) to the required guarantees which are (необходимые условия) for the transport and trade industry. 7. Customs authorities can (уменьшить) routine administrative (таможенные процедуры) and (посвятить) their resources to specific control measures based on (оценке риска) and intelligence information.

**Ex. 10. Fill in the blanks with the prepositions.**

1. The TIR Convention provides ... its international guarantee chain access ... the guarantees ... the transport. 2. Goods may travel ... national frontiers ... a minimum of interference ... Customs administrations. 3. The TIR Convention is one of the most effective international instruments prepared ... the auspices of the United Nations Economic Commission ... Europe (UNECE). 4. The TIR system encourages the development of international trade ... reducing delays in transit. 5. The TIR Convention came ... force in 1978. 6. Customs authorities have the right to inspect the goods ... Customs seal at any time and to take adequate measures ... national legislation. 7. TIR Carnets cannot be used ... Customs transit operations ... its member countries. 8. As regards Customs control measures ... frontiers, the TIR system reduces the normal requirements ... national transit procedures. 9. These new multimodal transport techniques necessitated the acceptance ... the container... certain conditions, as a Customs secure loading unit.

**Ex. 11. Translate the following sentences into Russian. Mind the use of the verb to be.**

1. Efficiently operating transport networks in the former segmented European space-economy are critical success factors for the competitive edge of Europe. 2. Competitive efficiency is in the centre of current European transport policy. 3. There is a major more recent policy concern



on the question whether transport will be devastating for environmentally sustainable development. 4. The purpose of production logistics is to ensure that each machine and workstation is being fed with the right product in the right quantity and quality at the right point of time. 5. One of the keys to the success of the container is that an agreement about its base dimensions and latching system was reached through the International Standards Organization (ISO) within 10 years of its introduction.

**Ex. 12. Translate the following sentences into Russian. Mind the use of the passive voice.**

1. Since 90% of all traffic information is perceived visually, special attention must be paid to the visibility of traffic signs and systems. 2. Domestic road transport is being deregulated in most European countries. 3. Transport of goods by road is still hampered by restrictions on cabotage, empty runs and a lack of fiscal, technical and social harmonization. 4. Entrepreneurs offering transport services are being encouraged to develop door-to-door delivery systems which implies finding the ultimate balance between the existing transport modes. 5. Transport is affected by international economic shifts, by tourism and by changes in the balance of trade with Europe. 6. Road infrastructure costs have been closely examined in the UK over many years. 7. Changes in the supply of transport services are affected by men technologies, customer demand and external cost.

**Ex. 13. Give the main points of the text in 4-6 sentences. You may use the following clichés:**

*The text deals with... . The author points out that... . Attention is drawn to the fact that... . It is pointed out that... . It should be noted that... . The author comes to the conclusion that... . I find the text rather/very... .*

**Ex. 14. Translate the text into Russian. Use the dictionary if necessary.**

The TIR Customs Convention, through its familiar symbol on the backs of vehicles, has become known to every man, woman and child who has travelled the highways of Europe over the past few decades.

"TIR" stands for Transports Internationaux Routiers as defined in the UNECE TIR Convention.

The TIR system has been devised to facilitate to the maximum extent the international movement of goods under Customs seals. The system provides transit countries with the required guarantees to cover the Customs duties and taxes at risk. A balance is struck between the responsibilities of the Customs authorities and those of the international trading community.

The TIR system offers the following benefits to the different stakeholders involved in the international movement of transit goods:

- Facilitation of transport and trade reduces transport costs by reducing formalities and delays in transit; facilitates transit movements by the application of standardized controls and documentation; and as a result, encourages the development of international trade.

- For the transport industry goods move across international frontiers with minimum interference; delays and costs of transit are reduced; documents are simplified and standardised; and there is no need to make Customs guarantee deposits at transit borders.

- For Customs authorities duties and taxes at risk during international transit movements are guaranteed up to USD 50,000; only bona fide conscientious transport operators are permitted to use TIR carnets, thus increasing the security of the system; the need for physical inspection of goods in transit is reduced; the system facilitates Customs control and documentation; and use of internal clearance points for export and import allows more efficient deployment of Customs personnel.

However, as regards goods in transit, a way had to be found to seal the goods in order to apply the transit bond-note system to transport operations and to enable the Customs formalities applicable to imported goods to take place at destination rather than at the border.

The TIR system is an international Customs transit system for goods carried by road. It is based on 5 essential principles – the 5 pillars of the TIR system.

1. Secure vehicles or containers: goods are carried in sealed vehicles or containers which are approved for use by Customs and re-approved every two years.

2. International chain of guarantee: duties and taxes due in case of irregularity are secured by an international guarantee chain throughout the journey.

3. TIR carnet: the goods are accompanied by the TIR carnet: a control document accepted by the Customs authorities of the countries of departure, transit and destination.

4. Mutual recognition of Customs controls: control measures taken in the country of departure are accepted by countries of transit and destination.

5. Controlled access: access to the TIR system for national issuing and guaranteeing associations is given by the competent national authorities, and for transport operators, by the National Customs authorities and the National Association.

## Unit Ten: Containerization

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### Ex. 1. Mind the new words and expressions.

1. to abandon - отказываться
2. approximate – приблизительный
3. to allow for - учитывать
4. bale – тюк, пакет
5. barrel – бочка; баррель (мера жидких, сыпучих и некоторых твёрдых материалов)
6. bulk – масса; большое количество (крупная партия груза, без какой-л. упаковки; напр., зерно, уголь)
7. to boost – поддерживать, форсировать
8. bolster - поддон
9. collapsible - складной; раздвижной
10. compatibility - совместимость; соответствие
11. crate - (деревянный) ящик; тара для упаковки
12. drum – барабан, цилиндрический контейнер, металлическая бочка
13. gauge - мера, размер
14. to handle – трансп.: производить транспортную обработку (грузов)
15. intact – неповрежденный, нетронутый
16. imperial measures (measurements) - имперские меры (стандартные единицы мер, принятые в Соединённом Королевстве )
17. overwhelming – огромный, ошеломляющий

18. pallet - (грузовой) поддон для перевозки грузов
19. payload - грузоподъёмность; полезная нагрузка; трансп. коммерческая нагрузка (груз, который транспортируется за плату)
20. to plague – беспокоить, досаждать
21. to recycle – перерабатывать
22. reefer – рефрижератор, вагон- холодильник
23. to result from – происходить вследствие, являться результатом
24. to result in - приводить к
25. to salvage - собирать и использовать утильсырьё
26. scrutiny - внимательный осмотр
27. to seal - опечатывать
28. semi-finished goods – полуфабрикаты
29. to smuggle contraband - провозить контрабандой
30. to stack- -накапливать, укладывать в штабеля
31. swap body – съёмный (сменный) кузов для смешанных автомобильно-железнодорожных перевозок
32. tampering - 1) фальсификация; подделка 2) манипуляции, подкуп

**Ex. 2. Mind the following abbreviations.**

1. ISO - International Organization for Standardization ИСО – Международная Организация по Стандартизации
2. ITU - Intermodal Transport Units – единицы (контейнеры) для смешанных перевозок
3. TEU - twenty-foot equivalent units – единицы, эквивалентные 20 футам
4. FEU - forty-foot equivalent unit - единицы, эквивалентные 40 футам

**Ex. 3. Match the word with the appropriate definition.**

**Intermodal, cargo, truck, cost, container, pallet.**

1. the price paid or required for acquiring, producing, or maintaining something, usually measured in money, time, or energy; expense or expenditure; outlay.
2. a large motor vehicle designed to carry heavy loads, esp. one with a flat platform .

