



# Logistics

# 1

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# **Historical outline of transport and shipping**

**1. Discuss with your partner what you know about the history of the transportation in the Czech Republic. Share your knowledge with the class.**

**2. Read the article below about the transportation within the U.S.**

### *Domestic Transportation - some History*

Transportation within the borders of the U.S. used to be a highly regulated industry. In 1887, the Act to Regulate Commerce first regulated the railroads. This act created the once imposing Interstate Commerce Commission (ICC). The Act and the Commission were created to curb abuses within the rail industry. Primary among these were: discrimination favouring one shipper over another; rebates given by a carrier to a shipper or prospective shipper to obtain or maintain business; special rates favouring certain shippers; rates were not published; and the rate system was confusing and complex.

In 1935, congress passed regulation for the motor carrier industry. Known as the Motor Carrier Act – 1935, its purpose was to bring stabilization to an industry that viewed as chaotic at the time. The act defined three different classes of carriers: common carriers, contract carriers and private carriers. Briefly, a common carrier is one who holds his services out to the general public. A contract carrier is one who offers its services to one or a limited number of persons under the terms of a contract. Finally, a private carrier is a company that operates its own fleet of vehicles.

Congress initially regulated the domestic air carrier industry in the 1920's and 1930's. The first comprehensive legislation passed was the Civil Aeronautics Act of 1938. This created the Civil Aeronautics Board as the governing authority for domestic air transportation. The Federal Aviation Act supplemented this law in 1958.

In the late 1970's, the transportation industry and the federal government realized that the current regulatory environment was an impediment to competition and a movement began to deregulate the industry.

In 1977, air cargo was the first transportation mode to be deregulated. Then in 1980, the floodgates opened and the rail industry was deregulated with the passing of the Staggers Rail Act of 1980 and motor carriers were deregulated by the Motor Carrier Act of 1980. This trend continued through the 1980's.

In 1985, the governing body for the airline industry, the Civil Aeronautics Board, was sunsetted (dissolved). This was followed-up by the Federal Aviation Act of 1994, which eliminated all interstate economic regulation of the industry by the federal government.

The motor carrier industry was the subject of a number of pieces of legislation in the early- to mid- 1990's. The Negotiated Rates Act (NRA) of 1993 was implemented with the purpose of protecting shippers from a flood of overcharge claims from bankrupt carriers. The overcharge claims resulted from the then illegal practice of implementing discounts without filing them with the Interstate Commerce Commission (ICC). Then in 1994, congress passed the Trucking Industry Regulatory Reform Act (TIRRA). The main provision of this law was to repeal the filed rate doctrine. With the implementation of this law, a motor carrier was no longer required to file its rates and rules with the ICC.

Finally, in 1995, the ICC Termination Act was passed eliminating the Interstate Commerce Commission. The remaining powers of this once formidable organization were transferred to the Surface Transportation Board (STB), which is an independent agency within the Department of Transportation (DOT). A further consequence of this act was the elimination of the distinction between common and contract carriers.

(Stroh, 2006)

### Vocabulary

<b>within</b> ( <i>wɪ 'ðɪn</i> )	v rámci, uvnitř
<b>act (n)</b> ( <i>ækt</i> )	zákon (zde)
<b>carrier</b> ( <i>'kæriə</i> )	dopravce
<b>rate</b> ( <i>reit</i> )	cenová relace, sazba
<b>to supplement</b> ( <i>tu: 'sʌplɪmənt</i> )	dodat, doplnit
<b>impediment</b> ( <i>ɪm 'pedɪmənt</i> )	překážka
<b>cargo</b> ( <i>'kɑ:gəʊ</i> )	náklad
<b>open the floodgates</b> ( <i>'əʊpən ði: 'flʌdʒeɪts</i> )	přípravit živnou půdu
<b>overcharge claim</b> ( <i>ˌəʊvə 'tʃɑ:ʒ kleɪm</i> )	předražený nárok / požadavek
<b>to file</b> ( <i>tu: faɪl</i> )	zařadit, zapsat, zaregistrovat
<b>to dissolve</b> ( <i>tu: dɪ 'zɒlv</i> )	rozpustit, zrušit
<b>to curb</b> ( <i>tu: kɜ:b</i> )	potlačit, omezit

3. In pairs / small groups try to elicit the meaning of underlined expressions.

#### 4. Add the missing endings.

In 1935, congress pass\_\_\_\_ regulation for the motor carrier industry. Known as the Motor Carrier Act – 1935, its purpose was to bring stabilization to an industry that view\_\_\_\_ as chaotic at the time. The act defin\_\_\_\_ three different classes of carriers: common carriers, contract carriers and private carriers. Briefly, a common carrier is one who hold\_\_ his services out to the general public. A contract carrier is one who offer\_\_ its services to one or a limited number of persons under the terms of a contract. Finally, a private carrier is a company that operate\_\_ its own fleet of vehicles.

#### 5. Read the article one more time and then rewrite it. Your schoolmate will add, if needed, the missing information.

#### 6. In small groups think of five questions related to the article (using at least in two of them USED TO + INFINTIVE) . The rest of class will answer them.

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) \_\_\_\_\_

#### Short topic outline

##### Historical outline of transportation and shipping

1887 - the Act to Regulate Commerce

Abuses in the railway industry:

- discrimination
- rebates
- special rates favouring certain shippers
- not published rates
- the confusing rate system

1935 – motor carrier industry regulation

1938 - Civil Aeronautics Act - first comprehensive legislation

1977- air cargo the first transportation mode deregulated

1990s – a lot of pieces of legislation in the motor carrier industry

## Short grammar outline

### Used to + infinitive

#### Use + meaning

- the structure is used to express events in the past, or things which happened (regularly) which are not true anymore

#### Form

**Positive:** He used to go to the theatre with his wife.

**Negative:** They didn't (did not) use to read fairy-tales.

**Question:** Did they use to go by train?

## Test

- 1 Would you like some more coffee? There's still ..... left.  
A a little B little C a few D few
- 2 She's already ..... her mother.  
A so tall than B as tall than C so tall as D as tall as
- 3 Mary wants to know if she can bring a friend of ..... to the party.  
A her B him C hers D his
- 4 My brother, ..... lives in Spain, is coming to visit us.  
A which B that C what D who
- 5 If you ..... soon, we'll miss the start of the film.  
A aren't coming B don't come C won't come D wouldn't come
- 6 I don't allow my children ..... so badly.  
A that they behave B behave C to behave D behaving
- 7 I ..... watching that programme because it's very interesting.  
A amuse B please C smile D enjoy
- 8 ..... that you would be at the meeting.  
A I was said B It was said me C I was told D will arrive to

9 I'll ring you when I ..... the hotel.  
A arrive at B will arrive at C arrive to D will arrive to

10 She's got a much more interesting ..... in the company now.  
A job B work C employ D reward

(Fowler, 2005)

## Key

### 4. Add the missing endings.

In 1935, congress pass#ed regulation for the motor carrier industry. Known as the Motor Carrier Act – 1935, its purpose was to bring stabilization to an industry that view#ed as chaotic at the time. The act defin#ed three different classes of carriers: common carriers, contract carriers and private carriers. Briefly, a common carrier is one who hold#s his services out to the general public. A contract carrier is one who offer#s its services to one or a limited number of persons under the terms of a contract. Finally, a private carrier is a company that operate# s its own fleet of vehicles.

## Test

1 A

2 D

3 C

4 D

5 B

6 C

7 D

8 C



9 A

10 A

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# **Transport technology**

**1. Discuss with your partner the outstanding products of the transport technology in the Czech Republic (Czechoslovakia). Share your knowledge with the class.**

**2. Read the article giving milestones of world transport technology.**

### *Timeline of transport technology*

#### *Antiquity*

- Stone Age – Dugout canoes and walked
- 5000 BC - Wheels were developed
- 3500 BC – Wheeled carts are invented in Mesopotamia
- 3500 BC – River boats are invented
- 3100 BC – Horses are tamed and used for transport in Botai Egypt
- 2000 BC – Chariots built by Indo-Iranians
- 500 BC – Postal system developed in Persian Empire
- 312 BC – One of the earliest paved roads still maintained, the Appian Way, is built; the Romans eventually built over 50,000 miles of paved Roman roads
- 312 BC - First Roman Aqueduct
- 236 BC – The date ascribed by Vitruvius for the first documented elevator, which he reports as having been built by Archimedes.

#### *Middle Ages*

- 1044 – Compass invented in China
- 13th century (or before) – Rocket invented in Afghanistan.
- late 15th century - European sailing ships become advanced enough to reliably cross oceans.

#### *17th century*

- 1620 – Cornelius Drebbel builds the world's first known submarine
- 1662 – Blaise Pascal invents a horse-drawn public bus which has a regular route, schedule, and fare system

### *18th century*

- 1783 – Joseph Montgolfier and Étienne Montgolfier launch the first hot air balloons
- 1784 – William Murdoch built a working model of a steam carriage

### *19th century*

- 1801 – Richard Trevithick ran a full-sized steam 'road locomotive' on the road in England
- 1804 – Richard Trevithick built a prototype steam-powered railway locomotive
- 1807 –Nicéphore Niépce installed his Pyréolophore internal combustion engine in a boat and powered up the river Saone in France.
- 1807 – Isaac de Rivas made a hydrogen gas powered internal combustion engine and mounted it on a vehicle.
- 1814 – George Stephenson built the first practical steam-powered railway locomotive "Blutcher" at Killingworth Colliery.
- 1816 – The most likely originator of the bicycle is the German, Baron Karl von Drais, who rode his 1816 machine while collecting taxes from his tenants.
- 1819 – SS *Savannah*, the first vessel to cross the Atlantic Ocean partly under steam power.
- 1830 - Liverpool Manchester Railway opens. First public transport system without animal traction, first public line with no rope hauled sections for main journey, first railway between 2 large towns, first timetabled trains, first railway stations, first train faster than a mail coach, first tunnels under streets, first proper modern railway
- 1838 – Isambard Kingdom Brunel's SS *Great Western*, the first purpose-built transatlantic steamship, inaugurates the first regular transatlantic steamship service.
- 1852 – Elisha Otis invents the safety elevator.
- 1853 – Sir George Cayley built and demonstrated the first heavier-than-air aircraft (a glider)
- 1862 – Étienne Lenoir made a gasoline engine automobile
- 1867 - first modern motorcycle was invented
- 1868 – George Westinghouse invented the compressed-air brake for railway trains.
- 1883 - Karl Benz invents the first car powered by an internal combustion engine, he

called it the Benz Patent Motorwagen.

- 1894 – Hildebrand & Wolfmüller became the first motorcycle available to the public for purchase.
- 1897 – Charles Parsons' *Turbinia* the first vessel to be powered by a steam turbine, makes her debut.
- 1899 - Ferdinand von Zeppelin builds the first successful airship

### *20th century*

- 1900 – Ferdinand von Zeppelin launches the first successful airship
- 1903
  - Orville Wright and Wilbur Wright fly the first motor-driven airplane
  - Diesel engine tested in a canal boat by Rudolph Diesel, Adrian Bochet and Frederic Dyckhoff
- 1908 – Henry Ford develops the assembly line method of automobile manufacturing with the introduction of the Ford Model T
- 1935 – First flight of the DC-3, one of the most significant transport aircraft in the history of aviation
- 1939 - First jet engine powered aircraft, the Heinkel He 178, takes flight.
- 1942 – V2 rocket covers a distance of 200 kilometres (120 mi)
- 1947 – First supersonic manned flight
- 1955 – The first nuclear-powered vessel, the USS *Nautilus*, a submarine, is launched
- 1957
  - Sputnik 1, the first man-made satellite to be launched into orbit
  - First flight of the Boeing 707, the first commercially-successful jet airliner
- 1961 – Vostok 1, the first manned space mission, designed by Sergey Korolyov and Kerim Kerimov, makes two orbits around the Earth
- 1969
  - First flight of the Boeing 747, the first commercial wide-body airliner.
  - First manned Moon landing
- 1976 – Concorde makes the world's first commercial passenger-carrying supersonic flight
- 1994 - The Channel Tunnel opens

## 21st Century

- 2002 - the Segway PT self-balancing personal transport was launched by inventor Dean Kamen
- 2004 – the first commercial high speed Maglev train starts operation between Shanghai and its airport.
- 2004 - the first flight of Space, the first privately funded human spaceflight (21 June 2004).

