



Ocado is using modern technology to improve efficiency and employability

► Digital Skills And Research Methods

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Background of the organization

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What is Ocado?



- It is the largest online grocery supermarket.
- Ocado operates over England, Poland, Bulgaria, Spain.
- Every year, Ocado increases its revenue by 15-20%.

Who and when created Ocado?



- Ocado was founded in April 2000.
- Ocado was created by Jonathan Feiman, Jason Gissing, Tim Steiner.
- All of them worked at Goldman Sachs bank.

A little bit about delivery in Ocado.



- Ocado delivers more than 600 000 products every day.
- Most of the goods are delivered by Waitrose.
- They are always maintaining the discussion on the social Networks (Facebook, Twitter).
- Ocado always try to deliver their goods through ecological transport.

Interesting facts about Ocado.

- The Grocer Magazine 2007 Best Online Retailer.
Over 3000 jobs created.
- An average 12000 orders delivered every day.
- Servicing around 60% of British households.
- Almost 16000 lines.
- Over 1bn pound total sales and annualised sales of 350m pounds.
- More than eight million orders delivered since launch in 2002.
- Over one million registered users and 150000 active users.

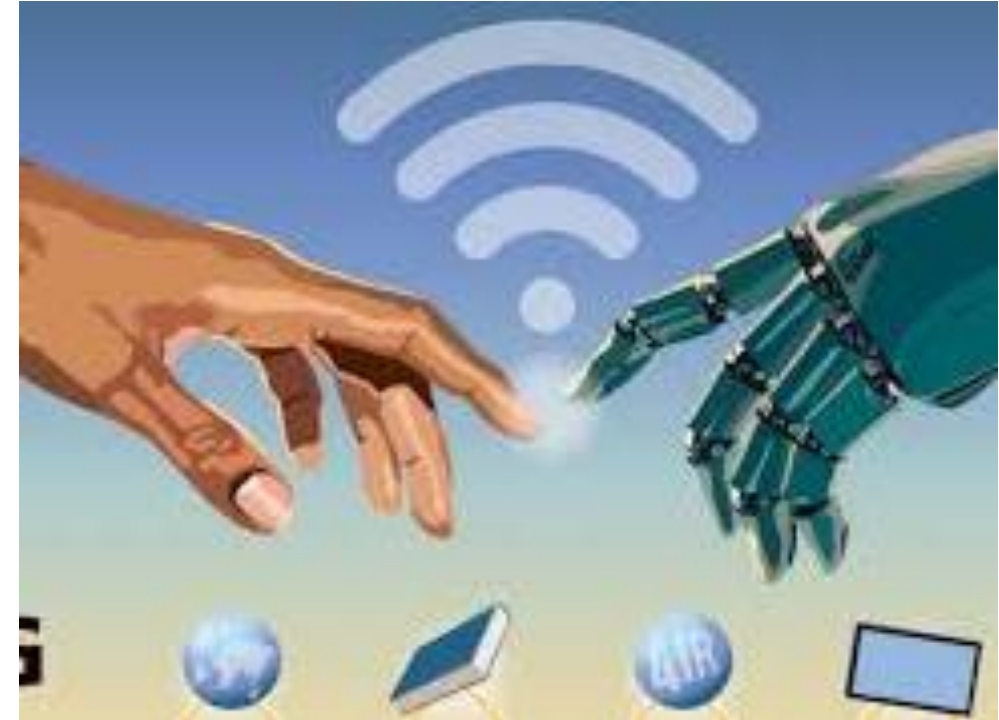
Ocado - challenges

- ▶ before introduction of modern technology

Implementing new technology

- general/ common issues

- ▶ Adopting new technology just because is new (FOMO - fear of missing out)
- ▶ Not implementing the right systems and procedures
- ▶ Failing to win staff over to the new technology
- ▶ Not training the staff adequately
- ▶ Not monitoring the data





Ocado's challenges & findings

- ▶ The software purchased in the beginning by Ocado could not handle...
 - ▶ Scale in the warehouse
 - ▶ The amount of deliveries Ocado did
 - ▶ The number of items in a basket
- ▶ ..which lead to Ocado acknowledging that:
 - ▶ Search engines for groceries were no good
 - ▶ The recommendation engines for groceries were no good
 - ▶ The routing software could not scale to the amount needed
 - ▶ The web software did not scale for 50 item baskets





Overcoming challenges

- ▶ In order to grow and overcome challenges, Ocado developed in house:
 - ▶ Simulation and emulation
 - ▶ Vision systems
 - ▶ Robotics
 - ▶ Data science
 - ▶ Analytics
 - ▶ Highly automated warehouses

Conclusion - main challenges that had to be overcome

- ▶ Financial
 - ▶ Ocado invested in 2021 alone an extra £30m in technology
- ▶ Software
 - ▶ Ocado could not rely on external software (created their own)
- ▶ Hardware
 - ▶ Ocado had to create in house systems to implement food-separation rules upon delivery (i.e. sausages could not mix with bleach)
- ▶ People
 - ▶ Although external factor, the scepticism of people toward Ocado pioneering a first-of-its-kind grocery delivery platform had to be taken into account.