3. a standard-sized platform of box section open at two ends on which goods may be stacked. The open ends allow the entry of the forks of a lifting truck so that the palletized load can be raised and moved about easily.
4. using different modes of conveyance in conjunction, such as ships, aircraft, road vehicles, etc.
5. goods carried by a ship, aircraft, or other vehicle; freight.
6. an object used for or capable of holding, esp. for transport or storage, such as a carton, box, etc.

**Ex. 4. Choose the right variant for each word combination. Mind the right translation of the word "bulk".**

- |                              |  |
|------------------------------|--|
| a) break bulk                | 1) прекращение погрузки товара навалом                 |
| b) break of bulk             | 2) оптовый покупатель                                  |
| n) the bulk of goods on sale | 14) бестарный груз                                     |
| d) bulk buyer                | 4) большая часть груза                                 |
| e) bulk cargo                | 5) разбивать крупную партию на мелкие                  |
| f) bulk discount             | 6) скидка с объема за количество                       |
| g) bulk of the cargo         | 7) грузить без упаковки                                |
| h) bulk rate                 | 8) фрахтовая ставка для перевозки большой партии груза |
| i) bulk storage              | 9) поставка крупными партиями                          |
| j) bulk supplies             | 10) оптом, большими партиями                           |
| k) bulk supply               | 11) предметы снабжения, поступающие крупными партиями  |
| l) in bulk                   | 12) большая часть товаров, имеющих в продаже           |
| m) load in bulk              | 13) бестарное хранение, хранение навалом               |

**Ex. 5. Choose the right variant for each word combination. Mind the translation of the word "container".**

- |                       |  |
|-----------------------|--|
| a) cargo container    | 1) кран для перегрузки контейнеров   |
| b) container crane    | 2) большой грузовой поезд, составленный из вагонов, созданных специально для транспортировки контейнеров |
| c) container depot    | 3) контейнеровоз, контейнерное судно   |
| d) container ship     | 4) контейнерный склад  |
| e) container traffic  | 5) дорога/путь, сделанные для транспортировки контейнеров  |
| f) container train    | 6) грузовой контейнер  |
| g) container truck    | 7) контейнерная перевозка  |
| h) transcontainer     | 8) контейнер, "специализирующийся" на перевозке только тех или иных товаров                              |
| i) container capacity | 9) контейнерные перевозки  |
| j) container cargo    | 10) объем контейнера   |
| k) container loader   | 11) контейнерный груз  |
| l) container shipment | 12) погрузчик контейнеров  |

**Ex. 6. Read the text and say what you have learnt about the containerization.**

Containerization is a system of intermodal freight transport cargo transport using standard ISO containers (known as shipping containers), ITUs (Intermodal Transport Units) that can be loaded and sealed intact onto container ships, railroad cars, planes, and trucks.

Although having its origins in the late 1780s or earlier, the global standardization of containers and container handling equipment was one of the important innovations in 20th century logistics.

Toward the end of World War II, the United States Army began using specialized containers to speed up the loading and unloading of transport ships. After the U.S. Department of Defense standardized an 8'x8' cross section container in multiples of 10' lengths for military use it was rap-

idly adopted for shipping purposes. These standards were adopted in the United Kingdom for containers and rapidly displaced the older wooden containers in the 1950s.

Even the railways of the USSR had their own small containers. The introduction of containers resulted in vast improvements in port handling efficiency, thus lowering costs and helping lower freight charges and, in turn, boosting trade flows. Almost every manufactured product spends some time in a container.

Containerization has revolutionized cargo shipping. Today, approximately 90% of non-bulk cargo worldwide moves by containers stacked on transport ships; 26% of all containers originate from China.

The widespread use of ISO standard containers has driven modifications in other freight-moving standards, gradually forcing removable truck bodies or swap bodies into the standard sizes and shapes (though without the strength needed to be stacked), and changing completely the worldwide use of freight pallets that fit into ISO containers or into commercial vehicles.

Improved cargo security is also an important benefit of containerization. The cargo is not visible to the casual viewer and thus is less likely to be stolen and the doors of the containers are generally sealed so that tampering is more evident. This has reduced the "falling off the truck" syndrome that long plagued the shipping industry.

Container capacity is often expressed in twenty-foot equivalent units (TEU, or sometimes teu). An equivalent unit is a measure of containerized cargo capacity equal to one standard 20 ft (length)  $\times$  8 ft (width) container. As this is an approximate measure, the height of the box is not considered. Similarly, the 45-ft (13.7 m) containers are also commonly designated as two TEU, although they are 45 and not 40 feet (12 m) long. Two TEU are equivalent to one forty-foot equivalent unit (FEU).

The use of Imperial measurements to describe container size (TEU, FEU) reflects the fact that US Department of Defense played a major part in the development of containers. The overwhelming need to have a standard size for containers, in order that they fit all ships, cranes, and trucks, and the length of time that the current container sizes have been in use, makes changing to an even metric size impractical.

The maximum gross mass for a 20 ft (6.1 m) dry cargo container is 24,000 kg. Allowing for the tare mass of the container, the maximum payload mass is therefore reduced to approximately 21,600 kg for 20 ft (6.1 m),

Since November 2007 48-ft and 53 ft (16 m) containers are used also for international ocean shipments. Various container types are available for different needs:

- -General purpose dry van for boxes, cartons, cases, sacks, bales, pallets, drums in standard, high or half height;
- -High cube palletwide containers for europallet compatibility;
- -Temperature controlled from  $-25^{\circ}\text{C}$  to  $+25^{\circ}\text{C}$  reefer;
- -Open top bulkainers for bulk minerals, heavy machinery;
- -Open side for loading oversize pallet;
- -Flushfolding flat-rack containers for heavy and bulky semi-finished goods, out of gauge cargo;
- -Platform or bolster for barrels and drums, crates, cable drums, out of gauge cargo, machinery, and processed timber;
- -Ventilated containers for organic products requiring ventilation;
- -Tank containers for bulk liquids and dangerous goods;
- -Rolling floor for difficult to handle cargo;
- -Gas bottle;
- -Generator;
- -Collapsible ISO;
- -Swap body.