(Timeline of transportation technology, Wikipedia, 2014)

## Vocabulary

<b>dugout</b> ( <i>'dʌɡaʊt</i> )	kánoe z vydlabaného kmene
<b>cart</b> ( <i>ka:t</i> )	povoz, kára
<b>chariot</b> ( <i>'ʃæriət</i> )	vůz (válečný)
<b>paved</b> ( <i>peɪvd</i> )	vydlážděný
<b>to ascribe</b> ( <i>tu: ə 'skraɪb</i> )	připisovat, přisuzovat
<b>rocket</b> ( <i>'rɒkɪt</i> )	raketa
<b>to launch</b> ( <i>tu: lɔ:nʃ</i> )	zavést, představit (na trhu)
<b>carriage</b> ( <i>'kæriɪdʒ</i> )	kočár, drožka, vagón
<b>to run</b> ( <i>tu: rʌn</i> )	provozovat
<b>combustion engine</b> ( <i>kəm 'bʌsʃɪn 'endʒɪn</i> )	spalovací motor
<b>internal combustion engine</b> ( <i>ɪn 'tɜ:nəl kəm 'bʌsʃɪn 'endʒɪn</i> )	motor s vnitřním spalováním
<b>to mount</b> ( <i>tu: maʊnt</i> )	namontovat, přimontovat
<b>tenant</b> ( <i>'tenənt</i> )	nájemce
<b>vessel</b> ( <i>'vesəl</i> )	loď, plavidlo
<b>hauled</b> ( <i>hɔ:ld</i> )	tažený
<b>aircraft</b> ( <i>'eəkra:ft</i> )	letadlo, letoun
<b>gasoline</b> ( <i>'gæsəli:n</i> )	benzín
<b>compressed-air brake</b> ( <i>kəm 'prest eə' breɪk</i> )	pneumatická brzda, vzduchová brzda
<b>assembly line</b> ( <i>ə 'sembli laɪn</i> )	montážní / výrobní linka

<b>manned</b> ( <i>mænd</i> )	s lidskou posádkou
<b>jet</b> ( <i>dʒet</i> )	tryskáč
<b>wide-body</b> ( <i>waid 'bɒdi</i> )	široké tryskové letadlo
<b>supersonic</b> ( <i>,su.pə'sɒnik</i> )	nadzvukový, supersonický

**3. In pairs / small groups try to elicit the meaning of underlined expressions.**

**4. Fill in the gaps with the expressions below.**

*assembly aviation commercial covers engine into introduction jet launches manned opens takes*

- 1900 – Ferdinand von Zeppelin \_\_\_\_\_ the first successful airship
- 1903 o Orville Wright and Wilbur Wright fly the first motor-driven airplane o Diesel \_\_\_\_\_ tested in a canal boat by Rudolph Diesel, Adrian Bochet and Frederic Dyckhoff
- 1908 – Henry Ford develops the \_\_\_\_\_ line method of automobile manufacturing with the \_\_\_\_\_ of the Ford Model T
- 1935 – First flight of the DC-3, one of the most significant transport aircraft in the history of \_\_\_\_\_
- 1939 - First jet engine powered aircraft, the Heinkel He 178, \_\_\_\_\_ flight.
- 1942 – V2 rocket \_\_\_\_\_ a distance of 200 kilometres (120 mi)
- 1947 – First supersonic \_\_\_\_\_ flight
- 1955 – The first nuclear-powered vessel, the USS Nautilus, a submarine, is launched
- 1957 o Sputnik 1, the first man-made satellite to be launched \_\_\_\_\_ orbit o First flight of the Boeing 707, the first commercially-successful \_\_\_\_\_ airliner
- 1961 – Vostok 1, the first manned space mission, designed by Sergey Korolyov and Kerim Kerimov, makes two orbits around the Earth
- 1969 o First flight of the Boeing 747, the first \_\_\_\_\_ wide-body airliner.  
o First manned Moon landing
- 1976 – Concorde makes the world's first commercial passenger-carrying supersonic flight
- 1994 - The Channel Tunnel \_\_\_\_\_

**5. Read the article one more time and choose one significant invention for you and google more information about it. Then in pairs talk about your inventions, why you have chosen it, the pros and cons, and so on. Write down your findings.**



**6. In small groups think of five questions related to the article WH-QUESTIONS . The rest of class will answer them.**

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) \_\_\_\_\_

### **Short topic outline**

#### **Transport technology**

##### Milestones

**Antiquity** – wheels, river boats, carts, paved roads

**Middle-Ages** – compass, rocket, advanced ships

**17<sup>th</sup> century** – submarine, horse-drawn public bus

**18<sup>th</sup> century** – hot-air balloons, steam carriage

**19<sup>th</sup> century** - steam-powered railway locomotive, internal combustion engine, bicycle, transatlantic steamship, safety elevator, gasoline engine automobile, compressed-air brake, airship

**20<sup>th</sup> century** - motor-driven airplane, assembly line method, first supersonic manned flight, first nuclear-powered vessel, wide-body airliner,

**21<sup>st</sup> century** - Segway PT self-balancing personal transport, first commercial high speed Maglev train

## Short grammar outline

### Wh-questions

**What** – asking about information

**What...for, Why** – asking about the reason

**When** – asking about the time

**Where** – asking about the place

**Which** – asking about the properties, characteristics

**Who** – asking about a person (subject)

**Whom** – asking about a person (object)

**Whose** – asking about the ownership

**How far** – asking about the distance

**How long** – asking about the length

**How much** – asking about quantity (uncountable)

**How many** - asking about quantity (countable)

**How old** – asking about the age

### Test

- 1 Can you lend me ..... scissors?  
A a B two C a couple of D a pair of
- 2 It will cost a lot of money to have .....  
A that work done B that work made C done that work D made that work
- 3 I ..... have tea than coffee.  
A would like more B prefer C had better D would rather
- 4 Good ..... ! I hope you win.  
A sort B wish C luck D chance
- 5 Take an umbrella ..... it rains while you are out.  
A if B in case C because D for

- 6 I couldn't hear what she was .....  
 A telling B saying C talking D speaking
- 7 You nearly had an accident. You ..... drive more carefully.  
 A would B ought C should D had to
- 8 That's the hotel ..... we stayed last year.  
 A which B that C chat D where
- 9 I had fallen asleep and didn't realise at first that the phone .....  
 A rang B was ringing C has rung D had rung
- 10 I broke a ..... while I was doing the washing-up  
 A glass wine B wine glass C glass for wine D glass of wine

(Fowler, 2005)

## Key

### 4. Fill in the gaps with the expressions below.

- 1900 – Ferdinand von Zeppelin #launches the first successful airship
- 1903
  - o Orville Wright and Wilbur Wright fly the first motor-driven airplane
  - o Diesel #engine tested in a canal boat by Rudolph Diesel, Adrian Bochet and Frederic Dyckhoff
- 1908 – Henry Ford develops the #assembly line method of automobile manufacturing with the #introduction of the Ford Model T
- 1935 – First flight of the DC-3, one of the most significant transport aircraft in the history of #aviation
- 1939 - First jet engine powered aircraft, the Heinkel He 178, #takes flight.
- 1942 – V2 rocket #covers a distance of 200 kilometres (120 mi)
- 1947 – First supersonic #manned flight
- 1955 – The first nuclear-powered vessel, the USS Nautilus, a submarine, is launched
- 1957
  - o Sputnik 1, the first man-made satellite to be launched #into orbit
  - o First flight of the Boeing 707, the first commercially-successful #jet airliner

- 1961 – Vostok 1, the first manned space mission, designed by Sergey Korolyov and Kerim Kerimov, makes two orbits around the Earth
  - 1969
    - o First flight of the Boeing 747, the first #commercial wide-body airliner.
    - o First manned Moon landing
  - 1976 – Concorde makes the world's first commercial passenger-carrying supersonic flight
- 1994 - The Channel Tunnel #opens

**Test**

1 D

2 A

3 D

4 C

5 B

6 B

7 C

8 D

9 B

10 B

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# **Transport infrastructure**

**1. Before reading the article think in pair about a definition of the word INFRASTRUCTURE.**

**2. Read the article below about the transport infrastructure.**

### *Transport infrastructure*

- Road and highway networks, including structures (bridges, tunnels, retaining walls), signage and markings, electrical systems (street lighting and traffic lights), edge treatments (curbs, sidewalks, landscaping), and specialized facilities such as road maintenance depots and rest areas
- Mass transit systems (Commuter rail systems, subways, tramways, trolleys, City Bicycle Sharing system, City Car Sharing system and bus transportation)
- Railways, including structures, terminal facilities (rail yards, railway stations), level crossings, signalling and communications systems
- Canals and navigable waterways requiring continuous maintenance (dredging, etc.)
- Seaports and lighthouses
- Airports, including air navigational systems
- Bicycle paths and pedestrian walkways, including pedestrian bridges, pedestrian underpasses and other specialized structures for cyclists and pedestrians
- Ferries

### *Communications infrastructure*

- Postal service, including sorting facilities
- Telephone networks (land lines) including telephone exchange systems
- Mobile phone networks
- Television and radio transmission stations, including the regulations and standards governing broadcasting
- Cable television networks including receiving stations and cable distribution networks (does not include content providers or "networks" when used in the sense of a specialized channel such as CNN or MTV)

- The Internet, including the internet backbone, core routers and server farms, local internet service providers as well as the protocols and other basic software required for the system to function (does not include specific websites, although may include some widely used web-based services, such as social network services and web search engines)
- Communications satellites
- Undersea cables
- Major private, government or dedicated telecommunications networks, such as those used for internal communication and monitoring by major infrastructure companies, by governments, by the military or by emergency services, as well as national research and education networks
- Pneumatic tube mail distribution networks

( Infrastructure, Wikipedia, 2014)

### Vocabulary

<b>retaining wall</b> ( <i>ri 'teɪnɪŋ wɔ:l</i> )	zadržující zeď, štětovnice
<b>edge</b> ( <i>edʒ</i> )	kraj, okraj, hranice
<b>treatment</b> ( <i>'tri:tmənt</i> )	zacházení, zpracování
<b>curb</b> ( <i>kɜ:b</i> )	obrubník
<b>rail yard</b> ( <i>reɪl jɑ:d</i> )	odstavné kolejiště
<b>dredging</b> ( <i>'dredʒɪŋ</i> )	bagrování
<b>underpass</b> ( <i>'ʌndəpɑ:s</i> )	podchod
<b>internet backbone</b> ( <i>'ɪntənət 'bækbəʊn</i> )	opora / páteř internetu
<b>core router</b> ( <i>kɔ:'r 'routər</i> )	stěžejní směrovač
<b>pneumatic tube mail</b> ( <i>nju:'mæɪtɪk tju:b meɪl</i> )	potrubní pošta
<b>signage</b> ( <i>'saɪnɪdʒ</i> )	značky, system značek

**3. In pairs / small groups try to elicit the meaning of underlined expressions.**



**4. Fill in the gaps with the expressions below.**

*facilities highway maintenance maintainable navigable other paths retaining Sharing treatments*

- Road and \_\_\_\_\_ networks, including structures (bridges, tunnels, \_\_\_\_\_ walls), signage and markings, electrical systems (street lighting and traffic lights), edge \_\_\_\_\_ (curbs, sidewalks, landscaping), and specialized facilities such as road \_\_\_\_\_ depots and rest areas
- Mass transit systems (Commuter rail systems, subways, tramways, trolleys, City Bicycle \_\_\_\_\_ system, City Car Sharing system and bus transportation)
- Railways, including structures, terminal \_\_\_\_\_ (rail yards, railway stations), level crossings, signalling and communications systems
- Canals and \_\_\_\_\_ waterways requiring continuous \_\_\_\_\_ (dredging, etc.)
- Seaports and lighthouses
- Airports, including air navigational systems
- Bicycle \_\_\_\_\_ and pedestrian walkways, including pedestrian bridges, pedestrian underpasses and \_\_\_\_\_ specialized structures for cyclists and pedestrians
- Ferries

**5. Read the article one more time and choose one item either from transport or communication infrastructure and gather in small groups as much information as possible within the place you live (or the Czech Republic) and then share it with the rest of the class. Afterwards, write the information down.**

**6. In small groups think of five questions related to the article (using QUESTION TAGS) . The rest of class will answer them.**

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_
- 4) \_\_\_\_\_
- 5) \_\_\_\_\_

## Short topic outline

### Transport infrastructure

#### 1) Transport infrastructure

Road and highway networks

Mass transit systems

Railways

Canals and navigable waterways

Seaports and lighthouses

Airports, including air navigational systems

Bicycle paths and pedestrian walkways

Ferries

#### 2) Communication infrastructure

Postal service

Telephone networks

Mobile phone networks

Television and radio transmission stations

Cable television

Communications satellites

Undersea cables

Pneumatic tube mail distribution networks

## Short grammar outline

### Question tags

- are made with an auxiliary verb and a pronoun
- if the sentence is negative, the positive question tag is used
- if the sentence is positive, the negative question tag is used

He is here, isn't he?

They will grow carrot next year, won't they?

He cannot leave in the middle of presentation, can he?

I am pretty good at what I'm doing, **aren't I?**

They used to travel by plane, didn't they?

Open the window, will you?

Let's leave, shall we?

### Test

- 21 Would you mind ..... the children while I'm out?  
A looking after B looking for C caring D taking care
- 22 I'll write him a note ..... he'll know where we are.  
A that B so C for D as
- 23 That man ..... my purse.  
A robbed me B stole me C robbed D stole
- 24 They ..... on holiday and ..... in love.  
A found ... got B knew ... became C met ... fell D saw ... grew
- 25 We had a lovely time. It was ..... good party.  
A so B such C a so D such a
- 26 They will never agree because they hate ..... other.  
A each B each to C one to D to one
- 27 The furniture for their house has cost them a large ..... of money.  
A lot B amount C number D piece
- 28 He's going to have a new ..... made to wear at the wedding.  
A dress B clothes C cloth D suit
- 29 I'm going to the supermarket ..... a few things.  
A to buy B for buy C for buying D in order buy
- 30 I'll be sad when I have to give ..... playing tennis.  
A off B in C out D up

(Fowler, 2005)

## Key

1. infrastructure – the basic systems and services that are necessary for a country or an organization to run smoothly

(Oxford's Advanced Learner's Dictionary, 2005)

## 4. Fill in the gaps with the expressions below.

- Road and #highway networks, including structures (bridges, tunnels, #retaining walls), signage and markings, electrical systems (street lighting and traffic lights), edge #treatments (curbs, sidewalks, landscaping), and specialized facilities such as road #maintenance depots and rest areas
- Mass transit systems (Commuter rail systems, subways, tramways, trolleys, City Bicycle #Sharing system, City Car Sharing system and bus transportation)
- Railways, including structures, terminal #facilities (rail yards, railway stations), level crossings, signalling and communications systems
- Canals and #navigable waterways requiring continuous #maintenance (dredging, etc.)
- Seaports and lighthouses
- Airports, including air navigational systems
- Bicycle #paths and pedestrian walkways, including pedestrian bridges, pedestrian underpasses and #other specialized structures for cyclists and pedestrians
- Ferries

## Test

1 A

2 B

3 D

4 C

5 D

6 A

7 B

8 D

9 A

10 D

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# **Transport organization**

1. Discuss with your partner the most interesting / boring / the newest / oldest / emptiest / fullest airport / port you have ever been to. Then share the experience of your schoolmate with the whole class.

