

Robots help get food from farm to table

1 Warmer

What do you think these robots do? How might they play a part in getting food to your table?



2 Key words

Find the words in the article that match the definitions below. Use the section numbers to help you.

1. make something fall apart by placing it under great pressure (introduction)
2. struggling; trying to deal with something difficult (introduction)
3. collect a crop from the fields (introduction)
4. not considered important or relevant (introduction)
5. passages between the shelves of a supermarket (section 1)
6. the amount of something that is produced (section 2)
7. someone (or something) whose job is to deliver documents or parcels (section 3)
8. problems (section 3)
9. people whose job is to sell food and other goods for the home in a small shop (section 5)
10. a set of problems that is impossible to escape from because each problem must be solved first before you can solve any of the others (section 5)
11. a large piece of something (section 5)
12. the goods in a shop (section 5)

Five robots that hope to save the US food supply chain

Understaffed industry turns to automation as it struggles to feed millions under lockdown

BY PATRICK MCGEE

- 1 **Introduction.** As Covid-19 threatens to buckle the US food supply chain, businesses are wrestling with the task of how to feed millions under lockdown via understaffed supply chains.
- 2 As a result, demand for robotics companies whose machines can harvest, handle and deliver food is surging — rapidly accelerating a trend towards automation that was already under way.
- 3 “Everybody’s been talking about the automation wave, the AI wave, and this fourth industrial revolution, but these trends were just creeping along,” said Scott Snyder, a consultant and partner at Heidrick and Struggles. “Now suddenly the business case that might have been marginal before — deploying a pick and pack robot in your backroom — is much more attractive.”
- 4 Here are five machines leading the food industry’s robot revolution.

1. Brain Corp’s floor scrubber

- 5 At supermarkets including Walmart and Kroger, autonomous floor-scrubbing machines are zooming up and down the aisles every night, ensuring the premises are spick and span.
- 6 SoftBank-backed Brain Corp has equipped thousands of robots with its sensors and software since 2016, and now they are collectively performing 8,000 hours of work each day, said chief executive Eugene Izhikevich. Last month the company raised \$36m in response to a new spike in demand triggered by supermarket labour shortages.
- 7 “Every day, we give back 8,000 hours to essential workers to do other stuff, for example... to precision clean, [disinfect] handles, restocking or just taking a break they need,” Mr Izhikevich said. “So the robots aren’t doing all the cleaning, they are the doing the most monotonous work.”

2. FarmWise’s robotic weeding service

- 8 On farms, demand has surged for automated crop-management solutions. In California, venture capital-backed FarmWise has seen “an order of magnitude” more appetite for its products since the Covid-19 outbreak, said chief executive Sébastien Boyer.
- 9 FarmWise’s “agribot” Titan is a giant orange robot equipped with artificial intelligence that enables it to identify weeds for removal, helping growers increase their efficiency and extract more yield from their land.
- 10 FarmWise, a team of 50 people, has seven robots up and running at present. According to Mr Boyer, 20 per cent of all field labour in southern California comes from temporary workers based in Mexico. With the border effectively shut amid coronavirus lockdowns, farmers are looking for alternative labour solutions.

3. FedEx’s ‘SameDay Bot’ aka ‘Roxo’

- 11 Roxo, the “SameDay Bot” from FedEx, is a last-mile courier that can climb stairs and drop off packages at your home. Current prototypes have some kinks — such as getting confused by shadows — but by the end of this year it is expected to be running deliveries for FedEx Office outlets.
- 12 In the past few months FedEx has expanded the list of partners seeking to use its service, which now includes McDonald’s, Walmart, CVS, AutoZone and Target. Collectively, its clients have about 80,000 locations in the US, potentially giving FedEx huge economies of scale to make robotic deliveries mainstream in the next 18 to 36 months.
- 13 “We can get the economics to a point where it makes sense to have a fleet of bots lined up outside the retailer or the restaurant, at the ready, to fulfil demand,” said Brian Philips, chief executive of FedEx Office.

Continued on next page

4. Fetch Robotics' warehouse robots

- 14 San Jose-based Fetch Robotics builds warehouse robots that ferry goods around facilities. The robots, already operational in 22 countries for more than 100 customers, come in three sizes that can carry payloads between 100kg and 1,500kg.
- 15 Chief executive Melonee Wise said in the past two months Fetch had shifted its focus to essential providers, helping businesses adhere to social-distancing guidelines. She added that there has been a surge in demand for disinfection robots, so the company was now equipping its machines with tools such as ultraviolet light to kill germs.
- 16 "What makes us very unique is that our robots are deployed on a cloud system," she said. "So we can monitor all of [them] in real time, globally, which makes it a lot easier to support and deploy... If you want to buy a robot today, you can have it set up and running in less than eight hours."

