DIGITAL SKILLS AND RESEARCH METHODS (DSR)

(BMSW4003_LON)

The use of Just Walk Out in Amazon Go Stores

Student Name	ID	Topic
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2. Andreea Gradinaru	2026721	Challenges before the introduction of the Just Walk Out technology
3. Bogdan Draghici	2027588	Insights of the Just Walk Out technology
4. Thomas Richard Franks	2027356	Impacts of the Just Walk Out technology
5. Kirsty Louise Graham	2028150	Lessons drawn from the case study/Conclusions

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

Table of contents

Introduction

Background of the organisation

Challenges before introducing Just Walk Out Just Walk Out

Insights of Just Walk Out Just Walk Out

Lessons drawn from the case study

Conclusion & References

Q&A

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

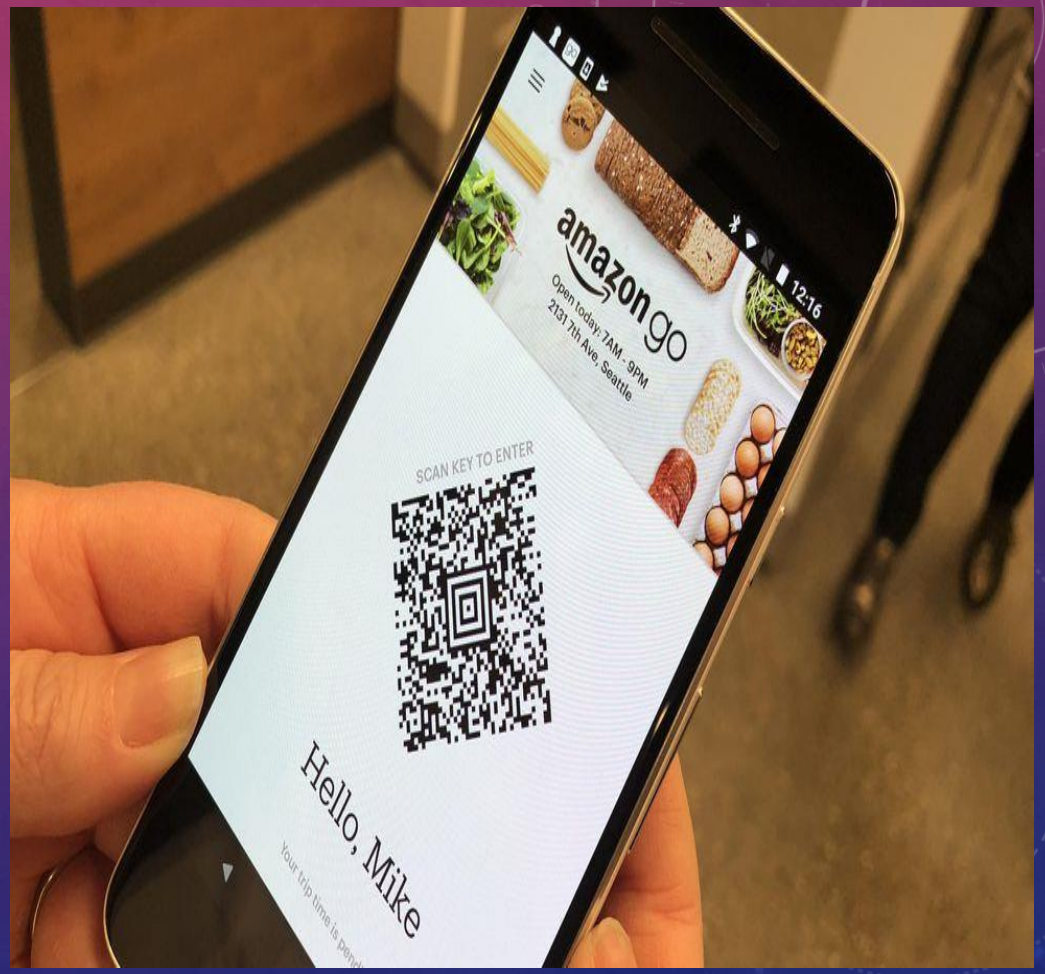
Just Walk Out

technology by amazon

Background of the organisation

History of the organization

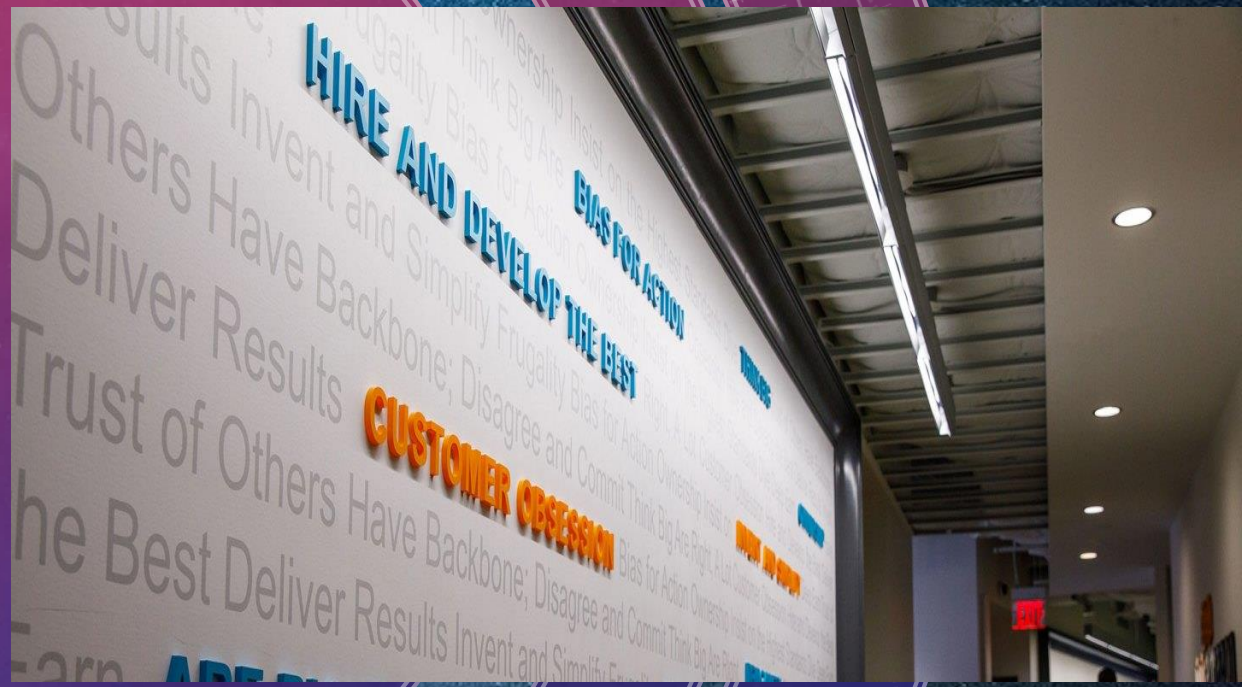
- Amazon was founded on July 5, 1994, in Washington by Jeff Bezos in his garage as online bookstore
