BUSINESS NEWS LESSONS

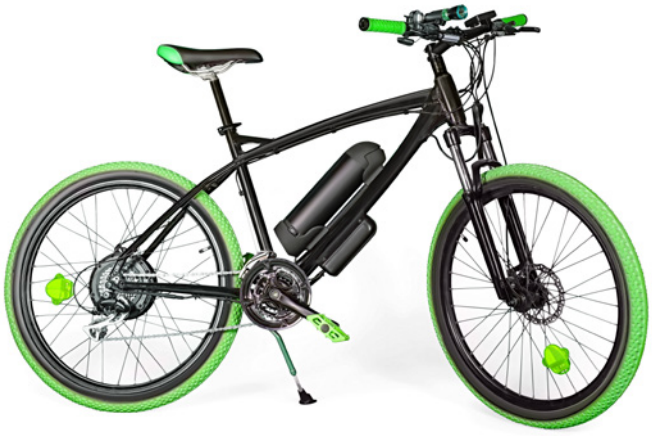
Air travel: the shape of things to come

1 Warmer

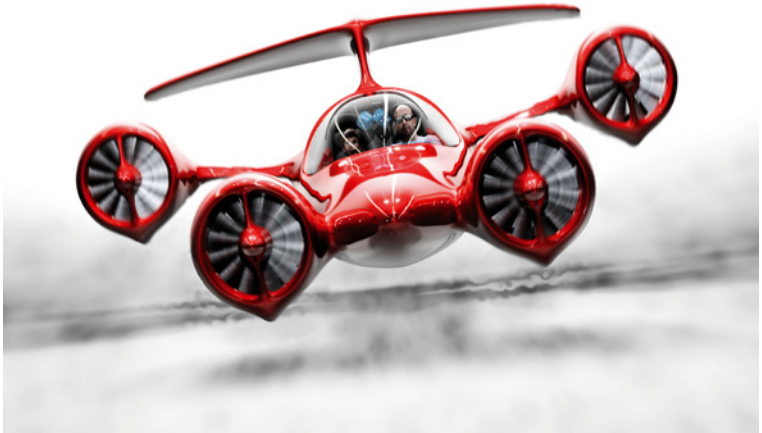
a. How do you imagine people will travel around in the future? Look at the images below and discuss what the public transport vehicles of tomorrow will look like.

1

2



3



Intermediate

Image credits: 1. DIGITAL VISION; 2. Getty Images/iStockphoto: Eshma; 3. Alamy Stock Photo: I. Glory

2 Key words and expressions

a. Match these words taken from the article to the definitions below. Then find them in the article to read them in context. The key words are listed in the same order they appear in the article.

aviation economy gravity maiden nuisance
pioneer prototype remote-controlled short-haul slanted

1. the practice of flying planes _____
2. something that is annoying and is a continuing problem _____
3. one of the first people to do something important which others later continue

   _____
4. the first form of something new, made before it is produced in large quantities

   _____
5. at an angle that is not 90 degrees _____
6. the cheapest seats on a plane _____
7. a machine that is operated by another piece of equipment from a short distance away

   _____
8. travelling or carrying people or goods over a short distance, especially by air

   _____
9. done for the first time _____
10. the force that makes any two objects that have mass move towards each other.

    _____

Intermediate

The model plane that might be the future of flying

THE FLYING-V RAISES THE PROSPECT OF FEWER EMISSIONS AND MORE SPACE (EVEN THOUGH IT'S ONLY THREE METRES WIDE)

1 There have been big aircraft advances since flying began: jet engines, lighter materials, computerised control systems. But the shape of the planes has stayed the same — fuselage, two wings and a tail. Aviation engineers have long seen the heavy fuselage as a nuisance. What if the passengers and cargo could be housed in a wing?

2 The flying wing might look futuristic but the idea is nothing new. Possibly the first flying wing was designed and flown by Czech aviation pioneer Igo Etrich in 1909, although he had to add a tail to keep it stable. During the second world war, both the Americans and Germans worked at flying-wing bombers, without fully succeeding. In the postwar era, the US managed to build flying-wing military aircraft such as the B-2 stealth bomber.

3 Engineers have been trying to build a passenger flying wing too. KLM and the Delft University of Technology, supported by Airbus, have created a prototype called the Flying-V, a 3-metre- wide scale model of which made its pilotless first flight at an air base in Germany in July.

