

DIGITAL SKILLS AND RESEARCH METHODS (DSR)

(BMSW4003 LON)

The use of Just Walk Out in Amazon Go Stores

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The use of Just Walk Out Just Walk Out in Amazon Go Stores

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THE IMPACT OF “JUST WALK OUT” TECHNOLOGY IN AMAZON GO STORES



No more queues

- Future of retail
- Chain of convenience stores
- Billions invested by amazon in new technology

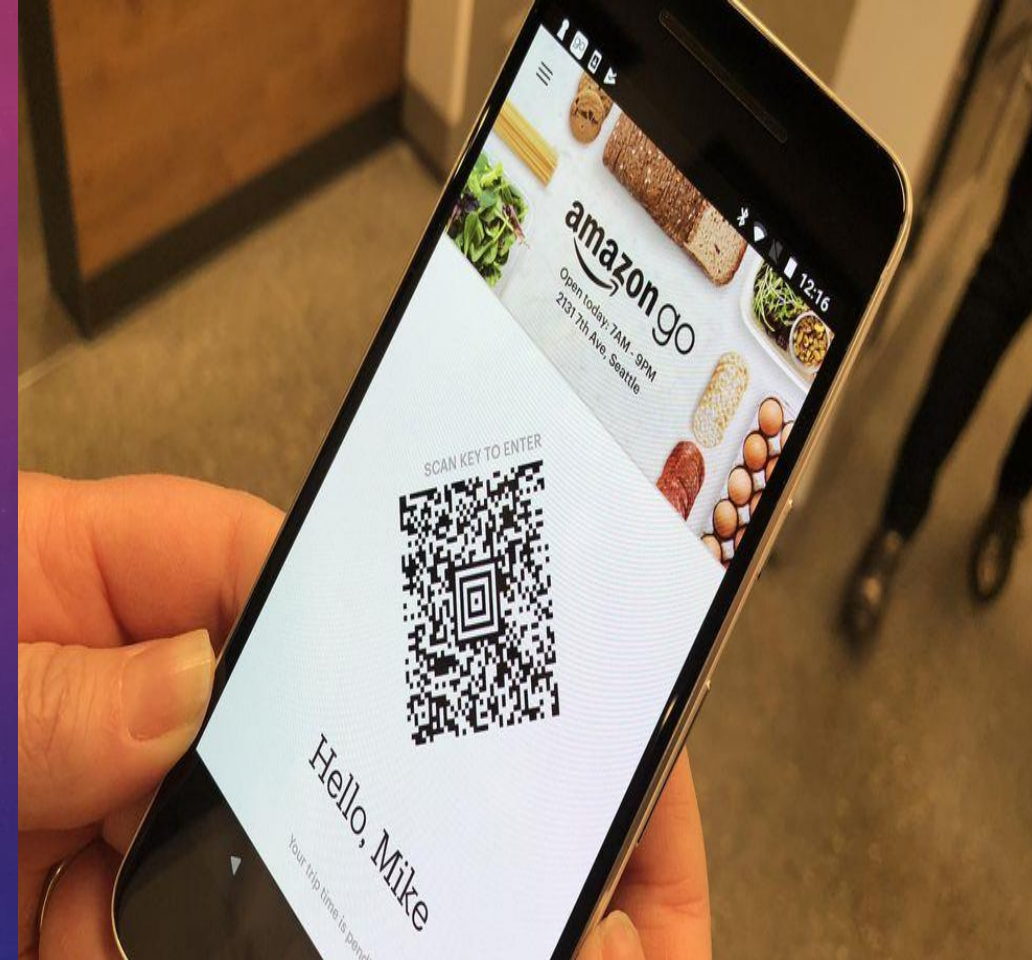
Just Walk Out

technology by 

Background of the organisation

History of the organization

- Amazon was founded on July 5, 1994, in Washington by Jeff Bezos in his garage as online bookstore
- In 1997-98 Amazon start selling larger range of products online and deliver them worldwide
- First Amazon Go store was open just for the employees and was located near the company's building in Seattle on December 5, 2016 (Weise, 2016)
- In 2021 there is 29 Amazon Go stores in United States and United Kingdom