Containers have been used to smuggle contraband. The vast majority of containers are never subjected to scrutiny due to the large number of containers in use. In recent years there have been increased concerns that containers might be used to transport terrorists or terrorist materials into a country undetected. The U.S. government has advanced the Container Security Initiative (CSI), intended to ensure that high-risk cargo is examined or scanned, preferably at the port of departure.

Containers are intended to be used constantly, being loaded with a new cargo for a new destination soon after being emptied of the previous cargo. This is not always possible, and in some cases the cost of transporting an empty container to a place where it can be used is considered to be higher than the worth of the used container. This can result in large areas in ports and warehouses being occupied by empty containers left



abandoned. However, empty containers may also be recycled in the form of shipping container architecture, or the steel content salvaged.

**Ex. 7. Provide answers to the questions below.**

1. What does the containerization mean?
2. When were the standards for containers adopted in the United Kingdom and in the USA?
3. Containerization has revolutionized cargo shipping, hasn't it?
4. What is considered to be one of the important benefits of containerization?
5. How is container capacity often expressed?
6. What are the general types of container?
7. Is there any misuse of containers?

**Ex. 8. Translate the following word combination into Russian. Use the dictionary if necessary. Consult the text.**

intermodal freight transport	out of gauge cargo
container handling equipment	cross section container
handling efficiency	freight charges
payload mass	tare mass
boosting trade flows	dangerous goods
flushfolding flat-rack containers	open side for loading

**Ex. 9. Replace the words in Russian with their appropriate equivalents in English.**

1. Containers have been used to (провозить контрабанду). 2. The introduction of containers resulted in vast improvements in (эффективность обработки грузов в порту), thus lowering costs and helping lower (расходы по перевозке) and, in turn, (поддержка торговых потоков). 3. Containerization has revolutionized (грузоперевозки). 4. The use of (стандартные единицы) to describe container (размер) reflects the fact that US Department of Defense played a major part in the (разработка) of containers. 6. The (груз) is not visible to the casual viewer and thus is less likely to be stolen and the doors of the containers are generally sealed so that (фальсификация) is more (очевидна). 7. Platform or (поддон) for barrels and drums, (деревянные ящики), cable drums, out of gauge (груз), machinery, and processed timber is a type of container.

8. The widespread use of ISO standard containers has changed (съемные кузова) into the standard sizes and shapes and changed completely the worldwide use of freight (поддоны) that fit into ISO containers or into commercial vehicles. 9. (Учитывая) the tare mass of the container, the maximum (полезная нагрузка) mass is therefore (уменьшены). 10. (Пустые) containers may be (переработаны) in the form of (транспортировочный контейнер) architecture, or the steel content (утилизировано).

**Ex. 10. Fill in the blanks with the appropriate prepositions.**

1. Various container types are available ... different needs. 2. Today, approximately 90% ... non-bulk cargo worldwide moves ... containers stacked ... transport ships; 26% of all containers originate ... China. 3. Tank containers are intended ... bulk liquids and dangerous goods. 4. This can result ... large areas in ports being occupied ... empty containers left abandoned. 5. The introduction of containers resulted ... vast improvements in port handling efficiency. 6. The vast majority ... containers are never subjected ... scrutiny due ... the large number of containers ... use.

**Ex. 11. Match the words and word combinations with the similar meaning.**

- |                |                           |
|----------------|---------------------------|
| a) to displace | 1) expenses               |
| b) to abandon  | 2) lorry                  |
| c) shipping    | 3) to decrease            |
| d) swap body   | 4) transportation         |
| e) evident     | 5) to refuse              |
| f) to reduce   | 6) removable truck bodies |
| g) gauge       | 7) obvious                |
| h) cargo       | 8) load                   |
| i) truck       | 9) to remove              |
| j) costs       | 10) measure               |

**Ex. 12. Translate the sentences into Russian, paying attention to the participial constructions.**

1. Logistics creates time and space utility for the products being moved, thereby enabling the logistics users to provide value-added to their cus-

tomers. 2. Services using advanced logistics always demand reliability but not necessarily speed. 3. Incidents or near collisions with other vehicles or objects, or driving off the road are not unusual when mobile phones are used while driving. 4. Although the deterioration of transport varies depending on time and place and the type and mode of transport, it is a general phenomenon. 5. Now many companies have started constructing logistics systems, introducing leading logistics strategies and technologies. 6. One of the main measures considered by logistics managers of agro industries with continuous process is related to truck waiting times in the reception area. 7. Transport services provided in return for money can immediately be classed as third-party operations. 8. The investigation carried out is based on the data from the road surface measurements made on stale roads and accidents reported by the police.

**Ex. 13. Translate the sentences into Russian, paying attention to the infinitive.**

1. The objective will be to maintain a high service level based on the reliability of supply. 2. The TIR Convention has proved to be one of the most effective international instruments prepared by the United Nations Economic Commission for Europe. 3. In order to stabilize the TIR system in the long term, more profound modifications in its operation and in the governmental cooperation and control mechanisms were felt to be required. 4. By reducing delays in transit, TIR system enables significant economics to be made in transport costs. 5. When transport regulations were first introduced the aim was to protect the railways. 6. Driver fatigue or falling asleep is recognized to be among the most important causative factors in road crashes, next to alcohol, speeding and inattention. 7. Buses are believed to be potentially flexible and cost effective method of public transport offering many advantages over rail. 8. The current ongoing deregulation of international road transport is expected to increase the load factors of vehicles considerably and thereby reduce the total transport cost. 9. The speed of delivery required this is conjunction with the type of cargo and its transport logistics characteristics may well determine the mode as well as the route to be taken.

**Ex. 14. Translate the sentences into Russian, paying attention to the conjunctions and compound prepositions.**

1. Intermodal transport is the carriage of goods by several modes of transport from one point/port of origin via one or more interface points to a final port/point where one of the carriers organizes the whole transport. 2. Such problem solution allows managers to optimize the transport channel more operatively and effectively both in terms of cost (rates) and time. 3. This may be due to economic factors and hence inadequate networks and services, or poor accessibility. 4. Because of the much higher densities of people and activities, environmental, economic, public health, social and quality of life considerations and constraints are important in cities. 5. Supply chain planning is carried out at corporate level as well as at operation level. 6. Supply chain management is significant for both service and manufacturing organizations, although the complexity of the chain may vary greatly from industry to industry. 7. A supply chain network of an organization includes the location as well as movement decisions in respect of procurement of raw materials and other inputs, transformation of these materials into intermediate and finished products and the distribution of these finished products to customers.