2. Read the article below and order paragraphs in the second part (The organisation of a port).

### **The Organisation of an Airport**

An airport is the location where aircraft take off and land, where goods, passengers and their baggage transit. Aircraft may be stored or maintained at an airport, where we usually distinguish two main parts: an air side and a land side. In the former we find all the infrastructures and services that serve to move aircraft, runways, taxiways, aircraft parkings, aprons and the air traffic control system; in the latter there are all the facilities and services associated with passengers such as the access to the airport, the terminal footpaths and the car parks. Gates are instead usually considered the border between the two areas.

The airport ramp or apron is the area where aircraft are parked, unloaded or loaded, refuelled and boarded. The apron is not usually open to the general public and a license may be required to gain access.

The use of the apron may be controlled by the apron management service (apron control or apron advisory).

The apron is designated by the I.C.A.O. (International Civil Aviation Organization) as not being part of the manoeuvring area. All vehicles, aircraft and people using the apron are referred to as 'apron traffic'.

In the USA, the words 'apron' and 'ramp' are used interchangeably in most circumstances. Generally, the pre-flight activities are carried out on ramps and areas for parking & maintenance are called aprons.

(D'Acunto, 2012)

### **The Organisation of a Port**

A  This expansion makes it imperative for the port to have efficient, up to date terminal buildings and also adequate space for vehicle ferry lines and for customer facilities for disembarking vehicles. Container transport is an expanding segment of the port of Oslo.

B  The port currently has two container terminals, but development is underway to bring all container handling into one single terminal. When completed, this terminal will



have a total quay length of 700 metres with a minimum water depth of 12 metres. Ferry traffic into and out of Oslo is expanding all the time with newer and ever larger ferries being taken into service.

C  Oslo is Norway's busiest ferry port with four daily departures to Denmark and Germany. The ferries carry over 2.6 million passengers a year and 1.2 million tons of freight. The freight carried by these ferries constitutes a third of the general cargo handled by the port of Oslo.

D  Ferry traffic into and out of Oslo is expanding all the time with newer and ever larger ferries being taken into service.

(D'Acunto, 2012)

### Vocabulary

<b>to distinguish</b> ( <i>tu: di 'stɪŋgwɪʃ</i> )	rozlišit
<b>apron</b> ( <i>'eɪprən</i> )	parkovací plocha, rampa
<b>advisory</b> ( <i>əd 'vaɪzəri</i> )	poradenský, informační zpravodajství
<b>to designate</b> ( <i>tu: 'deɪzɪneɪt</i> )	ustanovit, určit, jmenovat
<b>carryout</b> ( <i>'kæriəʊt</i> )	provést, uskutečnit, vykonat
<b>freight</b> ( <i>fret</i> )	náklad, dopravné
<b>cargo</b> ( <i>'kɑ:gəʊ</i> )	náklad
<b>imperative</b> ( <i>ɪm 'perətɪv</i> )	pravidlo, řád, směrnice
<b>disembarking</b> ( <i>ˌdɪsm 'bɑ:kɪŋ</i> )	vylodění se
<b>segment</b> ( <i>'seɡmənt</i> )	část, díl
<b>handle by</b> ( <i>'hændl baɪ</i> )	mít na starosti, řídit

3. In pairs / small groups try to elicit the meaning of underlined expressions.

**4. Fill in the gaps with the expressions below.**

*as at by for In in of off on out to with*

An airport is the location where aircraft take \_\_\_\_\_ and land, where goods, passengers and their baggage transit. Aircraft may be stored or maintained \_\_\_\_\_ an airport, where we usually distinguish two main parts: an air side and a land side. In the former we find all the infrastructures and services that serve to move aircraft, runways, taxiways, aircraft parkings, aprons and the air traffic control system; in the latter there are all the facilities and services associated \_\_\_\_\_ passengers such as the access to the airport, the terminal footpaths and the car parks. Gates are instead usually considered the border between the two areas. The airport ramp or apron is the area where aircraft are parked, unloaded or loaded, refuelled and boarded. The apron is not usually open \_\_\_\_\_ the general public and a license may be required to gain access. The use of the apron may be controlled by the apron management service (apron control or apron advisory). The apron is designated \_\_\_\_\_ the I.C.A.O. (International Civil Aviation Organization) as not being part \_\_\_\_\_ the manoeuvring area. All vehicles, aircraft and people using the apron are referred to \_\_\_\_\_ 'apron traffic'. \_\_\_\_\_ the USA, the words 'apron' and 'ramp' are used interchangeably \_\_\_\_\_ most circumstances. Generally, the pre-flight activities are carried \_\_\_\_\_ \_\_\_\_\_ ramps and areas \_\_\_\_\_ parking & maintenance are called aprons.

**5. Imagine you are checking in at the airport. Role-play the dialogue with your partner. Afterwards, write your dialogue down.**

**6. In small groups think of five questions related to the article. The rest of class will answer them.**

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_
- 4) \_\_\_\_\_
- 5) \_\_\_\_\_

## Short topic outline

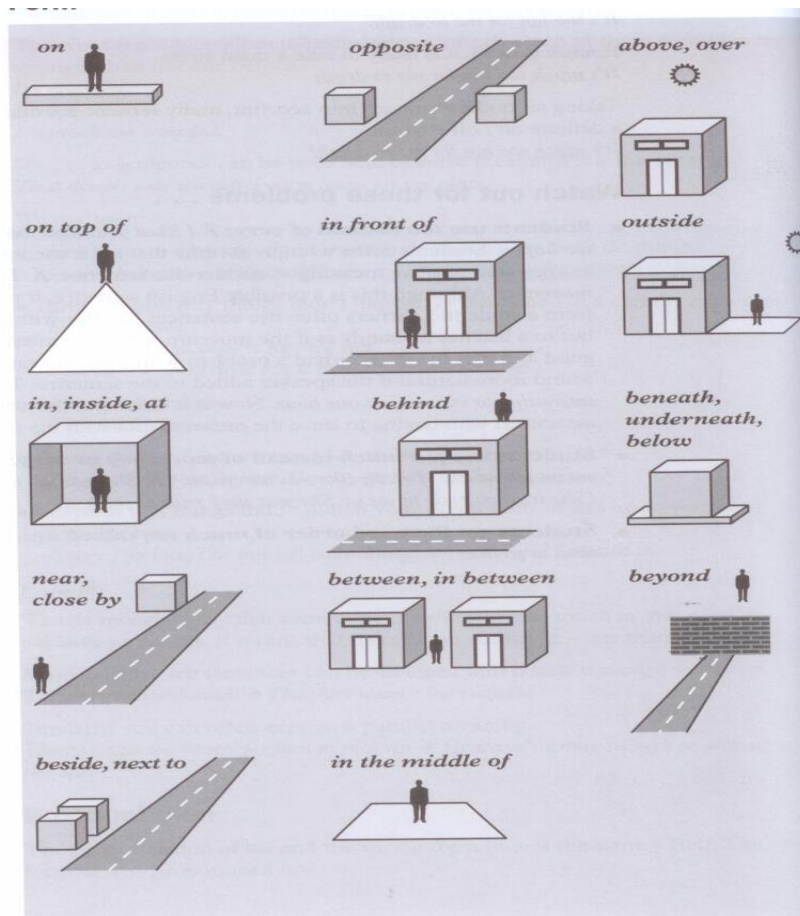
### Transport organization

#### Organization of an airport

- two main parts: a) air part
  - b) land part
- air side: infrastructures and services that serve to move aircraft, runways, taxiways, aircraft parkings, aprons and the air traffic control system
- land side: facilities and services associated with passengers
- the airport ramp or apron
- the apron may be controlled by the apron management service

## Short grammar outline

### Prepositions of place



( Scrivener, 2010)

## Test

- 1 The building is not safe so nobody is allowed ..... it.  
A enter B entering C to enter D that they enter
- 2 My uncle, ..... was born abroad, now lives quite near me.  
A which B that C what D who
- 3 They ..... at university and ..... close friends.  
A found ... got B knew ... stayed C met ... became D saw ... grew
- 4 If he ..... improve soon, he won't pass the driving test.  
A isn't B doesn't C won't D wouldn't
- 5 Would you like some more wine? There's still ..... left.  
A a little B little C a few D few
- 6 It's a very good film so I ..... seeing it.  
A amused B pleased C smiled D enjoyed
- 7 Hello! I didn't expect to see you. .... that you were on holiday.  
A I was said B It was said me C I was told D It was told me
- 8 She's a lovely little girl. I think that she's going to be ..... her mother.  
A so pretty than B as pretty than C so pretty as D as pretty as
- 9 You're getting fat. You ..... take more exercise.  
A would B ought C should D had to
- 10 There was a lot of noise so I didn't understand what he was .....  
A telling B saying C talking D speaking

(Fowler, 2005)

## Key

1. C, D, A, B

#### 4. Fill in the gaps with the expressions below.

An airport is the location where aircraft take off and land, where goods, passengers and their baggage transit. Aircraft may be stored or maintained at an airport, where we usually distinguish two main parts: an air side and a land side. In the former we find all the infrastructures and services that serve to move aircraft, runways, taxiways, aircraft parkings, aprons and the air traffic control system; in the latter there are all the facilities and services associated with passengers such as the access to the airport, the terminal footpaths and the car parks. Gates are instead usually considered the border between the two areas.

The airport ramp or apron is the area where aircraft are parked, unloaded or loaded, refuelled and boarded. The apron is not usually open to the general public and a license may be required to gain access.

The use of the apron may be controlled by the apron management service (apron control or apron advisory).

The apron is designated by the I.C.A.O. (International Civil Aviation Organization) as not being part of the manoeuvring area. All vehicles, aircraft and people using the apron are referred to as 'apron traffic'.

In the USA, the words 'apron' and 'ramp' are used interchangeably in most circumstances. Generally, the pre-flight activities are carried out on ramps and areas for parking & maintenance are called aprons.

#### Test

1 C

2 D

3 C

4 B

5 A

6 D

7 C

8 D

9 C

10 B

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**Means of transport**

-

**road / land**



1. Discuss with your partner road transport in the Czech Republic. It is said that Czech are mad drivers, they do not respect the rules. Do you agree with that stereotype? Do you know stereotype about drivers from other countries. Share your knowledge with the class.

2. Read the article below.

### Means of transport – road transport

#### On the road again

**Mike:** These are very narrow parking bays! Can you check for other cars while I reverse?

**Phyllis:** OK. Nothing coming in either direction.

**Mike:** Great. Now where?

**Phyllis:** There's the exit sign over there – just follow that minibus.

**Mike:** Right. Oh, wait a second – they've just turned off. I don't want to go into the service station. I've got plenty of petrol.

**Phyllis:** I think you need to take that service road to the right, past the petrol station and the motel. Be careful you don't land on the hard shoulder.

**Mike:** As long as I don't end up in the lorry park! No, you're right. Here's the slip road onto the motorway. I'll just accelerate a bit and have a look for a gap in the traffic. There, that's it.

**Phyllis:** Well done! It's not easy when everything is travelling so fast.

**Mike:** Next stop, Birmingham!

(Taylor, 2012)

#### Vocabulary

<b>parking bay</b> ( <i>pa:kɪŋ beɪ</i> )	parkoviště
<b>to reverse</b> ( <i>tu: rɪ 'vɜ:s</i> )	couvat

3. In pairs / small groups try to elicit the meaning of underlined expressions.

**4. Add the missing endings using the ones below.**

*for for off on onto up*

Mike: These are very narrow parking bays! Can you check \_\_\_\_\_ other cars while I reverse?

Phyllis: OK. Nothing coming in either direction.

Mike: Great. Now where?

Phyllis: There's the exit sign over there – just follow that minibus.

Mike: Right. Oh, wait a second – they've just turned \_\_\_\_\_. I don't want to go into the service station. I've got plenty of petrol.

Phyllis: I think you need to take that service road to the right, past the petrol station and the motel. Be careful you don't land \_\_\_\_\_ the hard shoulder.

Mike: As long as I don't end \_\_\_\_\_ in the lorry park! No, you're right. Here's the slip road \_\_\_\_\_ the motorway. I'll just accelerate a bit and have a look \_\_\_\_\_ a gap in the traffic. There, that's it.

Phyllis: Well done! It's not easy when everything is travelling so fast.

Mike: Next stop, Birmingham!