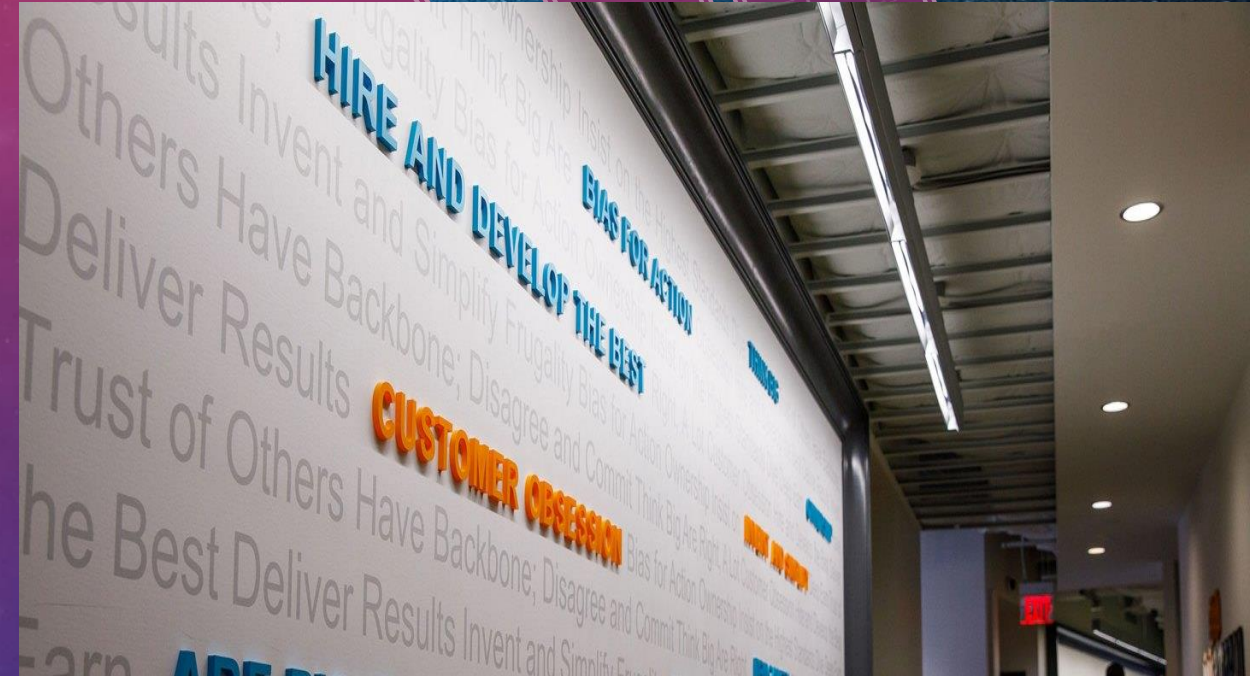
Sources: [amazon.com](https://www.amazon.com), eu.usatoday.com, [history.com](https://www.history.com)

Aims and objectives

- Amazon Go's objective is to sell more products and to elevate the customer experience enabled by smart building technology (Aamidor, 2016)
- Amazon aim is to sell cashier-less technology to other retailers and become the dominant in online and offline retail industry.

Purpose of Amazon Go stores

- Take items and walk out to save time
- Change physical retail experience
- Help customers to have very efficient and pleasant shopping experience
- Advertise their technology



(Amazon.com, 2021)

Mission and vision of Amazon Go stores

- Amazon Go might be currently in beta, but the mission and Amazon ambition is to be true alpha of retail (Frason, 2021)
- They are the first move of Amazon in the brick-and-mortar retail

Current Status and Services of Amazon Go

- Other retailers can buy this technology from Amazon, but not as a franchise
- Currently there are 5 stores in London, UK
- In the US, there are currently 24 stores and plans to open more (Matt, 2021)