**Ex. 15. Give the main points of the text in 4-7 sentences. Use the following clichés:**

*The text deals with... . The author points out that... . Attention is drawn to the fact that... . It is pointed out that... . It should be noted that... . The author comes to the conclusion that... . I find the text rather/very...*

**Ex. 16. Translate the following text into Russian. Use the dictionary if necessary.**

Transport is a key factor in modern economies. However, there is a permanent contradiction between society, which demands ever more mobility, and public opinion, which is becoming increasingly intolerant of chronic delays and the poor quality of some transport services. As demand for transport keeps increasing, the Community's answer cannot be just to build new infrastructure and open up markets. The transport

system needs to be optimised to meet the demands of enlargement and sustainable development, as set out in the conclusions of the Gothenburg European Council. A modern transport system must be sustainable from an economic and social as well as an environmental viewpoint. Plans for the future of the transport sector must take account of its economic importance. The sector employs more than 10 million people. It involves infrastructure and technologies whose cost to society is such that there must be no errors of judgment. Indeed, it is because of the scale of investment in transport and its determining role in economic growth that the authors of the Treaty of Rome made provision for a common transport policy with its own specific rules. For a long time, the European Community was unable, or unwilling, to implement the common transport policy provided for by the Treaty of Rome. For nearly 30 years the Council of Ministers was unable to translate the Commission's proposals into action. It was only in 1985, when the Court of Justice ruled that the Council had failed to act, that the Member States had to accept that the Community could legislate. Later on, the Treaty of Maastricht reinforced the political, institutional and budgetary foundations for transport policy.

Europe must bring about a real change in the Common Transport Policy. The time has come to set new objectives for it: restoring the balance between modes of transport and developing intermodality, combating congestion and putting safety and the quality of services at the heart of our efforts, while maintaining the right to mobility. One of the main challenges is to define common principles for fair charging for the different modes of transport. This new framework for charging should both promote the use of less polluting modes and less congested networks and prepare the way for new types of infrastructure financing.

## **Unit Eleven: The Spatial Economy of Road Transportation**

### **Ex. 1. Mind the new words and expressions.**

1. acute- острый, крайний, критический
2. attribute – показатель, характеристика
3. to constrain – ограничивать, сдерживать
4. convergence – схождение в одной точке, сближение

5. custodian - хранитель, смотритель
6. disparity – различия; несоответствие
7. divergence – расхождение, отклонение
8. economies of scale (scale economies) - экономия, обусловленная ростом масштабов производства; положительный эффект масштаба
9. to expropriate – лишать собственности, отчуждать
10. externalities - вид, внешность, облик, проявления
11. to impose – налагать, устанавливать
12. mandatory – обязательный, принудительный
13. obstacle – препятствие, затруднение, помеха
14. perishables - скоропортящиеся грузы; скоропортящиеся товары
15. restriction- ограничение, помеха
16. slope – уклон, наклон
17. spatial - пространственный
18. sustainable – устойчивый (экологически)
19. traction - сила тяги; сцепление
20. trucking industry - грузоперевозки
21. trunk - магистраль; главная линия
22. vested - законный, принадлежащий по праву

**Ex. 2. Match the word with the appropriate definition.**

**consumption, impose, externality, goods, demand, vested, infrastructure**

1. commodities that are tangible, usually movable, and generally not consumed at the same time as they are produced;
2. to establish as something to be obeyed or complied with; enforce to
3. willingness and ability to purchase goods and services
4. economics expenditure on goods and services for final personal use
5. the stock of fixed capital equipment in a country, including factories, roads, schools, etc., considered as a determinant of economic growth
6. having a present right to the immediate or future possession and enjoyment of property
7. an economic effect that results from an economic choice but is not reflected in market prices

**Ex. 3 Match the words and word combinations with the similar meaning.**

- |                 |                   |
|-----------------|-------------------|
| 1) restrictions | a) influence      |
| 2) growth       | b) lessening      |
| 3) costly       | c) limitation     |
| 4) income       | d) structure      |
| 5) impact       | e) limitations    |
| 6) consumption  | f) expensive      |
| 7) construction | g) increase       |
| 8) restriction  | h) use            |
| 9) attribute    | i) revenue        |
| 10) reduction   | j) characteristic |

**Ex. 4. Choose the right variant for each word combination.**

- |                                     |  |
|-------------------------------------|--|
| 1) under such circumstances         | a) городская окружающая среда                    |
| 2) multiplication of road accidents | b) городская многорядная автострада              |
| 3) size constraints                 | c) расхождение в ценах                           |
| 4) geographical disparities         | d) увеличение ДТП                                |
| 5) market dominance                 | e) грузоподъемность                              |
| 6) individual vehicle ownership     | f) ограничение по размерам                       |
| 7) carrying capacity                | g) гравийная дорога                              |
| 8) divergence of costs              | h) платная дорога                                |
| 9) multi-lane urban expressway      | i) мощность тягового усилия(сила сцепления)      |
| 10) gravel road                     | ж) служба от места отправления до места прибытия |
| 11) door to door service            | к) законные интересы                             |
| 12) toll road                       | л) доминирование на рынке                        |
| 13) right of passage                | м) право на проезд                               |
| 14) urban environment               | н) географические различия                       |
| 15) sustainable environment         | о) грузоперевозки                                |
| 16) vested interests                | р) автомобиль в личной собственности             |
| 17) traction capacities             | q) устойчивая окружающая среда                   |

18) trucking industry

r) при таких обстоятельствах

**Ex. 5. Choose the right variant for each word combination. Mind the use of some economic terms:**

1) economy of scale

a) внешние издержки

2) administration costs

b) издержки на отчуждение

3) development costs

c) экономика, обусловленная  
ростом масштаба производства

4) environmental externality

d) расходы по содержанию  
административного аппарата

5) construction costs

e) издержки на разработку

6) expropriation costs

f) страховые сборы

7) maintenance costs

g) развитие и развивающиеся  
страны

8) external costs

h) эксплуатационные расходы

9) insurance fees

i) затраты на строительство

10) inventory

j) ущерб, причиняемый в ре-  
зультате воздействия окру-  
жающую среду

11) developed and developing  
countries

k) материально-  
производственные запасы

**Ex. 6. Read the text and say what you have learnt about the spatial economy of road transportation.**

Road transportation is the mode that has expanded the most over the last 50 years, both for passengers and freight transportation. Such growth in road freight transport has been fuelled largely by trade liberalization. This is the result of growth of the loading capacity of vehicle and an adaptation of vehicle to freight (e.g. perishables, fuel, construction materials, etc) or passengers (e.g. school bus) demand for speed, autonomy and flexibility. New types of problems, such as a significant growth of fuel consumption, increasing environmental externalities, traffic congestion and a multiplication of road accidents have emerged.

Road infrastructures are moderately expensive to provide, but there is a wide divergence of costs, from a gravel road to a multi-lane urban expressway. Because vehicles have the means to climb moderate slopes, physical obstacles are less important than for some other land modes.