**5. Read the article one more time and expand the dialogue (at least two statements for each speaker). Then write your version down.**

**6. In small groups think of five questions related to the article (using at least in two of them phrasal words). The rest of class will answer them.**

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) \_\_\_\_\_

## Short topic outline

### Means of transport – road / land

A road - a route of travel, usually surfaced with gravel, asphalt or concrete

Road vehicles

- cars
- buses
- motorcycles
- bicycles
- long vehicles

Highway Code – set of rules for driving

The most frequent problems:

- traffic jams
- speeding
- a lack of parking lots / bays

( Mode of transport, Wikipedia, 2014)

## Short grammar outline

### Phrasal verbs – TURN

**Turn on** - zapnout

**Turn off** - vypnout

**Turn up** – dát nahlas, objevit se, přijet

**Turn over** - překonat

**Turn down** - ztlumit, odmítnout

**Turn in** – odevzdat

**Turn back** – otočit se zpět, obrátit se

**Turn around** – otočit se

## Test

- 1 Have you finished working yet? I don't think.....  
**A** it      **B** that      **C** so
- 2 Please ask.....see me.  
**A** her      **B** her to      **C** to her to
- 3 Somebody stole her bag so she.....money from a friend.  
**A** lent      **B** earned      **C** borrowed
- 4 When he heard the news, he.....  
**A** just smiled      **B** has just smiled      **C** was just smiling
- 5 '.....books are these?' 'They're mine!'  
**A** Which      **B** What      **C** Whose
- 6 You.....have a ticket to travel on the train.  
**A** must      **B** need      **C** want
- 7 I.....my uncle since last year.  
**A** didn't see      **B** don't see      **C** haven't seen
- 8 Those people with the guide have never been.....before.  
**A** abroad      **B** foreign      **C** outside
- 9 My wife doesn't eat meat, and I don't,.....  
**A** either      **B** too      **C** neither
- 10 Have you had.....to eat?  
**A** enough      **B** too many      **C** some more

(Fowler, 2005)

## Key

### 4. Add the missing endings using the ones below.

Mike: These are very narrow parking bays! Can you check #for other cars while I reverse?

Phyllis: OK. Nothing coming in either direction.

Mike: Great. Now where?

Phyllis: There's the exit sign over there – just follow that minibus.

Mike: Right. Oh, wait a second – they've just turned #off. I don't want to go into the service station. I've got plenty of petrol.

Phyllis: I think you need to take that service road to the right, past the petrol station and the motel. Be careful you don't land #on the hard shoulder.

Mike: As long as I don't end #up in the lorry park! No, you're right. Here's the slip road #onto the motorway. I'll just accelerate a bit and have a look #for a gap in the traffic. There, that's it.

Phyllis: Well done! It's not easy when everything is travelling so fast.

Mike: Next stop, Birmingham!

## Test

1 C

2 B

3 C

4 A

5 C

6 A

7 C

8 A

9 A

10 A

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**Means of transport**

-

**water**



**1. Does your schoolmate have any experience with the water transport (a boat, kayak, canoe, ship, cruise ship, ferry...). Find out and share with the class.**

**2. Read the article below.**

### A Ship's Structure

Modern ships are, almost without exception, built of steel. Shipbuilders today use steel which has good corrosion resistance when exposed to seawater, and which does not get brittle at low temperatures (below freezing) since many ships are at sea during cold storms in wintertime.

Steel typically has a fatigue limit, below which any quantity of stress will not cause metal fatigue and cracks. Ship design criteria generally assume that all normal loads on the ship should be below the fatigue limit for the steel used in its construction. It is wise to assume that the ship will regularly operate fully loaded, in heavy weather and strong waves, and that it will encounter its maximum operating conditions many time over during its lifetime.

Naval architecture is an engineering discipline dealing with the design, construction, maintenance and operation of marine vessels and structures. Naval architecture involves preliminary design of the vessel, its detailed design, construction, trials, operation and maintenance, launching and dry-docking. Naval architecture also involves formulation of safety regulations and damage control rules and the approval and certification of ship designs. Due to the complexity associated with operating in a marine environment, naval architecture is a co-operative effort between groups of technically skilled individuals who are specialists in particular fields, often coordinated by a lead naval architect.

A naval architect is an engineer who is responsible for the design, construction, and/or repair of ships, boats, other marine vessels, and offshore structures, both commercial and military.

Modern engineering on this scale is essentially a team activity conducted by specialists in their respective fields and disciplines. Naval architects integrate these activities. This demanding leadership role requires managerial qualities. In addition to this leadership role, a naval architect also has a specialist function in ensuring that a safe, economic, and seaworthy design is produced. Naval architects typically work for shipyards, ship owners, design firms and equipment manufacturers, classification societies, navies and governments.

(D'Acunto, 2012)

## Vocabulary

<b>brittle</b> ( <i>'britl</i> )	křehký, lámavý
<b>fatigue limit</b> ( <i>fə'ti:g 'limit</i> )	mezní hodnota únavy materiálu
<b>to assume</b> ( <i>tu: ə'sju:m</i> )	předpokládat
<b>load</b> ( <i>ləʊd</i> )	zatížení, břímě, náklad
<b>to operate</b> ( <i>tu: 'ɒpəreɪt</i> )	fungovat, působit, provozovat
<b>encounter</b> ( <i>ɪn'kaʊntəʳ</i> )	setkat se, narazit na něco
<b>preliminary</b> ( <i>pri'limɪnəri</i> )	předběžný, přípravný
<b>dry dock</b> ( <i>draɪ dɒk</i> )	suchý dok
<b>approval</b> ( <i>ə'pru:vəl</i> )	oficiální schválení, souhlas, přijetí
<b>offshore</b> ( <i>ˌɒfʃɔ:ʳ</i> )	příbřežní
<b>to conduct</b> ( <i>tu: 'kɒndʌkt</i> )	provádět, řídit, organizovat
<b>to ensure</b> ( <i>tu: ɪn'ʃɔ:ʳ</i> )	zajistit, zaručit, postarat se
<b>seaworthy</b> ( <i>'si:, wɜ:ði</i> )	schopný plavby
<b>shipyard</b> ( <i>'ʃɪpjɑ:d</i> )	loděnice
<b>navy</b> ( <i>'neɪvi</i> )	námořnictvo

**3. In pairs / small groups try to elicit the meaning of underlined expressions.**

**4. Fill in the gaps with expressions below.**

*approval dealing Due effort its lead marine offshore particular preliminary regulations*

Naval architecture is an engineering discipline \_\_\_\_\_ with the design, construction, maintenance and operation of marine vessels and structures. Naval architecture involves \_\_\_\_\_ design of the vessel, \_\_\_\_\_ detailed design, construction, trials, operation and maintenance, launching and dry-docking. Naval architecture also involves formulation of safety \_\_\_\_\_ and damage control rules and the \_\_\_\_\_ and certification of ship designs. \_\_\_\_\_ to the complexity associated with operating in a marine environment, naval architecture is a co-operative \_\_\_\_\_ between groups of technically skilled individuals who are specialists in \_\_\_\_\_ fields, often coordinated by a \_\_\_\_\_ naval architect. A naval architect is an engineer who is responsible for the design, construction, and/or repair of ships,

boats, other \_\_\_\_\_ vessels, and \_\_\_\_\_ structures, both commercial and military.

**5. Read the article one more time and take turns with you schoolmates in small groups in order to give as much information as possible from the article. After 10 minutes, compare your information with other groups.**

**6. In small groups think of five questions related to the article (using at least in two of them PASSIVE VOICE). The rest of class will answer them.**

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) \_\_\_\_\_

### **Short topic outline**

#### **Means of transport – water**

Ships – made of steel

- good corrosion resistance
- it does not get brittle at low temperatures

Fatigue limit of steel

Naval architecture - the design, construction, maintenance and operation of marine vessels and structures

Safety regulations

Damage control rules

Responsibilities of a naval architect

## Short grammar outline

### Passive voice

**Use and meaning** – when activity agent is unknown or when it is not needed / required / wanted to give the agent

**Form**- to be + past participle (so-called third column)

The ships are made of steel.

Have they been informed about the arrival of the new staff?

The safety regulations won't be broken anymore.

**Mentioning the agent requires a preposition BY** (The church has been designed by a world-know architect)

### Test

- 1 Who was the girl.....?  
A spoke to you                      B that you were speaking to                      C that you spoke
- 2 She was born.....  
A since 100 years                      B 100 years ago                      C for 100 years
- 3 We must go now. Call the waiter and ask for the.....  
A bill                      B price                      C cost
- 4 Hurry, children! I'm going to.....you to school in the car.  
A bring                      B carry                      C take
- 5 She's a friend of.....  
A them                      B theirs                      C their
- 6 There isn't much news in the paper today,.....?  
A isn't it                      B is there                      C are there
- 7 I couldn't find my hat.....

**A** nowhere                    **B** everywhere                    **C** anywhere

8 This book is very easy..... understand.

**A** for                    **B** in                    **C** to

9 I .....in bed when she arrived.

**A** was still                    **B** was yet                    **C** still was

10 We can go out now.....it isn't raining.

**A** for                    **B** so                    **C** while

(Fowler, 2005)

### Key

#### 4. Fill in the gaps with expressions below.

Naval architecture is an engineering discipline #dealing with the design, construction, maintenance and operation of marine vessels and structures. Naval architecture involves #preliminary design of the vessel, #its detailed design, construction, trials, operation and maintenance, launching and dry-docking. Naval architecture also involves formulation of safety #regulations and damage control rules and the #approval and certification of ship designs. #Due to the complexity associated with operating in a marine environment, naval architecture is a co-operative #effort between groups of technically skilled individuals who are specialists in #particular fields, often coordinated by a #lead naval architect.

A naval architect is an engineer who is responsible for the design, construction, and/or repair of ships, boats, other #marine vessels, and #offshore structures, both commercial and military.

### Test

1 B

2 B

3 A

4 C

5 B

6 B

7 C

8 C

9 A

10 C

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**Means of transport**

-

**air**



1. Work in small groups and think of recent airplane success / failure.

2. Read the article below and put the paragraph into a correct order.

### The Basics of Airplane Construction

- The engines provide thrust to push the plane forward through the air. The most common propulsion units are propellers (powered by turbine engines) and jet engines (which provide thrust directly from the engine and usually also from a large fan mounted within the engine). The landing gear is a set of wheels that support the plane while it is on the surface. On some planes the landing gear retracts during flight to reduce drag.
- A fixed/wings aircraft consists of 5 main components: the fuselage, the wings, the stabilisers, the engines and the landing gear.
- The fuselage is a long, thin body, often cylindrical, and usually with tapered or rounded ends to make its shape aerodynamically smooth. It may contain the flight crew, passengers, cargo, fuel and engines.
- There are two types of stabilizer: a vertical stabilizer and a horizontal stabilizer. The first of these is mounted at the rear of the plane and typically protruding above it. The vertical stabiliser stabilises the plane's yaw (turn left or right) and mounts the rudder which controls its rotation along that axis. The horizontal stabiliser, or tail-plane, is mounted at the tail of the plane, near the vertical stabilizer and is used to stabilise the plane's pitch (tilt up or down).
- The wing is shaped to deflect air downward as the plane moves forward, generating upward lifting force to support it in flight. The wing also stabilizes the plane's roll (tilt left or right).
- The pilots operate the plane from a cockpit located at the front or top of the fuselage and equipped with controls, windows and instruments. All the other parts of the plane are attached to the fuselage.

(D'Acunto, 2012)

## Vocabulary

<b>thrust</b> ( <i>θrʌst</i> )	tah, síla
<b>propulsion</b> ( <i>prə'pʌlʃən</i> )	pohon
<b>fan</b> ( <i>fæn</i> )	vrtule
<b>gear</b> ( <i>gɪəʳ</i> )	ozubené soukolí
<b>retract</b> ( <i>ri'trækt</i> )	vtáhnout, zatáhnout (se)
<b>drag</b> ( <i>dræɡ</i> )	aerodynamický odpor
<b>fuselage</b> ( <i>'fju:zə'la:ʒ</i> )	trup (letadla)
<b>stabilizer</b> ( <i>'steɪbəlɪzəʳ</i> )	ustalovač
<b>tapered</b> ( <i>'teɪpəd</i> )	zúžený, špičatý
<b>rear</b> ( <i>riəʳ</i> )	zadní část
<b>to protrude</b> ( <i>tu: prəʊ'tru:d</i> )	vyčnívat
<b>yaw</b> ( <i>jɔ:</i> )	vybočení, odchýlení se od kursu
<b>to mount</b> ( <i>tu: maʊnt</i> )	vyzdvihnout, zvýšit
<b>rudder</b> ( <i>'rʌdəʳ</i> )	směrové kormidlo, směrovka
<b>axis</b> ( <i>'æksɪs</i> )	osa
<b>tail-plane</b> ( <i>teɪlpleɪn</i> )	ocasní plocha
<b>pitch</b> ( <i>pɪtʃ</i> )	výška, poloha
<b>to tilt</b> ( <i>tu: tɪlt</i> )	naklonit (se), nachýlit (se)
<b>to deflect</b> ( <i>tu: drɪ'flekt</i> )	odklonit
<b>to generate</b> ( <i>tu: 'dʒenə'reɪt</i> )	vytvořit, vyrábět
<b>roll</b> ( <i>rəʊl</i> )	houpavý pohyb
<b>propeller</b> ( <i>prə'peləʳ</i> )	vrtule

**3. In pairs / small groups try to elicit the meaning of underlined expressions.**

**4. Fill in the gaps with the expressions below.**

*also at its mounted pitch plane's propulsion provide retracts support through types*

There are two \_\_\_\_\_ of stabilizer: a vertical stabilizer and a horizontal stabilizer. The first of these is \_\_\_\_\_ at the rear of the plane and typically protruding above it. The vertical stabiliser stabilises the \_\_\_\_\_ yaw (turn left or right) and mounts the rudder which controls \_\_\_\_\_ rotation along that axis. The horizontal stabiliser, or tail-plane, is mounted \_\_\_\_\_ the tail of the plane, near the vertical stabilizer and is used to stabilise the

plane's \_\_\_\_\_ (tilt up or down). The engines \_\_\_\_\_ thrust to push the plane forward \_\_\_\_\_ the air. The most common \_\_\_\_\_ units are propellers (powered by turbine engines) and jet engines (which provide thrust directly from the engine and usually \_\_\_\_\_ from a large fan mounted within the engine). The landing gear is a set of wheels that \_\_\_\_\_ the plane while it is on the surface. On some planes the landing gear \_\_\_\_\_ during flight to reduce drag.