5. Fabric's micro-fulfilment centres

- 17 Fabric builds heavily automated micro-fulfilment centres that aim to make grocers competitive with the same-day delivery capabilities of Amazon. Operations at its flagship centre in Israel increased

200 per cent between March and April, and it is now in the process of building its first US centre in Brooklyn, New York.

- 18 Before the pandemic, online groceries accounted for less than 5 per cent of America's \$682bn grocery market, according to IbisWorld. That share is now expected to exceed 10 per cent this year.
- 19 "What grocers have seen in the last four weeks is what they had expected to see in the next four years," said Elram Goren, chief executive of Fabric.
- 20 Grocers have been slow to adapt to e-groceries because the prospect places them in a catch-22: offer online orders and lose money on each sale, or refuse to offer the service and see a chunk of your business fall away to online rivals.
- 21 But by bringing inventory much closer to customers, and using robots to pick and pack items, Mr Goren argued he can change the equation and make a lasting change to how consumers buy groceries even after the pandemic ends.
- 22 "I believe a lot of it will stick," he said. "Covid will shift this industry – or at least accelerate it a few years ahead."

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3 Understanding the article

a. Without referring back to the article, read the statements and decide whether they are true or false. Correct the false information.

1. Even before the pandemic, businesses were starting to see a fast-moving trend towards greater deployment of AI.
2. The need for robots that can do monotonous and repetitive manual tasks has increased due to understaffed companies as a result of Covid-19.
3. Travel restrictions have greatly reduced the number of people who previously crossed borders and went to other countries to do unskilled labour.
4. The increase in online shopping has led smaller shops to sell their business to large multinational online retailers.

5. Artificial intelligence can support seasonal workers from other countries and allow them to spend more time on complicated work tasks as well as lessen the chances of them becoming mentally tired and needing a break.
6. In likely future scenarios, many of the robots from the article will need to be deployed individually as they do not work well in groups.
7. The technological advances made due to Covid-19 are likely to become a normal part of business and are here to stay.

4 Business language – word pairs

- a. Complete the phrase starting in Column A by using the given words above the table and adding them to Column B.
- b. Find the phrases in the article to check your answers.
- c. Use the phrase in a sentence that describes something relevant to your life. Write the sentence in Column C.

chain demand deploy fulfilment pack revolution scale shortages

Column A	Column B	Column C
1. supply	chain	My cousin delivers pizza so he is an important part of the supply chain for his restaurant.
2. industrial		
3. pick and		
4. labour		
5. economies of		
6. a surge in		
7. support and		
8. micro-		

5 Business & General English – other useful phrases

a. Complete the sentences with words or phrases from the article.

1. Rescue efforts are _____ to find the lost climbers. (= already started or happening, one word, introduction)
2. Dorothy was very strict about cleanliness. Everything in her workshop had to be _____ (= very clean and tidy, three words, section 1)
3. It took two years to get the project _____. (= starting to work correctly, three words, section 2)
4. They were _____ moving their head office from Paris to London.
(= used to say that someone is or was doing something at the time that you were talking about, four words, section 5)

b. Now use each phrase in sentences of your own.

6 Using the key words

a. Complete the questions with some of the key words. Change the form of the key word if necessary.

1. Where do you prefer to do your weekly food shopping: online, at a large supermarket, or at your local _____?
2. Have you or your company ever been in danger of losing a large _____ of your business to a competitor?
3. Take your children to work with you or leave them at home alone while the schools are closed: does that sound like a _____ situation to you?

4. What crops are most commonly _____ in your part of the country?
5. Are you currently _____ with any work dilemmas?
6. Where in your business do people need to keep an _____? (e.g. stationary, cleaning supplies, etc.)

b. Now ask and answer the questions in pairs or small groups.

7 Discussion questions

- Which robot in the article do you think is most likely to be a commercial success for its developers? Why?
- Which robot do you think will have the most impact on the food supply chain? Why?
- What are the advantages and disadvantages of introducing robots to a supply chain?

8 Wider business theme – creating a clear proposal and presentation

a. Think of an example of a supply chain in your life and imagine you work in that company. You have decided to deploy robots to make the supply chain more efficient. Make notes about:

- the benefits this robot could bring to the staff
- how much money it could save for the company
- how much quicker the job would be done
- any other benefits

b. Put this information into a short clear PowerPoint presentation for your boss so that he or she can present this to the board of directors at next week's meeting.