- In 1997-98 Amazon start selling larger range of products online and deliver them worldwide
- First Amazon Go store was open just for the employees and was located near the company's building in Seattle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



Sources: amazon.com, eu.usatoday.com, 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.



(Amazon.com, 2021)

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

Source: medium.com

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)

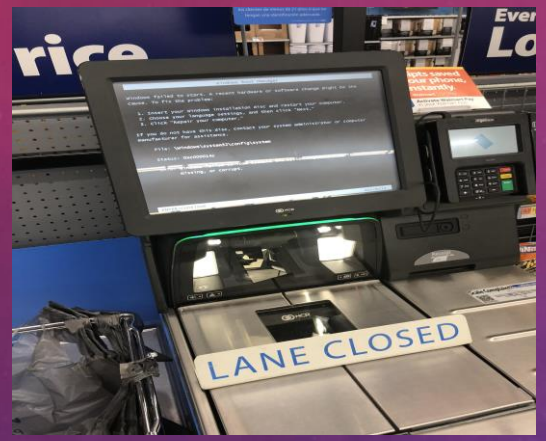
Source: Bloomberg.com, forbes.com, justwalkout.com

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)

Sources: retailcustomerexperience.com, memegenerator.net, reddit.com, en.uncyclopedia.co

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**

(Sainsburys.com, 2021)

- **The technology`s limitations (Amazon Go store hits some glitches, 2021)**

Sources: mylondon.news, smartshop.sainsburys.co.uk

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.**

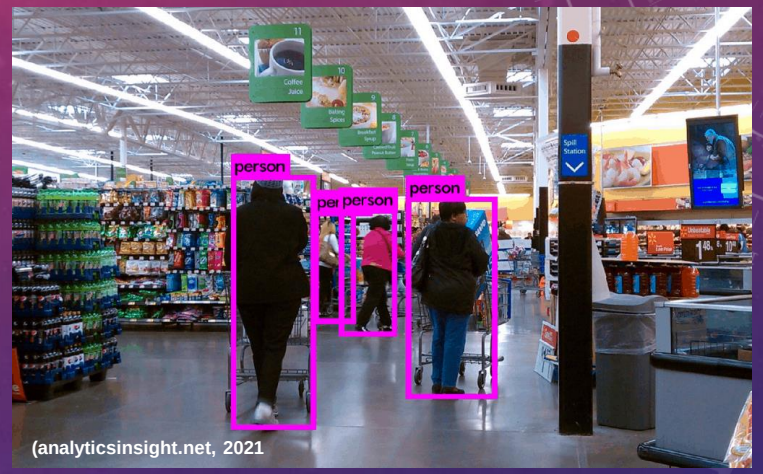
- **Amazon is trying to sell this technology to other retailers.**