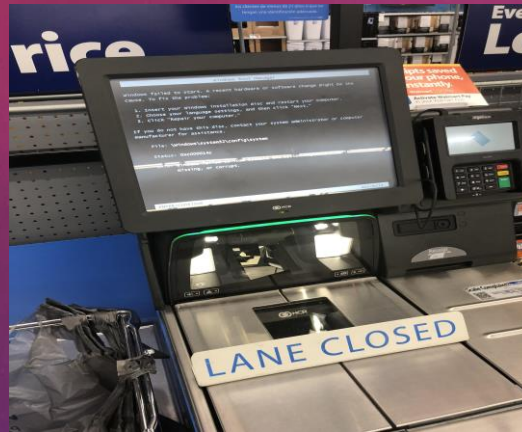
Challenges before introducing the new technology

- Long queues



(Shutterstock 2021)

- Technical issues



Reddit.com

- Customer's reluctance to new technology



(unfrozen caveman lawyer2 - I'm just a simple Caveman, 2021)

- Slow internet speed



(waiting for dial up download, 2021)

Challenges before introducing the new technology

- Theft



(There has been a dramatic increase in shoplifting in Hillingdon, 2016)

- Scan and Go Apps – adds more steps to the shopping process
- The technology's limitations (Amazon Go store hits some glitches, 2021)



(Sainsburys.com, 2021)

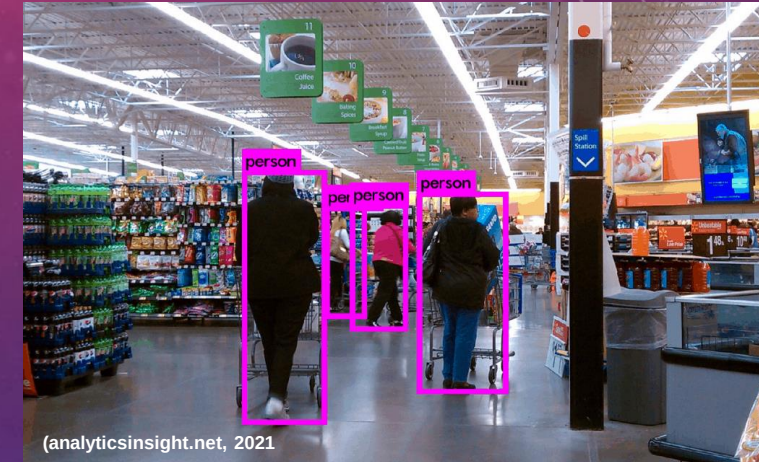
DESCRIPTION

- Just Walk Out technology enables shoppers to simply enter a store, grab what they want, and just go (*justwalkout.com 2021*)
- Customers do not need to download an app or create an Amazon account.
- Amazon is trying to sell this technology to other retailers.

Same types of technologies used in self driving cars:

Computer vision

- A field of artificial intelligence that trains computers to interpret and understand the visual world
- Machines can accurately identify and classify objects
- They can react to what they see
- Computer vision allows machines to make judgments reacting just in the same way a human mind would react (Some, 2021)



Source (Computer Vision: What it is and why it matters, 2021 analyticsinsight.net)

SENSOR FUSION

- It combines pieces of information coming from different sources(Thomas, 2010)
- In a shop we can find multiple sensors: Cameras, Motion Sensors, Smart shelves



Source (Computer Vision: What it is and why it matters, 2021 chainlinkresearch.com)

DEEP LEARNING

- One of the foundations of artificial intelligence
- It is used to classify images, recognise speech, and describe content
- Siri and Cortana are partially powered by deep learning.

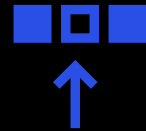


(TOP 5 KEY AREAS: DEEP LEARNING IN RETAIL & ADVERTISING, 2021)