Most roads are provided as a public good by governments, while the vast majority of vehicles are owned privately. The capital costs, therefore, are shared, and do not fall as heavily on one source as is the case for other modes. However, in many cases, governments have been inefficient custodians of road infrastructure. Consequently, a growing number of roads have been privatized and companies specializing in road management have emerged, particularly in Europe and North America. This is only possible on specific trunks that have an important and stable traffic. Unlike governments, private enterprises have vested interests to see that the road segments they manage are maintained and improved since the quality of the road will be directly linked with revenue generation. The majority of toll roads are highways linking large cities or bridges and tunnels where there is a convergence of traffic. Most roads are not economically profitable but must be socially present as they are essential to service populations.

Governments can expropriate the necessary land for road construction since a private enterprise may have difficulties to expropriate without government support. Another important aspect about roads is their economies of scale and their indivisibility, underlining that the construction and maintenance of roads is cheaper when the system is extensive, but to a limit. However, all road transport modes have limited abilities to achieve scale economies. This is due to the size constraints imposed by governments and also by the technical and economic limits of the power sources. In most jurisdictions, trucks and buses have specific weight and length restrictions which are imposed for safety reasons. In addition, there are serious limits on the traction capacities of cars, busses and trucks because of the considerable increases in energy consumption that accompany increases in the weight of the unit. For these reasons the carrying capacities of individual road vehicles are limited.

Roads are thus costly infrastructures, but also sources of income:

- **Costs.** They include rights of passage, development costs (planning), construction costs, maintenance and administration costs, losses in land taxes (urban environment), expropriation costs (money and time), and external costs (accidents and pollution).
- **Income.** They include registration, gas (taxes), purchases of vehicles (taxes), tolls, parking, and insurance fees.

Road transport, however, possesses significant advantages over other modes. The capital cost of vehicles is relatively small. This produces several key characteristics of road transport. Low vehicle costs make it comparatively easy for new users to gain entry, which helps ensure that the trucking industry, for example, is highly competitive. Low capital costs also ensure that innovations and new technologies can diffuse quickly through the industry. Another advantage of road transport is the high relative speed of vehicles, the major constraint being government-imposed speed limits. One of its most important attributes is the flexibility of route choice, once a network of roads is provided. Road transport has the unique opportunity of providing door to door service for both passengers and freight. These multiple advantages have made cars and trucks the modes of choice for a great number of trip purposes, and have led to the market dominance of cars and trucks for short distance trips.

Road transportation is characterized by acute geographical disparities in traffic. It is not uncommon that 20% of the road network supports 60 to 80% of the traffic. This observation is expanded by the fact that developed and developing countries have important differences in terms of the density, capacity and the quality of road transport infrastructures. Acute geographical variations of the inventory are therefore the norm.

Technological evolution of road transport vehicles was a continuous trend since the construction of the first automobiles. The basic technology is however very similar, as road transportation massively relies on the internal combustion engine. In the future new materials (ceramics, plastics, aluminum, composite materials, etc...), fuels (electricity, hydrogen, natural gas, etc...) and computerization (vehicle control, location, navigation and toll collection) are expected to be included in cars and improve the efficiency of road transport systems.

Urban population has increased considerably over the last 50 years and about 50% of the global population was urbanized by 2000 (about 3 billion people). It is impossible for developing countries to have rates of individual vehicle ownership similar to those of developed countries, especially compared with the United States. This will impose new or alternative methods to transport freight and passengers over roads in urban areas. The reduction of vehicle emissions and the impacts of infrastructures on the environment are mandatory to promote a sustainable environment. Under such circumstances cycling is thus to be considered

an alternative to the automobile in urban areas, widely adopted in developing countries, although more for economic reasons. A symbiosis between types of roads and types of traffic with specialization (reserved lanes and hours) is to be expected.

**Ex. 7. Answer the following questions.**

1. What are the main problems of road transportation?
2. What are the main types of road ownership?
3. Why will the quality of the road be directly linked with revenue generation?
4. Why do all road transport modes have limited abilities to achieve scale economies?
5. Why does road transport possess significant advantages over other modes of transport?
6. What fact will impose new or alternative methods to transport freight and passengers over roads in urban areas?
7. What is considered as an alternative means of transport to the automobile in urban areas?

**Ex. 8. Substitute the words in Russian with their appropriate equivalents in English.**

1. New types of problems, such as a significant (рост потребления топлива), (увеличение ущерба окружающей среде), traffic congestion and a (увеличение ДТП) have emerged. 2. (Доход) includes registration, gas (налоги), (покупка) of vehicles (taxes), (сборы), parking, and (страховые сборы). 3. Unlike governments, (частные) enterprises have (законные интересы) to see that the road segments they manage are maintained and improved. 4. In many cases, governments have been (не умелые смотрители) of road infrastructure. 5. Trucks and buses have specific weight and (ограничение по длине) which are (налагаются) (по соображениям безопасности). 6. Road infrastructures are moderately expensive to provide, but there is a (расхождение в ценах), from a (гравийная дорога) to a (городская многорядная автострада). 7. The majority of (платные дороги) are highways linking large cities or (мосты) and tunnels where there is a (схождение движения). 8. Low vehicle costs ensure that the (грузоперевозки) is highly (конкурентны). 9. (Развитые) and (развивающиеся страны) have important differences (с

точки зрения) the (плотности), (мощности) - and the quality of road transport infrastructures. 10. The (сокращение выбросов транспортных средств) and the (влияние) of infrastructures on the environment are (обязательны) to promote a (устойчивая окружающая среда). 11. However, all (виды дорожного транспорта) have limited abilities to achieve (экономики масштаба) due to the (ограничения по размерам) imposed by governments. 12. The (строительство) and (содержание дорог) is cheaper when the system is extensive, but to a limit. 13. The (грузоподъемность) of (личных автомобилей) are limited. 14. (Дорожные перевозки) is the mode that has (расширен) the most over the last 50 years, both for passengers and (грузоперевозки).

**Ex. 9. Fill in the blanks with the appropriate prepositions.**

1. Governments can expropriate the necessary land ... road construction since a private enterprise may have difficulties to expropriate ... government support. 2. Trucks and busses have specific weight and length restrictions which are imposed ... safety reasons. 3. There is a wide divergence ... costs, ... a gravel road ... a multi-lane urban expressway. 4. Road transport possesses significant advantages ... other modes. 5. It is impossible ... developing countries to have rates ... individual vehicle ownership, especially compared ... the United States. 6. ... such circumstances cycling is to be considered an alternative ... the automobile ... urban areas ... developing countries, although more ... economic reasons. 7. Road transport has the unique opportunity ... providing door ... door service ... both passengers and freight. 8. The basic technology is however very similar, as road transportation massively relies ... the internal combustion engine. 9. In addition, there are serious limits ... the traction capacities ... cars and trucks because of the considerable increases ... energy consumption.