**5. Read the article one more time and then make lines of 10 students. The first student whisper a piece of information from the article (containing at least 10 words) to a person next to. The last student in a row will write down the outcome and when all lines finish, the last students in the rows, read the sentences.**

**6. In small groups think of five questions related to the article (using at least in two of them FIRST CONDITIONAL) . The rest of class will answer them.**

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_
- 4) \_\_\_\_\_
- 5) \_\_\_\_\_

### Short topic outline

#### Means of transport - air

Parts of fixed/wings aircraft: the fuselage  
the wings  
the stabilisers  
the engines  
the landing gear

Cockpit – a plane is operated from a cockpit

Two types of stabilizer: a vertical stabilizer  
a horizontal stabilizer

## Short grammar outline

### First conditional

- real, possible

- IF = jestli

### **IF + Present simple, main clause + Will**

If I have time, I will fly with the aircraft, which you have recommended me.

The pilots will land in Frankfurt if the turbulences don't stop.

### Test

1 Is.....than mine?

**A** longer her hair      **B** her hair longer      **C** her hair more long

2 .....is it to your parent's house?

**A** How long    **B** How much way      **C** How far

3 You .....come if you don't want to.

**A** couldn't    **B** haven't      **C** needn't

4 We're all hungry. Go out and buy another.....

**A** bread      **B** loaf      **C** sandwich

5 She'll be 16 on her next birthday, ..... she?

**A** isn't      **B** won't      **C** hasn't

6 If you want to succeed, you must work.....

**A** harder      **B** more hard      **C** very hardly

7 'Come here!' the policeman said in a ..... voice.

**A** big      **B** loud      **C** strong

8 Both..... play the piano very well.

**A** they      **B** them      **C** of them

9 She has a very good job. She earns a thousand pounds.....week.

**A** a      **B** for      **C** the

10 ..... in the class likes that teacher.

**A** Everyone      **B** All students      **C** All the students

(Fowler, 2005)

## **Key**

### **1. Read the article below and put the paragraph into a correct order.**

A fixed/wings aircraft consists of 5 main components: the fuselage, the wings, the stabilisers, the engines and the landing gear.

The fuselage is a long, thin body, often cylindrical, and usually with tapered or rounded ends to make its shape aerodynamically smooth. It may contain the flight crew, passengers, cargo, fuel and engines.

The pilots operate the plane from a cockpit located at the front or top of the fuselage and equipped with controls, windows and instruments. All the other parts of the plane are attached to the fuselage.

The wing is shaped to deflect air downward as the plane moves forward, generating upward lifting force to support it in flight. The wing also stabilizes the plane's roll (tilt left or right).

There are two types of stabilizer: a vertical stabilizer and a horizontal stabilizer. The first of these is mounted at the rear of the plane and typically protruding above it. The vertical stabiliser stabilises the plane's yaw (turn left or right) and mounts the rudder which controls its rotation along that axis. The horizontal stabiliser, or tail-plane, is mounted at the tail of the plane, near the vertical stabilizer and is used to stabilise the plane's pitch (tilt up or down).

The engines provide thrust to push the plane forward through the air. The most common propulsion units are propellers (powered by turbine engines) and jet engines (which provide

thrust directly from the engine and usually also from a large fan mounted within the engine). The landing gear is a set of wheels that support the plane while it is on the surface. On some planes the landing gear retracts during flight to reduce drag.

**4. Fill in the gaps with the expressions below.**

There are two #types of stabilizer: a vertical stabilizer and a horizontal stabilizer. The first of these is #mounted at the rear of the plane and typically protruding above it. The vertical stabiliser stabilises the #plane's yaw (turn left or right) and mounts the rudder which controls #its rotation along that axis. The horizontal stabiliser, or tail-plane, is mounted #at the tail of the plane, near the vertical stabilizer and is used to stabilise the plane's #pitch (tilt up or down).

The engines #provide thrust to push the plane forward #through the air. The most common #propulsion units are propellers (powered by turbine engines) and jet engines (which provide thrust directly from the engine and usually #also from a large fan mounted within the engine). The landing gear is a set of wheels that #support the plane while it is on the surface. On some planes the landing gear #retracts during flight to reduce drag.

**Test**

1 B

2 C

3 C

4 B

5 B

6 A

7 B

8 C

9 A

10 A

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**Means of transport**

-

**rail**



**1. Discuss with your partner rail services in the Czech Republic comparing them with other country / countries within the EU. Please take in account more aspects of services.**

**2. Read the article below.**

## ***Rail***

Rail transport is where a train runs along a set of two parallel steel rails, known as a railway or railroad. The rails are anchored perpendicular to ties (or sleepers) of timber, concrete or steel, to maintain a consistent distance apart, or gauge. The rails and perpendicular beams are placed on a foundation made of concrete or compressed earth and gravel in a bed of ballast. Alternative methods include monorail and maglev.

A train consists of one or more connected vehicles that run on the rails. Propulsion is commonly provided by a locomotive that hauls a series of unpowered cars that can carry passengers or freight. The locomotive can be powered by steam, diesel or by electricity supplied by trackside systems. Alternatively, some or all the cars can be powered, known as a multiple unit. Also, a train can be powered by horses, cables, gravity, pneumatics and gas turbines. Railed vehicles move with much less friction than rubber tires on paved roads, making trains more energy efficient, though not as efficient as ships.

Intercity trains are long-haul services connecting cities; modern high-speed rail is capable of speeds up to 350 km/h (220 mph), but this requires specially built track. Regional and commuter trains feed cities from suburbs and surrounding areas, while intra-urban transport is performed by high-capacity tramways and rapid transits, often making up the backbone of a city's public transport. Freight trains traditionally used box cars, requiring manual loading and unloading of the cargo. Since the 1960s, container trains have become the dominant solution for general freight, while large quantities of bulk are transported by dedicated trains.

(Transport, Wikipedia, 2014)

## Vocabulary

<b>anchored</b> ( <i>'æŋkəd</i> )	ukotvený
<b>perpendicular</b> ( <i>ˌpɜːpən'dɪkjʊləɹ</i> )	svislý, vertikální
<b>timber</b> ( <i>'tɪmbəɹ</i> )	dřevo, trámy
<b>gauge</b> ( <i>geɪdʒ</i> )	šíře
<b>beam</b> ( <i>bi:m</i> )	trám
<b>propulsion</b> ( <i>prə'pʌlʃən</i> )	pohon
<b>to haul</b> ( <i>tu: hɔ:l</i> )	dpravovat, přepravovat
<b>gravel</b> ( <i>'grævəl</i> )	štěrk
<b>ballast</b> ( <i>'bæləst</i> )	zátěž
<b>maglev</b> ( <i>mæglev</i> )	magnetické zatěžování
<b>trackside</b> ( <i>træksaɪd</i> )	umístěný vedle železniční trati
<b>friction</b> ( <i>'frɪkʃən</i> )	tření
<b>long-haul</b> ( <i>ˌlɒŋ'hɔ:l</i> )	dálkový
<b>tie / sleeper</b> ( <i>taɪ / 'sli:pəɹ</i> )	pražec

3. In pairs / small groups try to elicit the meaning of underlined expressions.

4. Fill in the gaps with the expressions below.

*along Alternatively anchored beams by cables, efficient gravel maintain steel timber tires unpowered vehicles*

Rail transport is where a train runs \_\_\_\_\_ a set of two parallel \_\_\_\_\_ rails, known as a railway or railroad. The rails are \_\_\_\_\_ perpendicular to ties (or sleepers) of \_\_\_\_\_, concrete or steel, to \_\_\_\_\_ a consistent distance apart, or gauge. The rails and perpendicular \_\_\_\_\_ are placed on a foundation made of concrete or compressed earth and \_\_\_\_\_ in a bed of ballast. Alternative methods include monorail and maglev. A train consists of one or more connected \_\_\_\_\_ that run on the rails. Propulsion is commonly provided by a locomotive that hauls a series of \_\_\_\_\_ cars that can carry passengers or freight. The locomotive can be powered \_\_\_\_\_ steam, diesel or by electricity supplied by trackside systems. \_\_\_\_\_, some or all the cars can be powered, known as a multiple

unit. Also, a train can be powered by horses, \_\_\_\_\_ gravity, pneumatics and gas turbines. Railed vehicles move with much less friction than rubber \_\_\_\_\_ on paved roads, making trains more energy efficient, though not as \_\_\_\_\_ as ships.

**5. Read the paragraph with a high-speed track (third paragraph). Discuss in small group the speed track in the Czech Republic. If you need to get more information, feel free to use a Google search engine. After 12 minutes of gathering the information, share the outcome of your small discussion with the rest of the class.**

**6. In small groups think of five questions related to the article (using at least in one of them SECOND CONDITIONAL) . The rest of class will answer them.**

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_
- 4) \_\_\_\_\_
- 5) \_\_\_\_\_

### Short topic outline

#### **Means of transport – rail**

Rail transport - a train runs along a set of two parallel steel rails

A train consists of one or more connected vehicles

The locomotive can be powered by steam, diesel or by electricity

Intercity trains

High-speed rail -up to 350 km/h (220 mph)

Container trains for carrying cargo

## Short grammar outline

### Second conditional

- not real

- IF = Kdyby

#### **IF + Past simple, main clause + Would**

If there **were** a high-speed rail, many passengers **would use** it.

The travellers **would appreciate** if there all fast trains **had** an air-conditioning.

### Test

- 1 I ..... have fish than meat.  
A prefer B would like more C had better D would rather
- 2 The company have offered her a much better ..... in London.  
A job B work C employ D reward
- 3 Hide this somewhere ..... the teacher sees it.  
A if B in case C because D for
- 4 If people ..... more carefully, there wouldn't be so many accidents.  
A drove B drive C would drive D should drive
- 5 I gave her ..... stockings for her birthday.  
A a B two C a couple of D a pair of
- 6 Good ..... ! I hope you pass the examination.  
A chance B wish C luck D fortune
- 7 John has asked if he can bring a friend of ..... to the party.  
A him B her C his D hers
- 8 I'll leave her a message ..... she'll know where to go.  
A that B so C for D as
- 9 Some gangsters ..... all their money.  
A robbed them B stole them C robbed D stole

10 I was answering the phone and didn't realise you ..... outside.

A waited B were waiting C have waited D had waited

(Fowler, 2005)

## Key

### 4. Fill in the gaps with the expressions below.

Rail transport is where a train runs #along a set of two parallel #steel rails, known as a railway or railroad. The rails are #anchored perpendicular to ties (or sleepers) of #timber, concrete or steel, to #maintain a consistent distance apart, or gauge. The rails and perpendicular #beams are placed on a foundation made of concrete or compressed earth and #gravel in a bed of ballast. Alternative methods include monorail and maglev.

A train consists of one or more connected #vehicles that run on the rails. Propulsion is commonly provided by a locomotive that hauls a series of #unpowered cars that can carry passengers or freight. The locomotive can be powered #by steam, diesel or by electricity supplied by trackside systems. #Alternatively, some or all the cars can be powered, known as a multiple unit. Also, a train can be powered by horses, #cables, gravity, pneumatics and gas turbines. Railed vehicles move with much less friction than rubber #tires on paved roads, making trains more energy efficient, though not as #efficient as ships.

## Test

1 D

2 A

3 B

4 A

5 D

6 C

7 C

8 B

9 D

10 B

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WIKIPEDIA. *Transport*. [online]. 2014, [cit. 2014-14-8]. Available at WWW : <http://en.wikipedia.org/wiki/Transport>

# Shipping



**1. In pairs speak about shipping companies within the EU (worldwide).**

**2. Read the article below.**

### **Intermodal Freight Transport**

Transport is everywhere! In the air, by rail or road, on the water, by cable or pipeline and even in space – people, animals and goods are constantly on the move. Transport is fundamental both for trade between people and for establishing cultural exchanges and increasing understanding between different cultures. As a field of study transport can be divided into three categories: infrastructure, vehicles, and operations. Infrastructure for transport is all around us – from airports, railway and bus station to warehouses, trucking terminals, refuelling depots and seaports. Vehicles include automobiles, bicycles, buses, trains, trucks, people, ships, helicopters and airplanes. Operations deal with the way the vehicles are operated, and the procedures set for this purpose, including financing, legalities and policies. Passenger transport may be public or private. Freight transport is today focused on containerization. Transport plays an important part in economic growth and globalization, but can also cause air pollution and use large amounts of land. It is commonly heavily influenced by governments, both in terms of subsidies and planning, which is essential to make traffic flow and control urban sprawl.