4 The aircraft's creators presented the results this month, with Roelof Vos, leader of the project and a Delft assistant professor, calling it "the most revolutionary change in aviation since the introduction of the jet aircraft".

5 The Flying-V, as its name suggests, is really two wings, splaying out v-shaped from a pointed nose. Apart from the environmental benefits, of which more below, the designers are excited about the possibilities for passengers. We should always take cabin comfort promises with a pinch of salt — remember the gyms and bowling alleys we were promised in the Airbus A380? The Flying-V team says the plane could feature economy bunk beds. But a more important advantage of a slanted cabin wall is that the seats could be staggered, rather than in rows, so that, even in economy, people would not share arm rests with their neighbours.

6 There have been other remote-controlled test flights of scaled-down blended wing- body aircraft. Boeing designed the X-48B and X-48C aircraft, which have more of a triangle than a v-shape. Built by Cranfield Aerospace of the UK, and flown in a partnership with Nasa, the planes ended their flights in 2013, with the partners declaring them a successful look at the future. Airbus showed off its similarly shaped Maveric demonstrator at this year's Singapore air show, saying it could one day be a replacement for today's short-haul single aisle planes.

7 The Flying-V is a future long-haul plane, carrying up to 360 passengers. The model's maiden flight, while largely successful, was not perfect. The plane's centre of gravity turned out to be too far back. It rolled and yawed and landed awkwardly, breaking its nose gear. All these problems are correctable, Vos said.

8 More important is whether the gains would be worth it. The Flying-V would use 20 per cent less fuel than today's most advanced long-haul planes, which doesn't sound much in an age when many oppose flying altogether. But Vos says that's only the fuel saving from a different air frame. It doesn't take into account improvements in materials and engines — or the use of a different fuel. While he doesn't envisage the Flying-V ever being electric, he suggests it may be possible, one day, for it to fly on hydrogen.

9 When could a plane like this enter service? "In my personal view, 2040," Vos told me. Richard Wahls, Nasa's strategic technical adviser on advanced aircraft, also said wing-body planes could be rolling off the production line in the late 2030s. A long way off. But the pause in our flying is not a bad time to think about a more advanced and environmentally improved way of doing it.

Intermediate

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Michael Skapinker, September 21 2020

3 Understanding the article

a. Complete the notes with information from the article

Flying-V
Creators: (1) _____, Delft University of Technology
Project leader: (2) _____
Size of prototype: (3) _____
Location of first pilotless flight: (4) _____
Maximum no. of passengers: (5) _____
Fuel: (6) _____ less than most long-haul planes; could use
(7) _____ in future
Date in service: Project leader predicts (8) _____

4 Business language – compound nouns

a. Match the words on the left to the words on the right to make compound nouns from the text.

1.	jet	a. war
2.	air	b. advisor
3.	world	c. line
4.	technical	d. engine
5.	production	e. base

b. Complete the questions with the correct compound nouns.

1. Which industries use a/an _____ _____ to make their products efficiently?
2. Can you name some machines that have a/an _____ _____?
3. What does the job of _____ _____ involve doing?

Intermediate

4. Which country has the largest military _____ _____?

5. Which movies have you watched about soldiers who fought in the Second

_____ _____?

c. In pairs, ask and answer the questions above.

5 Business language – adjectives for describing change

a. Complete the words to make adjectives from the text. Search the article for the adjective and write the noun it is used with.

1. r ___ v ___ ___ ___ t ___ ___ n ___ ___ y — _____
2. s ___ c ___ ___ s s ___ u l — _____
3. s ___ ___ ___ t e ___ ___ c — _____
4. ___ d v ___ ___ c ___ d — _____
5. ___ m p ___ ___ v ___ d — _____

b. Use the adjectives above to make sentences about the industry you work in or describe an invention you particularly like.

6 Discussion questions

If a V-shape plane becomes commercially available, would you be among the first passengers to book a flight on it?

What new developments are taking place in your industry? Describe them.

Which of these developments most excite you? Why?

If you are not aware of developments in your industry, what changes would you like to see in the future? Explain your answer.

Intermediate

7 Wider business theme – the car industry

a. Work in groups of three to research the future of the car industry. Choose an option each to investigate:

- Driverless vehicles
- Hydrogen powered vehicles
- Electric powered vehicles

b. Explain your research to the group in a presentation about the option you chose. Then discuss together the potential of each development for commercial success.