**Ex. 10. Translate the following sentences into Russian. Mind the use of the modal verbs.**

1. Access to infrastructure and allocation of rail infrastructure charges have to be fair to the operators and should be non-discriminatory in relation to other transport modes. 2. In a well functioning market, rail transport can play an essential role as a viable link in the intermodal supply chain and in the logistical strategies of companies. 3. With information

technology freight and vehicle flows may be monitored and thus controlled and optimized. 4. It can be expected that the optimum equilibrium between transport, production and inventory costs is highly sensitive to the cost of each of these categories. 5. Rail transport could offer a good alternative for both passengers and freight. 6. It has to be emphasized that the general development of transport systems is matched by a rise in the number of people excluded. 7. The importance of the transportation should also be seen by looking at the impact of transportation on a country's economy.

**Ex. 11. Translate the following sentences into Russian. Mind the use of gerund.**

1. Delivery may take over great distances and involve switching between transport modes and sectors dispersed over different countries. 2. Carriers try to retain business by maximizing the line-haul under their control. 3. Intermodality enhances the economic performance of a transport chain by using modes in the most productive manner. 4. By reducing transportation emissions globally, it is predicted that there will be significant positive effects on earth's air quality, acid rain, smog and climate change. 5. In a modern society it is recognized that there has to be some attempt at providing equality for all kinds of transport, accepting that this is not always possible or even desirable. 6. If financing is not easy for conventional public transport, it is an acute problem when demand is low. 7. With increasing use of e-shopping, deliveries to rural areas cost more and often the rural dweller has to pay an additional charge to reflect his isolation.

**Ex. 12. Give the main points of the text in 4-7 sentences. Use the following clichés:**

*The text deals with... . The author points out that... . Attention is drawn to the fact that... . It is pointed out that... . It should be noted that... . The author comes to the conclusion that... . I find the text rather/very... .*

**Ex. 13. Translate the following text into Russian. Use the dictionary if necessary.**

Travel by public transport has never been so difficult as today. In European Union countries, in thirty years from 1970 to 2000 the modal share of the car has increased of 4.5% from 73.8% to 78.3% while the public transport modal share has decreased of 8.7% from 24.6% to 15.9%. This relative reduction of public transport ridership is the result of major sociological and politico-economic changes. It corresponds to changes in lifestyles, characterized by a new relationship towards time and more flexible schedules, an increasing share of leisure activities. It is also the consequence of urban sprawl with dispersion of the origins and destinations of the journeys, a high increase of journeys from suburb, and on longer distances. The increasing use of cars has been also strengthened by political decisions in favour of private modes, which led to an increasing pressure on public budgets and insufficient financial investment for public transport. The management of mobility has never been as difficult as today. The demand of mobility has become more complex and can not be satisfied by traditional modes of public transport. Against this background, mobility actors and stakeholders have started to provide flexible solutions. They constitute an essential link in the whole mobility chain, either as a complement or as a substitute of traditional public transport. The challenge is therefore to implement innovative solutions to meet the needs for public transport by low demand. In this context it is fundamental to develop flexible solutions to meet the needs when demand is low. If authorities and operators want to contain the pre-eminence of the car, they need to consider the whole chain of mobility and reposition public transport as to fill in the gaps left by conventional services. The request is for door-to-door seamless travel by providing the market with one public transport offer that integrates different products from conventional public transport to demand responsive solutions, regardless of the type of providers. Demand Responsive Transport (DRT) can have the potential to improve the effectiveness and the efficiency of providing mobility services. Experience shows that with DRT, public transport actors can find cost-effective means of meeting societal needs where there was previously a serious mobility deficit or they succeeded to achieve effective mobility at reduced pre-trip costs.

## Unit Twelve: Information Technologies in Transport

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### Ex. 1. Mind the new words and expressions:

1. aids – вспомогательные средства
2. bill of lading - коносамент, транспортная накладная
3. compatible - совместимый; сочетаемый
4. driving licence - водительские права
5. enforcement - требование о соблюдении (законов, стандартов, норм, тарифов)
6. to enhance - увеличивать, усиливать, улучшать
7. electronic funds transfer (EFT) - электронный перевод средств (платежей)
8. to fit - монтировать; устанавливать;
9. fleet - парк (транспортных средств)
10. HGV - heavy goods vehicle - большегрузный автомобиль
11. idle time - время простоя
12. immobilization - потеря подвижности
13. invoice - счет-фактура, накладная
14. maintenance - техническое обслуживание; ремонт; эксплуатация
15. occupant - пассажир
16. packing slip = packing list - упаковочная ведомость
17. penalty – штраф, наказание
18. protection device - защитное устройство, предохранитель
19. purchase order - заказ на покупку, доставку
20. with reference to smb. / smth. — ссылаясь на кого-л. / что-л.
21. reminder - устройство передачи аварийных сигналов
22. road holding – держание дороги (автолюбителем); курсовая устойчививость
23. routing – выбор маршрута, схема движения;
24. smart device - интеллектуальное устройство
25. spacing - интервал, расстояние, промежуток
26. to tackle - пытаться найти решение (каких-л. вопросов)
27. telematics - интегрированные средства обработки и передачи информации

**Ex. 2. Match the word with the appropriate definition.**

**Exchange, driving license, distribution, bar code, technology, telematics.**

1. the application of practical sciences to industry or commerce.
2. the division of the total income of a community among its members, esp. between labour incomes (wages and salaries) and property incomes (rents, interest, and dividends).
3. to transfer or hand over (goods) in return for the equivalent value in kind rather than in money; barter; trade.
4. a machine-readable arrangement of numbers and parallel lines of different widths printed on a package, which can be electronically scanned at a checkout to register the price of the goods and to activate computer stock-checking and reordering.
5. the branch of science concerned with the use of technological devices to transmit information over long distances.
6. an official document or certificate authorizing a person to drive a motor vehicle.

**Ex. 3. Match the words and word combinations with the similar meaning.**

- |                  |                 |
|------------------|-----------------|
| 1) to enhance    | a) to regulate  |
| 2) penalty       | b) crash        |
| 3) in the event  | c) to support   |
| 4) seat belt     | d) passenger    |
| 5) accessible    | e) advantage    |
| 6) occupant      | f) safety belt  |
| 7) to adjust     | g) to intensify |
| 8) to provide    | h) available    |
| 9) accident      | i) punishment   |
| 10) to encourage | j) in case of   |
| 11) objective    | k) to supply    |
| 12) benefit      | l) goal         |

**Ex. 4. Choose the right variant for each word combination.**

- |                             |                              |
|-----------------------------|------------------------------|
| 1) braking habits           | a) финансовое урегулирование |
| 2) on-board computer        | b) ударопрочность            |
| 3) renewable energy sources | c) оптимальная маршрутизация |



