

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

Write these words from the article next to the definitions below. Then find them in the article to read them in context. Use the section numbers to help you.

accelerating	catch-22	collectively	creeping along
crop	fleet	grocers	harvest
kinks	mainstream	monotonous	inventory

1. collect a crop from the fields (introduction) _____
2. speeding up, making something move faster (introduction) _____
3. moving at a very slow speed (introduction) _____
4. the buildings and land that a business uses (section 1) _____
5. together, as a group (section 1) _____
6. very boring because you have to keep repeating the same thing (section 1) _____
7. plants grown for food, usually on a farm (section 2) _____
8. problems (section 3) _____
9. considered ordinary or normal and accepted or used by most people (section 3) _____
10. a group of vehicles (or robots) that are owned by one company (section 3) _____
11. very special, unusual, or good (section 4) _____
12. people whose job is to sell food and other goods for the home in a small shop (section 5)

13. 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) _____
14. 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 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.”



Patrick McGee in San Francisco May 18 2020
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3 Understanding the article

a. Read the statements and decide whether they are true or false. Correct the false information.

1. Even before the pandemic, there was a fast-moving trend towards greater deployment of AI in businesses.
2. The need for robots that can do monotonous and repetitive manual tasks has increased because companies are understaffed due to Covid-19.
3. Brain Corp's floor scrubber is being used in supermarkets to disinfect handles on shopping trolleys and baskets.
4. FarmWise's “agribot” Titan is programmed to decide without human help which plants are crops and which ones are weeds.

5. FedEx's 'SameDay Bot' 'Roxo' doesn't always work as it should when it moves into a dark area.
6. Fetch Robotics' warehouse robots move heavy goods around warehouses.
7. An important part of Fetch Robotics' business is making robots that can carry things to disinfect and help fight Covid-19.
8. Fabric aims to help online grocers compete with giant online companies by putting goods near their consumers and using robots to fill orders.
9. The pandemic has meant that the online grocery business in the US will double its share of the market.
10. Small grocers are likely to stop using robots after the pandemic.

4 Business language – word pairs

- a. Match the words to make word pairs or phrases from the article. Then check your answers in the article.

- | | |
|-----------------|------------|
| 1. supply | process of |
| 2. under | shortages |
| 3. automation | demand |
| 4. labour | chains |
| 5. economies of | wave |
| 6. shift its | way |
| 7. a surge in | scale |
| 8. in the | focus |

- b. Write the word pairs and phrases next to the definitions.

1. _____ = a change in what is most important to you and your business
2. _____ = a series of processes involved in supplying a product to someone
3. _____ = already happening
4. _____ = reductions in the cost of making and selling products that are made possible because a business is very large

5. _____ = used to say that someone is or was doing something at the time that

you were talking about

6. _____ = when it is possible to see that after one company starts to use

artificial intelligence and robots, another does the same, and so on until they are all using it

7. _____ = when there aren't enough people available to do the work that needs

to be done

8. _____ = when there is a sudden increase in the need for certain things

c. **Choose four word pairs or phrases and write a sentence. Write something about yourself or your life.**

Ex. *My cousin delivers pizza, so he is an important part of the supply chain for his restaurant.*

5 Business English – phrases with ‘and’

Complete these sentences with three-word phrases with ‘and’ from the article.

1. Dorothy was very strict about cleanliness. Everything in her workshop had to be

_____ (= very clean and tidy, three words, section 1)

2. It took two years to get the project _____. (= starting to work correctly, three words, section 2)

3. One of the monotonous tasks people do in a warehouse is to _____ the customers' orders. (= choose a product and put it in a shipping box, introduction & section 5)

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 shopping: online, at a large supermarket, or at your local _____?
2. If your company has a large campus, how many buildings are on the _____?
3. Is it correct to say that organic groceries are now _____?
4. What _____ do farmers grow in your part of the country?
5. What do you think is the most _____ task in your work?
6. What is _____ about your company's services or products?

- 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. Imagine that you work for a company in that supply chain. You have decided to deploy a robot to make the supply chain more efficient. Make notes about:
- the robot you need, what work it must do, and how it will work with human employees
 - the benefits this robot could bring to the staff
 - how it might save money for the company
 - how much quicker the job would be done
 - any other benefits
- b. Draw a sketch of the robot or give a detailed description. Present your idea for the robot to your boss and try to get approval (or budget) to develop the robot.