CHARACTERISTICS



Can be installed in both new and existing stores



Can be installed in weeks



It is great in busy shops, with long lines

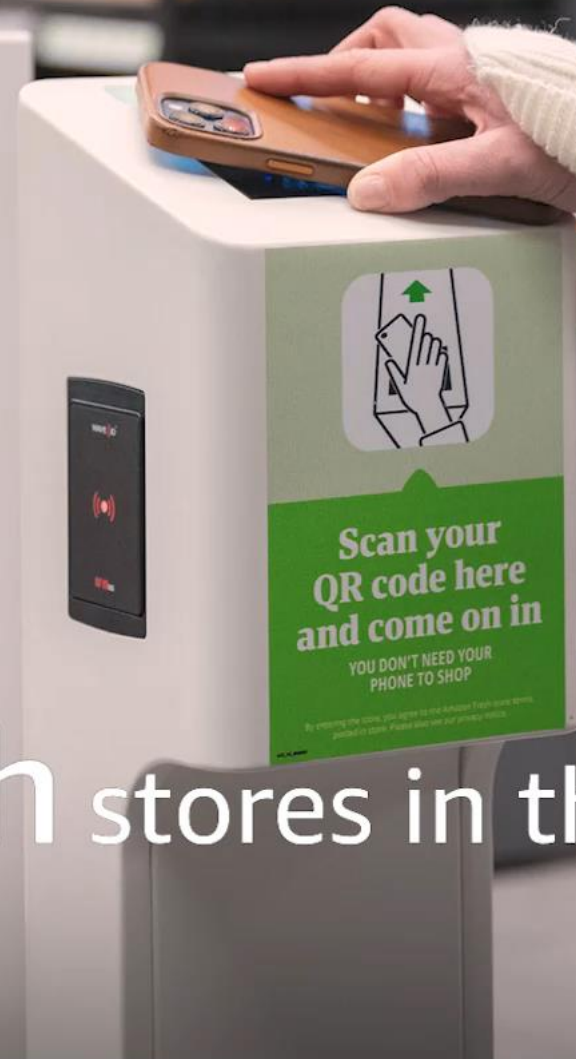
How does it work?

- Scan to enter
 - QR code on Amazon app
 - Credit/Debit card
 - Palm

 Shop

Walk out

Introducing  fresh stores in the UK...



THE IMPACT OF THE JUST WALK OUT TECHNOLOGY

• Positive impacts

For Customers

- The decrease in waiting times
- Ease of use

For Retailers

- Relocate personnel resources
- Provide quick service

For the workforce

An increase in demand for

- Technical skilled employees
- Customer service
- Supervisors
- Security personnel
- To maintain
- Advice, assist
- Complaints
- Prevent theft

The impact of the Just walk out technology

Negative impacts

For Customers

- The depersonalisation of the shopping experience
- Privacy issues

For Retailers

- Smaller retailers can not afford the cost
- Personal data management (GDPR compliance)

(Wimbledonguardian.co.uk, 2020)

For the workforce

- Millions of cashier roles will become obsolete

DIFFERENCES BETWEEN TRADITIONAL AND MODERN TECHNOLOGY



(Bbc.co.uk,2021)

Before Modern Technology

Shopping experience was frustrating

Difficult to track the stocks

Lots of write-offs

Long queues

Theft

DIFFERENCES BETWEEN TRADITIONAL AND MODERN TECHNOLOGY

After Modern Technology

- Seamless shopping experience
- Stocks are updated in real-time
- Virtually no losses
- No queues
- Theft is inexistent



Why is this technology important for the organisation

- Cashierless shops offer the opportunity to improve the unsatisfactory check-out process and reduce labour costs in store.
 - The focus should be on the available technologies and on how to combine them for each format. Different paths can lead to the desired goal.
 - The retailer should take advantage of the simplifications of cashierless stores and invest, for example, in more time for advising the customer.
- (Schogel and Lienhard, 2020)

Prospects

- Amazon will continue to expand its Amazon Go stores
- It will sell the technology to other retailers

CONCLUSION

- Amazon Go stores represent the future of retail, because it was the most ambitious project launched in the retail landscape in a long time. The project became possible thanks to the effort of hundreds of smart, dedicated scientists and engineers around the world.
- The potential threats for retailers, grocers and their employees, in the event of a widespread implementation of a technology like that of Amazon Go, are numerous, but will be an increase demand for technical people to design, implement and maintain this new technology.

THANK YOU FOR
YOUR ATTENTION



Q&A



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