- |                             |   |
|-----------------------------|---|
| 4) vehicle spacing          | d) профилактические меры                      |
| 5) repair shop              | e) ремонтная мастерская                       |
| 6) financial settlement     | f) стиль вождения                             |
| 7) optimal routing          | g) возобновляемые источники энергии           |
| 8) heat engine              | h) пристегнуть ремни безопасности             |
| 9) fleet maintenance        | i) расстояние между автомобилями              |
| 10) hydrogen fuel cells     | j) бортовой компьютер                         |
| 11) onboard driving aids    | k) тепловой двигатель                         |
| 12) prevention measures     | l) обслуживание парка                         |
| 13) impact resistance       | m) система предупреждения                     |
| 14) improved road holding   | n) интеллектуальное устройство защиты         |
| 15) slippery surface        | o) водородные топливные элементы              |
| 16) warning system          | p) бортовые вспомогательные средства вождения |
| 17) smart protection device | г) специализированная защита                  |
| 18) tailored protection     | с) скользкая поверхность                      |
| 19) to wear seatbelts       | т) улучшенное содержание дороги               |

**Ex. 5. Look at the title and say what information the text gives. Read the text attentively for the details.**

### **Information technologies in transport**

Information technology (IT) is process and "act upon" information at the right time and place, makes greater market intelligence possible. IT is instrumental in supporting the basic internal and inter-company transactions associated with distribution, transport and related services, i.e.: preparation of the logistics process; planning of the process; operations and control; financial settlement; fleet maintenance and monitoring.

The benefits of all information technology innovations in road freight operations result from improved, real-time electronic exchange of, and acting upon, data and information. Information technology innovations enable or will require the electronic exchange of data and information concerning:

- cargo, vehicle and driver identification and status;

- vehicle location;
- current traffic conditions;
- optimal routing, taking into consideration the availability of loads and appropriate equipment to move them, traffic and weather conditions, the nature of the cargo being transported, using routing algorithms or "artificial intelligence" (so-called "real-time routing");
- optimal routing of cargo (package or whole shipments);
- optimal routing of load units (trailers, containers, swap bodies, etc).

Here are the main innovations in information technology:

1. **Automatic vehicle identification:** transmits vehicle information (identification, size and weight, vehicle type or class);

2. **Bar coding:** provides product & picking information (identification, size and weight, origin and destination);

3. **Electronic data interchange:** transmits business data and provides electronic business documentation (purchase order; bill of lading; packing slip; invoice; electronic funds transfer);

4. **In-vehicle navigation systems:** provides driver with information (highway and traffic conditions; location (of vehicle, destination, etc.); alternate routes; automatic vehicle spacing);

5. **On-board computer (mobile IT):** monitors vehicle and driver behavior (vehicle speed; engine idle time; engine oil temperature & pressure; vehicle stop time and distance; driver's braking habits);

6. **Two-way communication systems:** exchange messages between dispatcher and driver (trip and shipment information; location (of vehicle, destination, etc.) including location of maintenance and repair shops).

Technological innovation provides an excellent opportunity to integrate the transport modes, optimise their performance, make them safer and help make the European transport system compatible with sustainable transport development.

Technology development in the transport field is estimated at around EUR 1.7 billion, in such areas as intermodality, energy and the technology of means of transportation, including telematics applications.

The strategic objectives deal with the reduction of greenhouse gases and pollutant emissions, the security of energy supply and the balanced use of the various transport modes. The research is focused on actions to develop renewable energy sources and on cleaner and more efficient en-

ergy use, especially in urban areas, and to develop new transport concepts that are cleaner and more energy efficient.

The development of a new generation of hybrid electric cars (electric motor combined with a heat engine) and cars which run on natural gas or, in the longer term, hydrogen fuel cells, looks very promising.

Technological developments enhance the usual methods of control and penalties, with the introduction of automatic devices and onboard driving aids. In the same context, the eventual fitting in road vehicles, as in other forms of transport, of black boxes to record parameters which help explain the causes of accidents, will make motorists more responsible and enable more effective prevention measures to be taken. The introduction of electronic driving licenses could also help with the enforcement of penalties, such as the immobilisation of vehicles whose drivers have lost their licenses.

Intelligent transport systems are another opportunity. In this context, it would be useful to encourage the introduction of active safety systems for all new vehicles. Fitted with innovative technologies, for example, in the area of traffic management and collision-avoidance systems, such vehicles hold out the prospect of road safety being improved by 50%.

Technological progress should also increase vehicles' impact resistance thanks to the development of new materials and the introduction of new advanced design processes for structural integrity. Current progress with tyres (reduced water projection for HGV tyres, improved road holding on slippery surfaces, warning system to indicate under-inflated tyres) should in the short term make for reduced fuel consumption and rolling noise while maintaining a high level of safety. This should produce a 10% saving on fuel and around 1 000 fewer deaths per year.

Protection of vehicle occupants in the event of impact is progressing remarkably. Electronic systems will enable new smart protection devices (airbags for example) to adjust for the number of vehicle occupants, their morphology and the nature of the impact so as to provide more tailored protection. Reminders to put safety belts on must become standard vehicle equipment. In Sweden, 95% of car occupants wear their seatbelts. However, half of all those killed in accidents were not wearing their seatbelts at the time of the accident.

Finally, as the volume of traffic increases, better vehicle-speed management is an essential aspect of safety that will also help tackle conges-

tion. In addition to improved road safety, observation of speed limits will also reduce greenhouse gas emissions significantly. The most promising prospects here are offered by new technologies that can determine optimum speed at any moment with reference to traffic conditions, road features and external conditions (such as weather) and pass the information on to drivers by way of information display boards or on-board communication systems. Roads and vehicles throughout the Union need to be equipped with these new technologies as soon as possible, and information systems made accessible to everyone.

**Ex. 6. Provide answers to the following questions.**

1. What is 'information technology'?
2. What do information technology innovations enable?
3. What are the main innovations in information technology?
4. What does technological innovation provide?
5. Protection of vehicle occupants in the event of impact is progressing remarkably, isn't it?

**Ex. 7. Substitute the words in Russian with their appropriate equivalents in English.**

1. Technological innovation (обеспечивает) an excellent (возможность) to integrate the (виды транспорта), make them safer and help make the European transport system (совместимой) with (устойчивое) transport development. 2. (Бортовой компьютер) monitors vehicle and (поведение водителя): vehicle speed; engine (время простоя); (расстояние); driver's (стиль вождения). 3. In addition to improved (безопасность дорог), observation of (ограничение скорости) will also (уменьшит) greenhouse gas (выбросы) significantly. 4. The most (обещающий) prospects are offered by new technologies that can (определять) optimum speed at any moment with reference to (условия движения), (характеристиками дорог) and external conditions and pass the information on to drivers by way of information display boards or (бортовая система связи). 5. Technological (разработки) enhance the usual methods of control and (штрафов), with the introduction of automatic devices and (бортовых вспомогательных средств вождения). 6. As the (объем движения) increases, better (управление скоростью автомобиля) is an essential aspect of (безопасность) that

will also help (решать проблему заторов). 7. IT is instrumental in supporting the basic (сделки) associated with (распределением), transport and (финансовое урегулирование); fleet (техническое обслуживание) and monitoring. 8. (Защита) of vehicle (пассажиров) (в случае столкновения) is progressing remarkably. 9. Information technology innovations (требуют) the electronic (обмен данных) and information concerning: (груз); vehicle location; current (условий движения); optimal (схемы движения груза). 10. The eventual (установка) in road vehicles, as in other forms of transport, of (черных ящиков) to record parameters which help explain the (причина аварий), will make motorists more (ответственный) and enable more effective (профилактические меры) to be taken.