Insights to the modern technology

- ▶ Diana Ispas
- ▶ 2030507

Powering OSP

- ▶ Robotics
 - ▶ Digital twins
 - ▶ Cloud
 - ▶ Big Data
-
- ▶ The Ocado Smart Platform (OSP) spans an award-winning network of native apps, alongside voice ordering, our highly automated warehouses and a suite of in-house built smart software for a fully optimised last mile.





Shopping Channels

- ▶ Machine learning and Big Data for personalised experiences
- ▶ Demand forecasting
- ▶ The world most automated warehouses
- ▶ Highly optimised routing and planning
- ▶ Shaping the future of online retail

- ▶ By operating at the intersection of multiple cutting-edge technologies, we are not just a step ahead of retail trends, our one of a kind designs are leading the way.

Ocado Robotics and Machines



- ▶ Artificial intelligence and machine learning
- ▶ IoT and Edge Intelligence (smart machines that move)
- ▶ Simulation and modelling
- ▶ Robotics are important technologies in their own right.
- ▶ These machines operate as a swarm, collaborating with one another in order to achieve unprecedented levels of resilience and efficiency.

Ocado Engineering

- ▶ Buildings Technology advisory
- ▶ Automation Engineering , including the design , implementation and commissioning of electro-mechanical automation solutions
- ▶ Engineering operations to continually monitor and maintain our automated mechanical handling equipment
- ▶ As the Ocado Smart Platform is adopted by retailers around the world, our automated warehouses will be established in almost every continent.



Impact of the technology introduced

- Ocado has changed the way the world shops
- The company has become the UK'S fastest growing retailer due to its technological advances
- Ocado has always been leading the innovation to make their customers' journey easy and simple when shopping for groceries online (Alvarez, David E. Bell, and Damien, 2015)
- Ocado's high-tech model benefits consumers and the business itself (Jose ,2015)
- Technology has always been playing a key role in Ocado.com's success greatly



Continued..

- Its highly automation process also means that orders are fulfilled much quicker with a lower cost. People can just order online with a few clicks
- Ocado offers customers a wide range of choices online as well as the freshest foods
- Ocado's highly-automated customer fulfillment centres (CFCs) that operate using a complex system of rapid robot pickers means Ocado would be able to keep more stocks in much smaller spaces.



- ▶ Ocado's driver-routing technology reduces delivery time by finding out the most efficient roads (Alvarez, David E. Bell, and Damien, 2015)
- ▶ This technology enables the retailer to deliver 90 % of its orders on time
- ▶ With the use of technology the customers will have their shopping experience to their front doors



- ▶ Moreover, with its automation in its CFCs, Ocado's supply chain efficiencies is going to be central for ensuring that the company keeps growing and serving more customers
- ▶ Company focuses on developing robotics that is like the speed quality and efficiency of a human picking and the company has a great tech-team
- ▶ The company introduced Robotic picking in its warehouses
- ▶ OCADO has always been at the front of innovation with its use of technology





Lessons from project-based learning “Ocado’s study”

- ▶ Team work
- ▶ Task Engagement
- ▶ Knowledge acquired through the study task
- ▶ Developed Logical and Analytical Thinking
- ▶ Assessments
- ▶ Applied practical Skills

Team Work

The essence of a team is shared commitment (Katzenbach & Smith, 2005)

- ▶ Work together to achieve goals.
- ▶ Team Support
- ▶ Communication Skills
- ▶ Leadership
- ▶ Push forward productivity
- ▶ Commitment



Developing Logical and Analytical thinking..



Understand
the problem



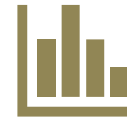
Clarifying



Thinking



Examining and
evaluating



Analyzing

Practical skills



**RESEARCH
MODELS**



**READING AND
ANALYZING**



**SHOWING
CONFIDENCE**



**GETTING
KNOWLEDGE**

References

- ▶ Alvarez, José B., Damien McLoughlin, and Natalie Kindred. "Ocado Group: Ready for the Future." Harvard Business School Case 521-061, January 2015
- ▶ Griffith, Brian A, (2014) *Working in Teams*, SAGE 2015