(D'Acunto, 2012)

### **Air Freight**

Today an increasing number of goods are transported by air. Planes can transport letters, cars and even horses as well as other planes! Virtually every passenger flight also transports cargo, and of course many flights are for the transportation of goods only. The planes used may be similar to passenger planes or are sometimes old passenger planes which have been converted for goods transportation, or they may be cargo aircraft, some of which are enormous. The Boeing 747-400, for example, can transport the same quantity of goods as 5 articulated lorries! But there is yet another category of plane which was developed exclusively for cargo: the super transporter. The largest of these, the Antonov An-225, can carry over 250 tons of cargo!

(D'Acunto, 2012)

## Vocabulary

<b>legality</b> (li: 'gæləti)	zákonnost
<b>subsidy</b> ('sʌbsɪdi)	podpora
<b>sprawl</b> (sprɔ:l)	růst

3. In pairs / small groups try to elicit the meaning of underlined expressions.

4. Fill in the gaps with the expressions below.

*amounts by cause constantly essential establishing everywhere from including infrastructure into on procedures refuelling ships sprawl subsidies*

Transport is \_\_\_\_\_ ! In the air, \_\_\_\_\_ rail or road, on the water, by cable or pipeline and even in space – people, animals and goods are \_\_\_\_\_ on the move. Transport is fundamental both for trade between people and for \_\_\_\_\_ cultural exchanges and increasing understanding between different cultures. As a field of study transport can be divided \_\_\_\_\_ three categories: \_\_\_\_\_, vehicles, and operations. Infrastructure for transport is all around us – \_\_\_\_\_ airports, railway and bus station to warehouses, trucking terminals, \_\_\_\_\_ depots and seaports. Vehicles include automobiles, bicycles, buses, trains, trucks, people, \_\_\_\_\_, helicopters and airplanes. Operations deal with the way the vehicles are operated, and the \_\_\_\_\_ set for this purpose, \_\_\_\_\_ financing, legalities and policies. Passenger transport may be public or private. Freight transport is today focused \_\_\_\_\_ containerization. Transport plays an important part in economic growth and globalization, but can also \_\_\_\_\_ air pollution and use large \_\_\_\_\_ of land. It is commonly heavily influenced by governments, both in terms of \_\_\_\_\_ and planning, which is \_\_\_\_\_ to make traffic flow and control urban \_\_\_\_\_.

**5. Choose one shipping company and in small groups prepare a short presentation about it including the headquarters, where it operates, approximate number of employees, possible benefits for the staff, pros and cons of being employed by the company, main activities, and so on. Also add if you would like to join the shipping company in question and give your reason. The presentation is to be shown in front of the class. You have 25 minutes for this task**

**6. In small groups think of five questions related to the article (using at least in one of them SOME). The rest of class will answer them.**

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) \_\_\_\_\_

### **Short topic outline**

#### **Shipping**

Air, by rail or road, on the water, by cable or pipeline, in space

Study transport – three categories: infrastructure

vehicles

operations

Passenger transport may be public or private

Vehicles include automobiles, bicycles, buses, trains, trucks, people, ships, helicopters and airplanes

## Short grammar outline

### Some

**Some** is used for affirmatives

**Some** are used for questions

### Some

When anticipating a positive response

*Did she give you some money?*

When offering something

*Would you like some dessert?*

When requesting something

*Can we have some quiet?*

(Scrivener, 2010)

## Test

- 1 I broke a ..... while I was washing up.  
A cup tea B tea cup C cup for tea D cup of tea
- 2 That's the restaurant ..... we had dinner last week.  
A which B that C what D where
- 3 She's a good neighbour. She ..... the house when we're on holiday.  
A cares B takes care C looks after D looks for
- 4 The doctor has told him that he must give ..... smoking.  
A off B out C from D up
- 5 They paid a large ..... of money for the house.  
A lot B amount C piece D number
- 6 We had a wonderful holiday. It was ..... pleasant hotel.  
A so B such C a so D such a

- 7 My colleagues have always disliked ..... .  
A each other B each to other C one to other D one to another
- 8 I'm going to the library ..... a book.  
A to borrow B for borrow C for lend D to lend
- 9 How much does it cost to have ..... ?  
A a dress done B a dress made C done a dress D made a dress
- 10 I'll meet you when you ..... the airport.  
A arrive at B will arrive at C arrive to D will arrive to

(Fowler, 2005)

## Key

### 4. Fill in the gaps with the expressions below.

Transport is everywhere! In the air, by rail or road, on the water, by cable or pipeline and even in space – people, animals and goods are constantly on the move. Transport is fundamental both for trade between people and for establishing cultural exchanges and increasing understanding between different cultures. As a field of study transport can be divided into three categories: infrastructure, vehicles, and operations. Infrastructure for transport is all around us – from airports, railway and bus station to warehouses, trucking terminals, refuelling depots and seaports. Vehicles include automobiles, bicycles, buses, trains, trucks, people, ships, helicopters and airplanes. Operations deal with the way the vehicles are operated, and the procedures set for this purpose, including financing, legalities and policies. Passenger transport may be public or private. Freight transport is today focused on containerization. Transport plays an important part in economic growth and globalization, but can also cause air pollution and use large amounts of land. It is commonly heavily influenced by governments, both in terms of subsidies and planning, which is essential to make traffic flow and control urban sprawl.

**Test**

1 B

2 D

3 C

4 D

5 B

6 D

7 A

8 A

9 B

10 A

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978-0-2307-2321-4.

# **Transport planning**



**1. With your schoolmate think of a definition of an expression ‘strategy’ without looking in the article or googling.**

**2. Read the article below.**

### *What is strategic planning?*

#### 1. Description

Strategic planning is a comprehensive process for determining what a business should become and how it can best achieve that goal. It involves evaluating a full potential of a business and details the actions and resources required to achieve the business’s objectives. Strategic planning offers a systematic process to ask and answer the most critical issues confronting a management team- especially major decisions involving a large commitment of resources.

#### 2. Methodology

A successful strategic planning process should:

- Describe the organization’s mission, vision, and fundamental values.
- Target potential business areas and explore each market for potential threats and opportunities.
- Understand the current and future priorities of targeted customer segments.
- Analyse the company’s strengths and weaknesses.
- Determine which elements of the value chain the company should produce itself rather than buy.
- Identify and evaluate alternative strategies.
- Develop an advantageous business model than will differentiate the company from the competition.
- Define stakeholder expectations and establish clear objectives for the business.
- Prepare programs, policies, and plans to implement the strategy.
- Establish supportive organizational structures, decision processes, information and control systems, as well as hiring and training systems.
- Allocate resources to develop critical capabilities.
- Plan for and respond to environmental changes.

- Monitor performance.

### 3. Common uses

Strategic planning processes are often implemented to:

- Change the direction and performance of a business.
- Encourage discussions of politically sensitive issues.
- Create a common Framework for decision-making in the organization.
- Set a proper context for budget decisions and performance evaluations.
- Train managers to make better decisions.
- Increase confidence in the business's direction.

(Business Spotlight, 2009)

### Vocabulary

<b>to determine</b> ( <i>tu: dɪ 'tɜ:mɪn</i> )	určovat, stanovit, rozhodnout (se)
<b>to achieve</b> ( <i>tu: ə 'fi:v</i> )	dosáhnout
<b>to require</b> ( <i>tu: rɪ 'kwaɪə</i> )	požadovat
<b>objective</b> ( <i>əb 'dʒektɪv</i> )	cíl
<b>issue</b> ( <i>'ɪʃu:</i> )	záležitost, otázka, problematika
<b>commitment</b> ( <i>kə 'mɪtmənt</i> )	závazek, povinnost
<b>threat</b> ( <i>θret</i> )	hrozba, výhrůžka
<b>opportunity</b> ( <i>ˌɒpə 'tju:nəti</i> )	příležitost
<b>current</b> ( <i>'kʌrənt</i> )	současný
<b>to differentiate</b> ( <i>tu: ,dɪfə'rentʃiət</i> )	rozlišovat, odlišovat
<b>to hire</b> ( <i>tu: haɪə</i> )	najmout
<b>to allocate</b> ( <i>tu: 'æləkeɪt</i> )	přidělit, rozdělit
<b>to encourage</b> ( <i>tu: ɪn 'kʌrɪdʒ</i> )	povzbudit, přimět
<b>framework</b> ( <i>'freɪmwɜ:k</i> )	soustava, stěžejní rámec
<b>proper</b> ( <i>'prɒpə</i> )	pořádný, řádný, korektní, vlastní

3. In pairs / small groups try to elicit the meaning of underlined expressions.

**4. Fill in the gaps with the expressions below.**

*advantageous Allocate alternative current performance should stakeholder threats vision which*

2. Methodology

A successful strategic planning process \_\_\_\_\_ :

- Describe the organization's mission, \_\_\_\_\_ , and fundamental values.
- Target potential business areas and explore each market for potential \_\_\_\_\_ and opportunities.
- Understand the \_\_\_\_\_ and future priorities of targeted customer segments. • Analyse the company's strengths and weaknesses.
- Determine \_\_\_\_\_ elements of the value chain the company should produce itself rather than buy. • Identify and evaluate \_\_\_\_\_ strategies.
- Develop an \_\_\_\_\_ business model than will differentiate the company from the competition.
- Define \_\_\_\_\_ expectations and establish clear objectives for the business.
- Prepare programs, policies, and plans to implement the strategy.
- Establish supportive organizational structures, decision processes, information and control systems, as well as hiring and training systems.
- \_\_\_\_\_ resources to develop critical capabilities.
- Plan for and respond to environmental changes.
- Monitor \_\_\_\_\_ .

**5. Read the article one more time and then in small groups think of any company placed either in the Czech Republic or abroad which is not successful. Consider a strategy how to reach a better performance. After 25 minutes present selected company and an outline of strategy.**

**6. In small groups think of five questions related to the article (using at least in two of them ANY). The rest of class will answer them.**

1) \_\_\_\_\_

2) \_\_\_\_\_

3) \_\_\_\_\_

4) \_\_\_\_\_

5) \_\_\_\_\_

### Short topic outline

#### Transport planning

Strategic planning - comprehensive process for determining what a business should become and how it can best achieve that goal

It involves evaluating a full potential of a business

Strategic planning offers a systematic process

Methodology

Common uses

### Short grammar outline

#### Any

**Not....any** are used for negatives.

**Some or any** are used for questions

#### Any

##### Any in negative sentences

When referring to a zero quantity / amount

*There weren't complaints.*

##### Any in questions

Typically used to ask if either a small amount or nothing exists

*Are there any biscuits left?*

##### Any in affirmative sentences

When saying that it is not important which specific individual item is referred to

*Press any key.*

(Scrivener, 2010)

## Test

- 1 Jane's dress is ..... yours.  
A the same than B the same to C similar than D similar to
- 2 We've proved that he was guilty but he ..... doesn't admit it.  
A yet B already C still D no longer
- 3 If I ..... the mistake, I would have corrected it.  
A noticed B would notice C would have noticed D had noticed
- 4 Every old house like this has ..... strange stories.  
A their B its C his D the
- 5 That's my name on the cheque but it isn't my.....  
A signature B letter C firm D mark
- 6 'I'm going to the theatre tomorrow.' 'So ..... ?'  
A do I B I do C am I D I am
- 7 He came to the party ..... he hadn't been invited.  
A in case B in spite C although D even
- 8 I wanted to write to her but she ..... give me her address.  
A hadn't B hasn't C shouldn't D wouldn't
- 9 She fell down and broke her ankle ..... was a pity.  
A which B what C that D and
- 10 They were all on the platform, waiting ..... arrive.  
A for the train B the train to C the train's D for the train to

(Fowler, 2005)

## Key

### 1. Definition of the word 'strategy'.

- a) a plan that is intended to achieve a particular purpose
- b) the process of planning something or putting a plan into operation in a skilful way

c) the skill of planning the movement of armies in a battle or war

(Oxford's Advanced Learner's Dictionary, 2005)

**4. Fill in the gaps with the expressions below.**

2. Methodology

A successful strategic planning process #should:

- Describe the organization's mission, #vision, and fundamental values.
- Target potential business areas and explore each market for potential #threats and opportunities.
- Understand the #current and future priorities of targeted customer segments.
- Analyse the company's strengths and weaknesses.
- Determine #which elements of the value chain the company should produce itself rather than buy.
- Identify and evaluate #alternative strategies.
- Develop an #advantageous business model than will differentiate the company from the competition.
- Define #stakeholder expectations and establish clear objectives for the business.
- Prepare programs, policies, and plans to implement the strategy.
- Establish supportive organizational structures, decision processes, information and control systems, as well as hiring and training systems.
- #Allocate resources to develop critical capabilities.
- Plan for and respond to environmental changes.
- Monitor #performance.

