

## Abstract

Small and medium-sized enterprises (SMEs) face unique challenges in maintaining efficient operations and staying competitive in the market. This project aims to address these challenges by implementing a comprehensive approach to optimize various operational aspects within Al-Shakhshir Furniture Factory.

A primary focus is placed on production planning, where accurate demand forecasting, master production scheduling and detailed monthly production planning are utilized to align production activities with market demands. This ensures a reduction in inefficiencies and an overall improvement in productivity. The project also emphasizes the redesign of the factory layout to minimize waste and streamline workflows, thereby enhancing productivity and operational efficiency. Additionally, the development and implementation of Standard Operating Procedures (SOPs) are highlighted. These SOPs ensure that operations are consistent, efficient, and of high quality across the factory. Furthermore, the project addresses key aspects of inventory management, including the calculation of holding costs, reorder points and safety stock. Effective inventory management is critical for minimizing costs and preventing production delays caused by stockouts or overstocking.

Overall, this project demonstrates how an integrated approach to optimizing production planning, factory layout, SOPs, and inventory management can significantly enhance the operational efficiency and competitiveness of the factory. By adopting these strategies, the factory can achieve sustainable growth, improved market responsiveness, and better resource management, positioning them favorably in a competitive market landscape.