**Ex. 8. Fill in the blanks with the appropriate prepositions.**

1. Roads and vehicles ... Europe need to be equipped ... these new technologies as soon as possible. 2. It would be useful to encourage the introduction ... active safety systems ... all new vehicles. 3. Reminders to put safety belts ... must become standard vehicle equipment. 4. Protection ... vehicle occupants ... the event ... impact is progressing remarkably. 5. Half ... all those killed ... accidents were not wearing their seatbelts ... the time ... the accident. 6. Information technology is instrument ... supporting the basic internal and inter-company transactions associated ... transport and related services. 7. Technological developments enhance the usual methods ... control and penalties ... the introduction of automatic devices. 8. The research is focused ... actions to develop renewable energy sources and ... cleaner and more efficient energy use, especially ... urban areas. 9. The strategic objective deals ... the security ... energy supply. 10. The benefits ... all information technology innovations ... road freight operations result ... improved, real-time electronic exchange ... data and information. 11. Two-way communication systems exchange messages ... dispatcher and driver ... location ... vehicle, destination, etc.

**Ex. 9. Translate the following noun+noun constructions into Russian.**

1. mass production industries

10. manufacturing flow management

- |  |   |
|--|---|
| 2. material flow system                | 11. demand forecast data                      |
| 3. road transport markets              | 12. freight transport services                |
| 4. market observation system           | 13. raw material inventory stock level        |
| 5. public transport users              | 14. transport sector energy consumption       |
| 6. transport logistics characteristics | 15. door-to-door delivery system              |
| 7. supply chain management             | 16. air traffic control system                |
| 8. customer relationship management    | 17. traffic accident statistics               |
| 9. Road safety audits and inspections  | 18. supply chain business process integration |

**Ex. 10. Translate the sentences into Russian, paying attention to the infinitive.**

1. Transport telematics is assumed to contribute to goal achievement in the transport sector in Norway. 2. Even though the drivers seem to acknowledge falling asleep as an important cause in road accidents, few drivers seem aware of the severity of sleep-related accidents. 3. Road transport growth is expected to soar in Eastern Europe. 4. Logistics experts consider it is increasingly important for manufacturers, distributors and retailers to focus on efficiency in seeking out solutions to meet their specific transportation requirements. 5. Very few measures have been taken to provide a basic regulation of social conditions in the road transport sector. 6. What is needed is to make rail transport once again competitive enough to remain one of the leading players in the transport system in the enlarged Europe. 7. The concept of containerization is considered to be the key innovation in the field of logistics which has revolutionized freight handling in the twentieth century. 8. As the Internet and other new communication technologies are developing, it is expected to bring more innovations which further simplify the tasks of logistics. 9. Today various mathematical and analytical methods are available to solve the problems of vehicle routing.

**Ex. 11. Translate the sentences into Russian, paying attention to the use of the verb 'to have' in different functions.**

1. Rail has always been far safer than road. 2. A free exchange of persons, commodities and capital has far reaching implications for intra-European trade and transport. 3. Around 1/3 of passengers have to change buses in the course of their actual journey. 4. With the convergence of Europe's economies, trade relations and the subsequent need for transport of goods and passengers have immensely increased. 5. Governmental authorities in charge of public works have the legal obligation to ensure road safety at any time and without restriction. 6. Road safety audits and inspections have to be implemented to guarantee continuous high safety standards and to supervise the overall road safety criteria. 7. Today containerization has become the integral part of logistics, which has revolutionized the cargo shipping. 8. To build up inventory sufficient capital has to be tied up for a length of time. 9. In business, logistics may have either internal focus (inbound logistics) or external focus (outbound logistics) covering the flow and storage of material from point of origin to point of consumption. 10. Sophisticated control systems have to be developed and used in the nearest future.

**Ex. 12. Give the main points of the text in 4-7 sentences. Use the following clichés:**

*The text deals with... . The author points out that... . Attention is drawn to the fact that... . It is pointed out that... . It should be noted that... . The author comes to the conclusion that... . I find the text rather/very... .*

**Ex. 13. Translate the following text into Russian. Use the dictionary if necessary.**

The Department of Transportation has contributed \$18mln towards the project as part of its efforts to find new ways to cut congestion in big cities. Donald Shoup, a professor of urban planning at the University of California, Los Angeles, thinks parking should be made easier to find so as to help public transport flow more freely and to reduce the amount of carbon dioxide spewed out by motorists in their endless searching for somewhere to stop.

The SFpark project will begin early in 2009 with a new network of pavement sensors in 6,000 of San Francisco's metered parking spaces and 11,500 of its off-street car parks and garages. These sensors will detect when a space is taken and relay that information to a central database. From there, information about vacant parking spots will pass to drivers in several ways. The most basic will be through a network of road signs that will indicate areas with parking places. Eventually, however, officials want to provide web and mobile phone services that display the availability of parking block by block on a colour-coded map, much like the traffic maps now offered by Google.

The city also plans to make parking metres capable of two-way communications. This will allow them to accept credit and debit card payments, seek maintenance and (perhaps to less acclaim) alert Lovely Rita when a parking ticket needs to be issued. Crucially, such metres can also be changed remotely to charge different rates according to demand at different times of the day. "If you get the price right, nobody will have to cruise," adds Dr Shoup.

A number of companies already have detection systems at work. Streetline's technology, for instance, presents networks of small, cheap, low-powered sensors. The company's pavement sensors will run for more than five years on two AA batteries. Like those from other companies, they detect a disturbance in the magnetic field from a hunk of metal (that is, a car). Data can hop from sensor to sensor until it makes its way to a gateway, a small box sitting on top of a streetlamp or traffic-signaling box. From there, it can travel to the central database via the mobile-phone network or municipal Wi-Fi.

Streetline's sensors have already been tested in parts of San Francisco and by the end of the year they will be deployed in 3,500 parking spaces in Los Angeles. The company hopes eventually to create networks that monitor other bits of a city's infrastructure too, including traffic flows, street lamps and water mains.

VehicleSense is testing its wireless-sensor networks in parking areas along Interstate 95 in south-eastern Massachusetts. The idea is to give fatigued truckers better information on where they can pull off the road to get some sleep. This technology can go only so far towards relieving congestion and helping drivers find parking spaces.



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ENGLISH FOR TRANSPORTATION

АНГЛИЙСКИЙ ЯЗЫК ДЛЯ СПЕЦИАЛИСТОВ  
ПО ОРГАНИЗАЦИИ ПЕРЕВОЗОК

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