**Test**

1 D

2 C

3 D

4 B

5 A

6 C

7 C

8 D

9 A

10 D

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# **Safety of transport and shipping**

**1. Discuss with your partner what makes the modes of transport safe / unsafe. Next think of examples of safety measures in various kinds of workplaces. If you have any personal experience with observing / not observing the regulations, you can share it.**

**2. Read the article below.**

### **Safety Regulations and Legislation**

In the field of transport and logistics, like in all areas of work, safety is a fundamental consideration. In all workplaces today there are guidelines to follow in order to avoid accidents, which explain what risks exist at work, their potential danger, and how to avoid them. Employers are obliged to inform their workers of these indications. The following is authentic information from European:

- 1 Employer's Liability (Compulsory Insurance) Act 1969: this act requires employers to take out insurance against accidents and ill health to their employees.
- 2 Health and Safety (First Aid) Regulations 1981: they cover requirements for first aid.
- 3 The Health and Safety Information for Employees Regulations 1989: they require employers to display a poster telling employees what they need to know about health and safety.
- 4 Workplace Regulations 1992: they cover a wide range of basic health and safety issues such as ventilation, heating, lighting, workstations, seating and facilities.
- 5 Personal Protective Equipment at Work Regulations 1992: they require employers to provide appropriate protective clothing and equipment for their employees.
- 6 Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 (RIDDOR): they require employers to notify certain occupational injuries, diseases and dangerous events.
- 7 Provision and Use of Work Equipment Regulations 1998: they require that equipment provided for use at work, including machinery, is safe.
- 8 Management of Health and Safety at Work Regulations 1999: they require employers to carry out risk assessments and arrange for appropriate information and training.
- 9 Control of Substances Hazardous to Health Regulations 2002 (COSHH): they require employers to assess the risks from hazardous substances and take appropriate precautions.

(D'Acunto, 2012)

### Safety Regulations for Air Passengers

If you have travelled by airplane you will know that there are many safety procedures to follow before and during your journey. When you arrive at the airport your identity is checked several times, you have to pass through security checkpoints, and when you are on the plane and ready for take-off you have to listen to the in-flight safety procedures to understand what to do in case of an emergency. When you arrive at your destination your identity may be checked again and you may be asked to open your bags for inspection. If you are carrying liquids in your hand luggage, for example, they may be taken away from you. But why are all these safety checks so important? The main reason is to prevent acts of terrorism. Many liquids, such as perfume and aerosols, can be used to create explosives; computers can be programmed to control explosive devices; and many metal objects may be used as weapons – so controlling these items is fundamental to guarantee the safety of all passengers.

(D'Acunto, 2012)

### Vocabulary

<b>consideration</b> ( <i>kən,sɪdər'eɪʃn</i> )	zvážení, uvážení
<b>in order to</b> ( <i>ɪn'ɔ:dər tu:</i> )	aby
<b>to be obliged to</b> ( <i>tu: bɪ ə'blaɪdʒd tu:</i> )	mít povinnost
<b>indication</b> ( <i>ˌɪndɪ'keɪʃn</i> )	znamení, náznak
<b>liability</b> ( <i>ˌlaɪə'bɪləti</i> )	odpovědnost, ručení, náchylnost
<b>act</b> ( <i>ækt</i> )	zákon
<b>to require</b> ( <i>tu: rɪ'kwaɪə'</i> )	požadovat
<b>to take out</b> ( <i>tu: teɪk aʊt</i> )	odstranit, vypustit
<b>to cover</b> ( <i>tu: 'kʌvə'</i> )	pokrýt
<b>poster</b> ( <i>'pəʊstə'</i> )	plakát
<b>to provide</b> ( <i>tu: prəv'vaɪd</i> )	zajistit, dodat, poskytnout
<b>appropriate</b> ( <i>ə'prəʊpɪət</i> )	vhodný
<b>occurrence</b> ( <i>ə'kʌrənts</i> )	událost, příhoda, výskyt
<b>to notify</b> ( <i>tu: 'nəʊtɪfaɪ</i> )	oznámit, ohlásit

<b>certain</b> ( 'sɜ:tʃn )	jistý, určitý
<b>to carry out</b> (tu: 'kæri aʊt)	provést, uskutečnit
<b>assessment</b> (ə 'sesmənt)	ohodnocení
<b>to take precaution</b> (tu: teik pri 'kɔ:fʃn)	učinit opatření
<b>weapon</b> ( 'wepən )	zbraň

**3. In pairs / small groups try to elicit the meaning of underlined expressions.**

**4. Fill in the gaps with the expressions below.**

*acts aerosols away devices guarantee hand have identity inspection may on pass procedures take-off weapons what*

**Safety Regulations for Air Passengers**

If you \_\_\_\_\_ travelled by airplane you will know that there are many safety \_\_\_\_\_ to follow before and during your journey. When you arrive at the airport your \_\_\_\_\_ is checked several times, you have to \_\_\_\_\_ through security checkpoints, and when you are \_\_\_\_\_ the plane and ready for \_\_\_\_\_ you have to listen to the in-flight safety procedures to understand \_\_\_\_\_ to do in case of an emergency. When you arrive at your destination your identity \_\_\_\_\_ be checked again and you may be asked to open your bags for \_\_\_\_\_. If you are carrying liquids in your \_\_\_\_\_ luggage, for example, they may be taken \_\_\_\_\_ from you. But why are all these safety checks so important? The main reason is to prevent \_\_\_\_\_ of terrorism. Many liquids, such as perfume and \_\_\_\_\_, can be used to create explosives; computers can be programmed to control explosive \_\_\_\_\_; and many metal objects may be used as \_\_\_\_\_ – so controlling these items is fundamental to \_\_\_\_\_ the safety of all passengers.

**5. Read the article one more time and discuss in small groups if all the regulations mentioned in the text are really necessary or satisfactory. If not in either case, erase or add the measures.**

**6. In small groups think of five questions related to the article (using at least in one of them PREPOSITIONS OF MOVEMENT) . The rest of class will answer them.**

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_
- 4) \_\_\_\_\_
- 5) \_\_\_\_\_

### **Short topic outline**

#### **Safety of transport and shipping**

In all workplaces today there are guidelines to follow

#### Act and regulations

Employer's Liability (Compulsory Insurance) Act 1969

Health and Safety (First Aid) Regulations 1981

The Health and Safety Information for Employees Regulations 1989

Workplace Regulations 1992

Personal Protective Equipment at Work Regulations 1992

Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995

Provision and Use of Work Equipment Regulations 1998

Management of Health and Safety at Work Regulations 1999

Control of Substances Hazardous to Health Regulations 2002

### **Short grammar outline**

#### **Phrasal verb – Take**

**take after** být po někom

**take back** vzít zpět

**take in** ubytovat, zahrnout, pochopit, (po)rozumět

**take off** svléknout, vzlétnout, odstranit

**take out** vzít někoho ven, vyvést, vybírat

**take over** převzít vedení

**take up** přijmout nabídku, projednávat

(Source: Anglická frázová slovesa)

### Test

- 1 ..... a good thing that the teacher didn't see you.  
A That's B It's C What's D There's
- 2 He stayed under water for a minute and then swam to the .....  
A sea B surface C level D ground
- 3 What was the name of the person who won first ..... ?  
A reward B wage C prize D price
- 4 I didn't realise that your house was ..... the other side of the road.  
A in B by C for D on
- 5 Her work has been ..... and she deserves an increase in salary.  
A regular B very well C satisfactory D available
- 6 He had to get off the bus because he couldn't pay the .....  
A bill B fare C wage D hire
- 7 I would like you ..... that again, please.  
A to read B that you read C reading D read
- 8 We discussed the problem ..... our way to the office.  
A through B on C by D in
- 9 The school that I went to was 10 miles .....  
A away B far C distance D long
- 10 It's a lovely dress but it's too expensive. I can't ..... it.  
A spend B pay C afford D value

(Fowler, 2005)

## Key

### 4. Fill in the gaps with the expressions below.

#### Safety Regulations for Air Passengers

If you #have travelled by airplane you will know that there are many safety #procedures to follow before and during your journey. When you arrive at the airport your #identity is checked several times, you have to #pass through security checkpoints, and when you are #on the plane and ready for #take-off you have to listen to the in-flight safety procedures to understand #what to do in case of an emergency. When you arrive at your destination your identity #may be checked again and you may be asked to open your bags for #inspection. If you are carrying liquids in your #hand luggage, for example, they may be taken #away from you. But why are all these safety checks so important? The main reason is to prevent #acts of terrorism. Many liquids, such as perfume and #aerosols, can be used to create explosives; computers can be programmed to control explosive #devices; and many metal objects may be used as #weapons – so controlling these items is fundamental to #guarantee the safety of all passengers.

## Test

1 B

2 B

3 C

4 D

5 C

6 B

7 A

8 B

9 A

10 C

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**Environmental aspects of  
transport, sustainable  
transport**

**1. Discuss with your partner sustainable transport possibilities in the Czech Republic. If possible, compare your outcome with the other countries within the E.U.**

**2. Read the article below.**

### *Environmentally sustainable transport*

Transport systems are major emitters of greenhouse gases, responsible for 23% of world energy-related GHG emissions in 2004, with about three quarters coming from road vehicles. Currently 95% of transport energy comes from petroleum. Energy is consumed in the manufacture as well as the use of vehicles, and is embodied in transport infrastructure including roads, bridges and railways.

The environmental impacts of transport can be reduced by improving the walking and cycling environment in cities, and by enhancing the role of public transport, especially electric rail.

Green vehicles are intended to have less environmental impact than equivalent standard vehicles, although when the environmental impact of a vehicle is assessed over the whole of its life cycle this may not be the case. Electric vehicle technology has the potential to reduce transport CO<sub>2</sub> emissions, depending on the embodied energy of the vehicle and the source of the electricity. The Online Electric Vehicle (OLEV), developed by the Korea Advanced Institute of Science and Technology (KAIST), is an electric vehicle that can be charged while stationary or driving, thus removing the need to stop at a charging station. The City of Gumi in South Korea runs a 24 km roundtrip along which the bus will receive 100 kW (136 horsepower) electricity at an 85% maximum power transmission efficiency rate while maintaining a 17 cm air gap between the underbody of the vehicle and the road surface. At that power, only a few sections of the road need embedded cables. Hybrid vehicles, which use an internal combustion engine combined with an electric engine to achieve better fuel efficiency than a regular combustion engine, are already common. Natural gas is also used as a transport fuel. Biofuels are a less common, and less promising, technology; Brazil met 17% of its transport fuel needs from bioethanol in 2007, but the OECD has warned that the success of biofuels in Brazil is due to specific local circumstances; internationally, biofuels are forecast to have little or no impact on greenhouse emissions, at significantly higher cost

than energy efficiency measures.

In practice there is a sliding scale of **green transport** depending on the sustainability of the option. Green vehicles are more fuel-efficient, but only in comparison with standard vehicles, and they still contribute to traffic congestion and road crashes. Well-patronised public transport networks based on traditional diesel buses use less fuel per passenger than private vehicles, and are generally safer and use less road space than private vehicles. Green public transport vehicles including electric trains, trams and electric buses combine the advantages of green vehicles with those of sustainable transport choices. Other transport choices with very low environmental impact are cycling and other human-powered vehicles, and animal powered transport. The most common green transport choice, with the least environmental impact is walking.

(Sustainable transport, Wikipedia)

### Vocabulary

<b>emitter</b> ( <i>i'mitə'</i> )	emitor, zářič, vyzařovač
<b>GHG emission (Greenhouse Gases)</b> ( <i>'gri:nhaʊs 'gæsi:z i'miʃən</i> )	emise skleníkových plynů
<b>to be embodied</b> ( <i>tu: bi im'bɒdid</i> )	být součástí, být včleněn
<b>to enhance</b> ( <i>tu: in'hɑ:nts</i> )	zvýšit, pozvednout
<b>to charge</b> ( <i>tu: ʃɑ:dʒ</i> )	nabít
<b>embedded</b> ( <i>im'bedid</i> )	vrytý, zapuštěný, zakotvený, hluboce zakořeněný
<b>internal combustion engine</b> ( <i>in'tɜ:nəl kəm'bʌstʃən 'endʒɪn</i> )	motor s vnitřním spalováním
<b>natural gas</b> ( <i>'nætʃrəl gæs</i> )	zemní plyn
<b>to meet the needs</b> ( <i>tu: mi:t ði ni:dz</i> )	splnit, vyhovět potřebám
<b>OECD (The Organisation for Economic Co-operation and Development)</b> ( <i>ði ,ɔ:gə'nai 'zeɪʃən fɔ:'r ,i:kə'nɒmɪk kəʊ,ʋpə'reɪʃən</i> )	organizace pro hospodářskou spolupráci a rozvoj

<i>ænd di'veləpmənt)</i>	
<b>congestion</b> ( <i>kən'dʒestʃən</i> )	ucpání, zahlcení
<b>patronized</b> ( <i>'pætrənaɪzd</i> )	sponzorovaný, podporovaný
<b>sustainable</b> ( <i>sə'steɪnəbəl</i> )	udržitelný, dlouhodobě fungující

**3. In pairs / small groups try to elicit the meaning of underlined expressions.**

**4. Fill in the gaps with the expressions below.**

*advantages animal buses contribute crashes electric least low per sliding sustainability with*

In practice there is a \_\_\_\_\_ scale of green transport depending on the \_\_\_\_\_ of the option. Green vehicles are more fuel-efficient, but only in comparison \_\_\_\_\_ standard vehicles, and they still \_\_\_\_\_ to traffic congestion and road \_\_\_\_\_. Well-patronised public transport networks based on traditional diesel \_\_\_\_\_ use less fuel \_\_\_\_\_ passenger than private vehicles, and are generally safer and use less road space than private vehicles. Green public transport vehicles including \_\_\_\_\_ trains, trams and electric buses combine the \_\_\_\_\_ of green vehicles with those of sustainable transport choices. Other transport choices with very \_\_\_\_\_ environmental impact are cycling and other human-powered vehicles, and \_\_\_\_\_ powered transport. The most common green transport choice, with the \_\_\_\_\_ environmental impact is walking.

