# Improvements in the picking process by using planograms in the e-grocery sector

Alejandro Illan Manzano

**Abstract**:
The speed in the e-commerce is a crucial factor for customers to place an order as immediacy is one of the customer's main concerns. For that reason, the following dissertation focuses on the improvements in the picking time at the e-grocery sector by applying planogram techniques into darkstores with the aim of reducing customers' waiting time. Furthermore, a set of tests and surveys will be conducted and conclude that the same tool can be applied for both supermarkets and darkstores by offering crucial benefits in productivity and sales.

**Introduction**:

For the e-commerce sector, especially in the e-grocery the USP is to be the fastest among competitors to provide customers with their requested goods. For this reason, there is always a trigger for process planners to optimize and improve the existing processes to become the top player in the market. The intention in the dissertation is to adopt a similar tools used in the traditional supermarket sector.

The main goal of optimizing the picking process is first and most important to achieve a reduction in time of order fulfillment and making the picking and packing process easier and more comfortable for the pickers. By implementing planograms, it is intended to contribute to all these operational situations that Flashmarket is facing in all of the stores and depending on the results obtained after planogram implementation in one of the busiest stores then, it can be determined if the tool can be implemented into other darkstores from the company.

**Methodology**:
The approach used was based on a mixed-method approach, in which qualitative and quantitative components were tested in order to obtain a response to the main statement of discussion. By obtaining the precise timing of orders fulfillment and the input of pickers' opinions regarding planogram implementation is how the thesis concludes with arguments and discussions revolving around planograms and the e-grocery service

**Recommendations**:
A constant update from the planogram need to be reviewed as the sales pattern changes with time. Also, planograms are a good tool that can be mixed with other Lean and Six Sigma tools to ensure enhancement of processes.

**Results**:
The obtained results was a decrease in time for experienced and new pickers after planogram implementation at the darkstore. Additionally, there were also other areas of improvement focusing on ergonomics, 5S, and standardization of operation processes.

| | Average picking time with initial conditions | Average picking time with planogram implementation | Improvements | Savings in € per month |
|---|---|---|---|---|
| Both Pickers | 2.95 minutes | 2.84 minutes | 0.11 minutes | 6,720€ |
| Experienced Pickers | 2.59 minutes | 2.52 minutes | 0.07 minutes | 1,680€ |
| New Pickers | 3.81 minutes | 3.61 minutes | 0.20 minutes | 5,040€ |

**Conclusion**:
The approach and goals that were set up initially from the continuous improvement project was successfully achieved and is possible to transfer the best practices to the remaining categories inside the Manhattan store. Furthermore, planogram is a tool that is possible to explore more inside the e-grocery sector..