

## **ASSIGNMENT 1: RESEARCH PROPOSAL**

### **Improving Operational Efficiency in Food Manufacturing through Integrated Digital Applications: A Case Study of the Savola Group**

Prepared by: Wardah Abdulkhaliq Mohammed Wali

Midocean University

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Instructor: Prof. Abdelrahim Nader

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## Research Topic and Title

The proposed title for this research project is:

***“Improving Operational Efficiency in Food Manufacturing through Integrated Digital Applications: A Case Study of the Savola Group.”***

This title reflects the main focus of the study: examining how a large Saudi food manufacturer could improve the way it operates by replacing manual, paper-based data collection with simple, connected digital tools. The wording keeps the scope clear and specific, identifying the industry (food manufacturing), the proposed solution (integrated digital applications), the goal (operational efficiency), and the chosen case (the Savola Group).

## Introduction

The food manufacturing sector is one of the most important industries in Saudi Arabia, supplying essential products to local and regional markets. In recent years, however, the sector has come under increasing pressure. Rising raw material costs, supply chain disruptions, and stronger regional competition have reduced profit margins and pushed companies to find new ways of operating more efficiently. At the same time, the Saudi Vision 2030 programme has encouraged industrial modernisation, setting a national goal of transforming more than 4,000 factories into “smart” facilities that use digital technology in their daily operations (Alkhorayef, 1).

A growing body of research shows that the way a company manages its data can have a major effect on its performance. Organisations that base their decisions on accurate and timely data tend to be more productive and more profitable than those that do not; one widely cited study found data-driven firms to be roughly 5% more productive and 6% more profitable than their competitors (Frick, 2). In a similar way, manufacturers that invest in operational analytics have

reported production improvements of between 10% and 20% (Deloitte, 3). Together, these findings suggest that effective data management is not only a technical matter but also an important source of competitive advantage.

This study focuses on the Savola Group, one of the largest food manufacturing companies in the Middle East. Savola has a strong brand, an experienced workforce, and a wide production network across the region. Despite these strengths, parts of its manufacturing operations still depend on manual, paper-based methods for recording important information such as shift handovers and equipment downtime. Meanwhile, several competitors are moving in the opposite direction. Almarai, for example, has digitised much of its manufacturing using advanced software and analytics in order to reduce downtime and improve efficiency (Almarai, 4), and other regional producers are beginning to follow a similar path.

Approaching the topic from the perspective of an external student researcher, this proposal examines how Savola could strengthen its operational performance by replacing manual data-collection methods with a set of simple, integrated digital applications – covering shift handovers, downtime logging, production tracking, and a live performance dashboard. The aim is to understand whether such tools could reduce delays, improve the quality of operational records, and support faster, better-informed decisions on the factory floor.

## **Research Problem**

At several of Savola's manufacturing plants, key operational data is still collected by hand, using paper logs and handwritten notes that are passed between shifts. While these manual methods are familiar and inexpensive to maintain, they create three connected problems that limit the company's efficiency.

First, manual data collection is slow and time-consuming. Operators and supervisors must spend part of every shift writing down handover details and recording downtime events by hand. This administrative work takes time away from more valuable tasks and can delay the response to equipment problems.

Second, manual records often suffer from inconsistency and quality variation. Because different people record information in different ways, logs are sometimes incomplete, unclear, or difficult to compare. When important details are missing from a shift handover, the next team may not have the information it needs to keep production running smoothly.

Third, the absence of real-time information reduces overall efficiency. Without an up-to-date view of production levels and downtime, plant managers cannot quickly identify problems or make timely decisions, which can lead to missed production targets.

Taken together, these issues define the central problem of this research: Savola's continued reliance on manual, fragmented data collection causes delays, inconsistent record quality, and reduced operational efficiency at its manufacturing plants. This study proposes to investigate this problem and to explore whether a set of integrated digital applications could provide an effective and affordable solution.

## **Significance of the Research**

Addressing this problem is important for both academic and practical reasons.

From a theoretical perspective, the study contributes to the growing field of research on digital transformation in manufacturing. Much of the existing literature focuses on large, fully automated "smart factories," while less attention has been given to simpler, low-cost digital tools that replace manual record-keeping in companies that are still in the early stages of digital

adoption. By examining this kind of practical, step-by-step change, the research adds to the academic understanding of how data-driven decision-making can be introduced in real industrial settings, particularly within the context of Saudi Vision 2030 and the wider Middle Eastern food industry.

From a practical perspective, the research could offer clear benefits to Savola and to similar companies. Replacing manual processes with connected digital applications has the potential to reduce wasted administrative time, improve the accuracy of operational records, and support faster decisions on the factory floor. These improvements would be expected to translate into measurable cost savings and efficiency gains. Industry case studies support this expectation: factories that have introduced real-time performance dashboards have reported notable efficiency improvements, including gains in overall equipment effectiveness (Altizon, 5). In a competitive market where rivals such as Almarai are already using digital tools, improving operational efficiency could also help Savola protect its position and remain competitive.

Finally, the findings of this study may be useful beyond Savola itself. Many other food manufacturers in the region face the same challenge of moving away from manual data collection. The lessons learned from this case could therefore provide helpful guidance for other companies that are beginning their own digital transformation, which makes the research relevant to the broader industry as well as to a single firm.

## References

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