**5. In small groups write a list of pros and cons for green vehicles and ordinary vehicles. Consider how to enhance the role of walking, give tips.**

**6. In small groups think of five questions related to the article (using at least in two of them PREPOSITIONS OF MOVEMENT) . The rest of class will answer them.**

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_
- 4) \_\_\_\_\_

5) \_\_\_\_\_

### Short topic outline

#### **Environmental aspects of transport, sustainable transport**

Transport systems are major emitters of greenhouse gases

The environmental impacts of transport can be reduced by: walking

cycling

enhancing public transport

Green vehicles

Electric vehicle

Hybrid vehicles

Transport fuel: natural gas

biofuel

Other transport choices with very low environmental impact: cycling

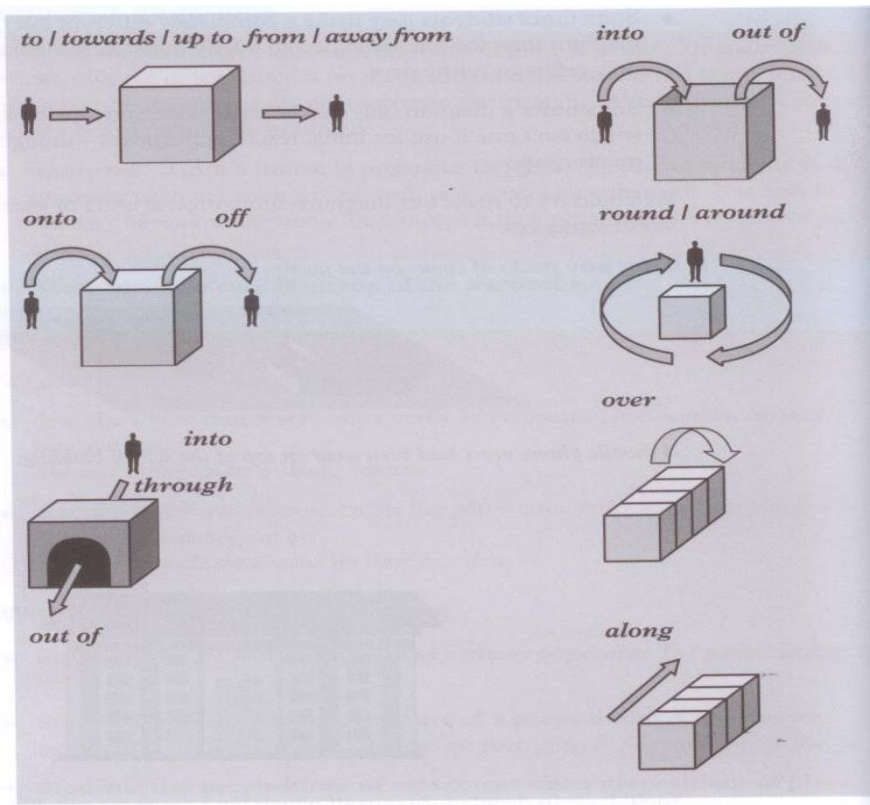
human-powered vehicles

animal powered transport

Walking

## Short grammar outline

### Prepositions of movement



(Scrivener, 2010)

### Test

- 1 They ..... him of taking the money.  
**A** accused **B** blamed **C** punished **D** threatened
- 2 I don't think we've met before. You're confusing me with .....  
**A** some other **B** someone other **C** other person **D** someone else
- 3 She'd seen the film before, ..... she?  
**A** hadn't **B** didn't **C** wouldn't **D** shouldn't
- 4 Look, there's the waiter! ..... the bill.  
**A** Ask him **B** Ask him for **C** Demand him **D** Demand him for
- 5 I don't believe him, ..... excuse he offers.  
**A** however **B** whatever **C** for any **D** for much

- 6 How long does it take you to ..... to work every day?  
A approach B reach C get D arrive
- 7 She wasn't ..... to reach the ceiling.  
A enough tall B so tall C as tall D tall enough
- 8 We have ..... for a secretary but haven't appointed anyone yet.  
A announced B advised C advertised D noticed
- 9 I played very badly. I was ..... with myself.  
A ashamed B disgusted C sorry D amazed
- 10 He's a better player than I am so I didn't expect to ..... him.  
A beat B gain C win D victory

(Fowler, 2005)

## Key

### 4. Fill in the gaps with the expressions below.

In practice there is a #sliding scale of green transport depending on the #sustainability of the option. Green vehicles are more fuel-efficient, but only in comparison #with standard vehicles, and they still #contribute to traffic congestion and road #crashes. Well-patronised public transport networks based on traditional diesel #buses use less fuel #per passenger than private vehicles, and are generally safer and use less road space than private vehicles. Green public transport vehicles including #electric trains, trams and electric buses combine the #advantages of green vehicles with those of sustainable transport choices. Other transport choices with very #low environmental impact are cycling and other human-powered vehicles, and #animal powered transport. The most common green transport choice, with the #least environmental impact is walking.

**Test**

1 A

2 D

3 A

4 B

5 B

6 C

7 D

8 C

9 B

10 A



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# **Current trends in transport and shipment**

1. Discuss with your partner the new trends in transport, if needed use the Google search engine and get ready the information on the task.

2. Read the article below.

### Wings of change

The wings of the experimental aircraft measure more than 63 metres from end to end, the same span as an Airbus A340, but they look weak, supported on the ground by wheeled struts. They are covered with 11,268 photovoltaic cells, which look dark blue in the early hours of the morning. The four ten-horsepower propellers; they power now start to turn silently. Bertrand Piccard, a 55-year-old explorer and psychiatrist, puts on his helmet and oxygen mask and completes his final checks. The *Solar Impulse* quietly taxis forwards. The plane is travelling impossibly slowly – 30 kilometres an hour – when it gently raises its nose and leaves the ground. With air beneath them, the long, thin wings seem to gain strength; the fuselage that on the ground appeared almost breakable becomes elegant, like a long-legged, long-necked bird in flight. It seems not to fly, though, so much as float. Piccard spends the day steering the solar-powered plane through the air around the Matterhorn and lands 12 hours later, after sunset. But the *Solar Impulse* is a plane that could fly forever.

In 2013, it crossed the US. It took off in San Francisco in May and landed at New York's JFK airport in July, covering the distance in five stages, with Piccard and the other project leader, André Borschberg, a former fighter pilot in the Swiss air force, changing places in the cockpit. The flight was a remarkable success: the Solar Impulse flew further than any solar-powered plane before it.

The plane that crossed America is a prototype, with the name HB-SIA. The next *Solar Impulse*, the HB-SIB, is currently being built, and will try to fly around the world in 2015. Solar power can seem the least exciting of clean energy sources: it just sits there, absorbing the sun. However, projects such as these seek adventure as they test the limits of technical knowledge. That the technology involved might also one day save the planet is a nice bonus.

Piccard started the *Solar Impulse* project because he had a problem with other fuels, a personal one – they had nearly cost him his life. In March 1999, along with British pilot Brian Jones, he had made the first non-stop journey around the world by balloon, in *Breitling Orbiter 3*. “We started with 3.7 tonnes of liquid propane,” he says today. “We landed with only 40 kilos.” Piccard promised himself that his next circumnavigation would rely on clean

energy alone.

As remarkable as the *Orbiter 3* flight was, Piccard was flying in a high-tech form of a technologically obsolete means of travel, the hot-air balloon. “*Orbiter 3* was the end of 200 years of ballooning,” Piccard says. “But *Solar Impulse* is the beginning of a new cycle in the history of aviation.”

The cycle also represents a new type of exploration, a new kind of adventure. Piccard knows about both. His father, Jacques Piccard, took a submarine to the deepest point on earth, seven miles (11.2 kilometres) underneath the sea to the Challenger Deep, in the Mariana Trench; his grandfather, Auguste Piccard, a physicist and friend of Albert Einstein’s, invented a balloon that he flew to a record height of 10 miles (16 kilometres) in August 1932, becoming the first person to enter the stratosphere and to see the curvature of the earth.

Today, according to Bertrand Piccard, the job of the modern explorer should focus on improving life on earth. “I think the pioneering spirit is not any more to conquer the planet, because it’s been done. There have been 12 people on the moon. Is it useful to be the 13<sup>th</sup> or 14<sup>th</sup> one? I don’t care. I think now the pioneering spirit should be more about the quality of life, better governance of this planet. *Solar Impulse* is a symbol of this. We can do better now.”

(Cheshire, 2014)

### Vocabulary

<b>span</b> ( <i>spæn</i> )	rozpětí, rozsah
<b>weak</b> ( <i>wi:k</i> )	slabý
<b>strut</b> ( <i>strʌt</i> )	vzpěra, podpěra
<b>propeller</b> ( <i>prəˈpelə</i> )	vtule
<b>to taxi</b> ( <i>tu:ˈtæksi</i> )	rolovat, pojíždět
<b>fuselage</b> ( <i>ˈfju:zəlɑ:ʒ</i> )	trup
<b>circumnavigation</b> ( <i>ˌsɜ:kəmˌnæviˈgeɪʃn</i> )	obeplutí
<b>obsolete</b> ( <i>ˈɒbsli:t</i> )	zastaralý
<b>curvature</b> ( <i>ˈkɜ:vəʃə</i> )	zakřivení
<b>steering</b> ( <i>striːɪŋ</i> )	řízení

**3. In pairs / small groups try to elicit the meaning of underlined expressions.**

**4. Fill in the gaps with the expressions below.**

*air appeared completes could dark end experimental float impossibly look psychiatrist  
silently sunset wings*

The wings of the \_\_\_\_\_ aircraft measure more than 63 metres from \_\_\_\_\_ to end, the same span as an Airbus A340, but they \_\_\_\_\_ weak, supported on the ground by wheeled struts. They are covered with 11,268 photovoltaic cells, which look \_\_\_\_\_ blue in the early hours of the morning. The four ten-horsepower propellers; they power now start to turn \_\_\_\_\_. Bertrand Piccard, a 55-year-old explorer and \_\_\_\_\_, puts on his helmet and oxygen mask and \_\_\_\_\_ his final checks. The Solar Impulse quietly taxis forwards. The plane is travelling \_\_\_\_\_ slowly – 30 kilometres an hour – when it gently raises its nose and leaves the ground. With air beneath them, the long, thin \_\_\_\_\_ seem to gain strength; the fuselage that on the ground \_\_\_\_\_ almost breakable becomes elegant, like a long-legged, long-necked bird in flight. It seems not to fly, though, so much as \_\_\_\_\_. Piccard spends the day steering the solar-powered plane through the \_\_\_\_\_ around the Matterhorn and lands 12 hours later, after \_\_\_\_\_. But the Solar Impulse is a plane that \_\_\_\_\_ fly forever.

**5. Read the article one more time and then retell it in your small group.**

**6. In small groups think of five questions related to the article (using at least in two of them TO BE USED TO + ING FORM) . The rest of class will answer them.**

- 1) \_\_\_\_\_
- 2) \_\_\_\_\_
- 3) \_\_\_\_\_
- 4) \_\_\_\_\_
- 5) \_\_\_\_\_

## Short topic outline

### Current trends in transport and shipment

Experimental aircraft – sun power  
Speed - 30 kilometres an hour  
Bertrand Piccard pioneer in solar power use in flying  
Emphasis on the sustainability of the environment

## Short grammar outline

### To be used to + ing

#### Use and meaning

Expressing something which we are acquainted with, it is not unknown anymore,

#### Form

They are used to paying attention to the environment.

He is not used to speaking in front of public.

Are you used to doing research in your field of work?

## Test

- 1 'I'm going to see the doctor tomorrow.' 'So ..... .'  
A do I B I do C am I D I am
- 2 I didn't leave that note on your desk. I suppose ..... did.  
A some other B other person C someone other D someone else
- 3 Every royal palace has ..... secrets.  
A the B its C his D their
- 4 They didn't take any notice of us ..... we protested.  
A in case B in spite C although D even
- 5 Oh, look! The design on that man's tie is ..... yours.  
A similar than B similar to C the same than D the same to
- 6 We can't pay you unless we're sure that this is his ..... on the cheque.

A signature B letter C mark D firm

7 If we ..... you were coming, we would have met you at the station.

A knew B would know C would have known D had known

8 I tried to persuade her, but she ..... listen.

A hasn't B hadn't C shouldn't D wouldn't

9 Congratulations! You've won first ..... !

A reward B victory C prize D price

10 ..... a pity that you can't come to the party.

A That's B It's C What's D There's

(Fowler, 2005)

### Key

#### 4. Fill in the gaps with the expressions below.

The wings of the #experimental aircraft measure more than 63 metres from #end to end, the same span as an Airbus A340, but they #look weak, supported on the ground by wheeled struts. They are covered with 11,268 photovoltaic cells, which look #dark blue in the early hours of the morning. The four ten-horsepower propellers; they power now start to turn #silently. Bertrand Piccard, a 55-year-old explorer and #psychiatrist, puts on his helmet and oxygen mask and #completes his final checks. The Solar Impulse quietly taxies forwards. The plane is travelling #impossibly slowly – 30 kilometres an hour – when it gently raises its nose and leaves the ground. With air beneath them, the long, thin #wings seem to gain strength; the fuselage that on the ground #appeared almost breakable becomes elegant, like a long-legged, long-necked bird in flight. It seems not to fly, though, so much as #float. Piccard spends the day steering the solar-powered plane through the #air around the Matterhorn and lands 12 hours later, after #sunset. But the Solar Impulse is a plane that #could fly forever.

### Test

1 C

2 D

3 B

4 C

5 B

6 A

7 D

8 D

9 C

10 B



## **Bibliography**

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