



APS1028: Operations & Production Management

# AN IDEAL OPERATIONAL FRAMEWORK FOR THE FOOD MANUFACTURING

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## Executive Summary

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Yoovita is a family owned business that is looking to enter the market for affordable groceries through Yoovi, an organic, fruit-flavored drinkable yoghurt product. The recent trend towards more nutritious food options combined with the numerous benefits of yoghurt make Yoovi's market prospects very attractive.

Yoovita's mission statement highlights the key characteristics of Yoovita's products, which have taken the customer's needs into consideration. The products will be affordable meaning low cost, highly nutritious, which means no additive and using organic ingredients and no preservatives, and lastly, highly flavorful – meaning that it also tastes good. As it is a family owned business, its future state vision is to become the number one drinkable yoghurt in North America.

Yoovita is planning to build a manufacturing facility located in Ontario, Canada. In order to build and operate a manufacturing facility for this production process, there are many operational aspects that require careful consideration, including planning and supply chain. There is a need for benchmarking and analyzing the best practices of the already competitive fast moving consumer goods (FMCG) industry. In order to achieve this, Unilever's plant in Bramalea, Ontario and Nestlé's plant in Toronto, Ontario were analyzed. These plants were chosen because they are both in the approximate location where Yoovita wants to build its facilities. This comprehensive analysis covered plant layout and organization, end to end operations, safety, quality, production, maintenance, production maintenance dynamics, supply chain, finances and human resources. Its aim is to find out what which initiatives are successful and where gaps might still exist. The comparison would then be used to build an ideal operational case for Yoovita.

Nestle and Unilever are both considered giants in the food and beverage industry. There were many similarities in their operational practices but some glaring differences were noticed in some key aspects which were safety, maintenance and concurrent engineering.

The safety culture at Unilever was enforced through initiatives such as near miss reporting and the safety behaviors observation based on the safety triangle. Nestle had implemented the friends helping friends program to induce a change in the safety behavior of their employees. But the implementation was fragmented, especially on the shop floor. For any facility, safety should be a top priority and this comparative analysis shows how it can ideally be implemented for Yoovita.

Unilever performed both preventative and reactive maintenance. Their practices were based on the ethos of total productive maintenance (TPM) which was enforced by the twelve pillars of lean thinking, integrated with a base of 5S. TPM also led Unilever to be able to identify where in their facility the biggest losses were occurring. 12 step Kaizen events were then conducted in order to reduce these losses. One thing to note is that Unilever's maintenance department's software management system

was not integrated with the ERP system used by the rest of the Bramalea plant. Nestlé's maintenance philosophy is still entrenched in a "fire-fighting" culture that largely focuses on reactive maintenance, rather than proactive maintenance. Nestle has been trying to implement and convert its Toronto plant to TPM. However, there is no integration from the top-down and also from the bottom-up. Their implementation of some TPM tools are a disjointed effort, at best. There is need for a change in their organizational culture.

In manufacturing facilities, concurrent engineering is very important. The smooth dynamics between the production and the maintenance teams can ensure smoother plant operations. In both Unilever and Nestle plants, a blame culture exists. There is a lack of cross-functional collaboration and instead of working to achieve the company goal, too much time is spent discussing departmental goals. Nestle is also facing resistance due to a lack of acceptance in the change of their organizational structure.

Analyzing the operational frameworks of Nestle and Unilever allowed Yoovita to identify the industry best practices and where they could improve, in order to fill in the gaps. With this ideal operational case in mind, Yoovita is going to proceed to with the construction of its manufacturing facility.