(Cencenelec.eu, 2021)

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



(analyticsinsight.net, 2021

- Machines can accurately identify and classify objects
- They can react to what they see

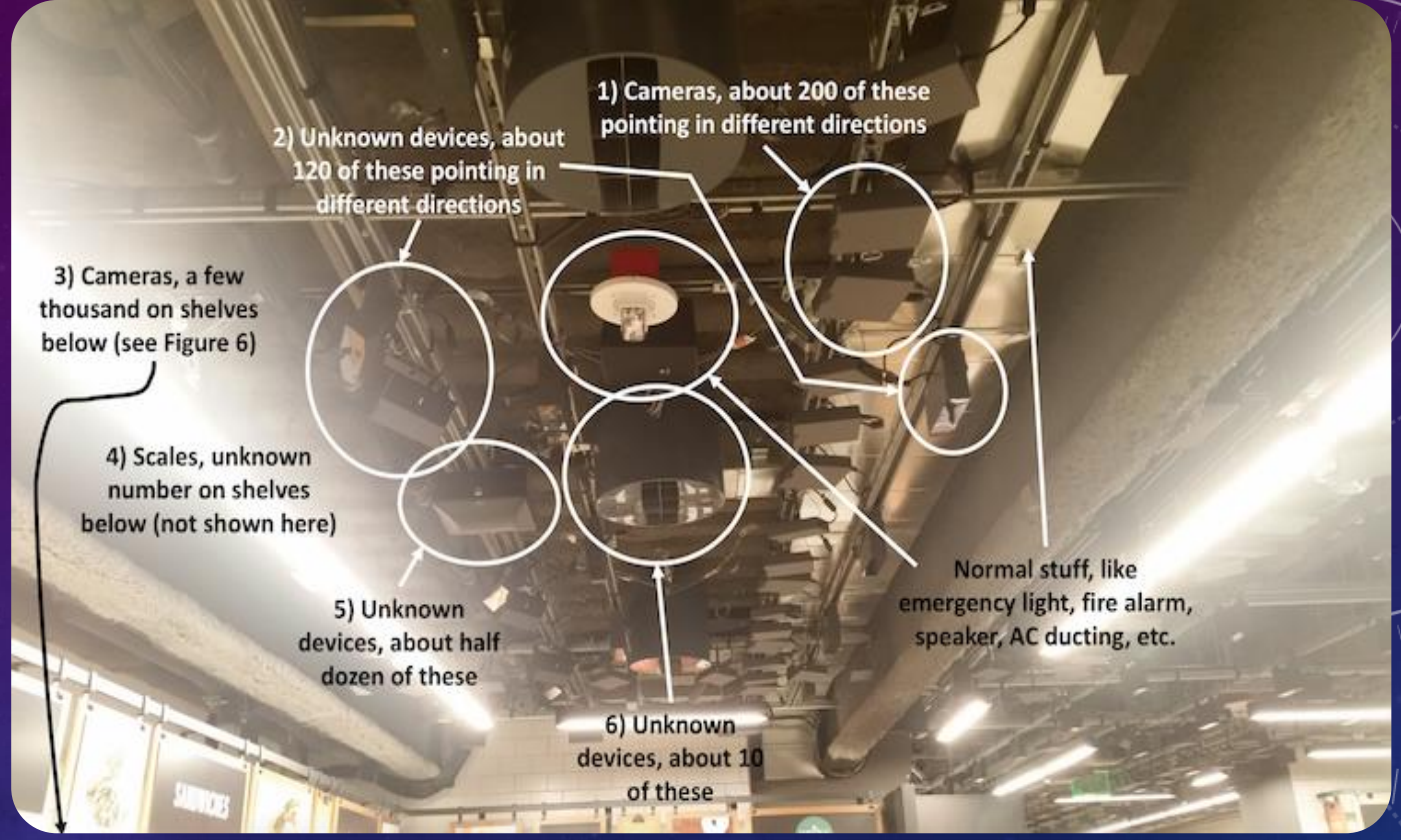
- Computer vision allows machines to make judgments reacting just in the same way a human mind would react (Some, 2021)

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

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

Source: (Polacco and Backes, 2021)

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

Source: (Polacco and Backes, 2021) (spotco.ir, 2021) getty images

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

(GettyImages/hakule)

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.

(Theverge, 2021)

THANK YOU FOR YOUR ATTENTION

Q&A

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