

Dupry Beauty – ERP MRP Case Study

Introduction

This case study analyzes material planning challenges at Dupry Beauty and examines how data accuracy and ERP configuration impact MRP-driven purchase order quality. Based on the case study, the analysis reviews the supply chain and system issues, answers the provided business and ERP questions, and offers recommendations to improve planning accuracy and operational efficiency.

Background

Dupry Beauty is a multinational cosmetic company providing makeup and skin care products to different brands in North America, Europe, and Asia, established in 1952. The company is managed through a very intricate structure of supply chain networks, more than 1200 moving products, multiple distribution centers, and regional offices. The major issue is the manual processing of purchase orders.

Problem

The department that Jenny worked in was very oriented on manual practices, and the employees had to check more than 400,000 purchase orders annually, which took a lot of time and the risk of neglect was quite high.

Solution

The suggested solution aimed at enhancing the quality of master and transactional data in the ERP system. Important actions within the suggested solution included proper BOM information, inventory accuracy and thorough master data. The plan was tested in the specific units and then expanded.

Findings

After several months, the data inconsistencies were minimized. The material planners claimed streamlined operations and fewer corrections, and automated purchase orders were much more closely aligned with the functional requirements, reducing the time wasted by bad inputs.

Supply Chain Processes Involved in Generating Material Requirements

The generation of material requirements is a result of interacting supply chain processes, that involve production planning, inventory review, and Material Requirements Planning (MRP). As described in the case study, the organization uses its Master Production Schedule (MPS) to transform demand cues into scheduled orders that stimulate the procurement requirements. As indicated in the Appendix, the issue of delaying the BOM updates and irregular inventory reporting resulted in material requirements generated by the

system, and thus the necessity of coordinated processes. Based on the research, the processes are to be integrated to make sure that procurement is aligned with the actual production needs and not assumptions (Kermani et al., 2024). Since the inaccuracies of the BOMs or incorrect records of the inventory would interfere with the logic of the MRP. Overall, the quality of material requirements basically depends on how well the company handles forecasting, scheduling, BOM updates, inventory accuracy, and MRP. If any of these are off, the system won't produce realistic procurement plans.

Information Required: Material Requirement Production.

A multifaceted aggregate of information, such as the estimated demand, actual facts about the inventory, future orders, and information about the elements of the BOM, has to be provided for the calculations of MRP. As the case study mentions, incorrect records and inaccurate BOMs produced discrepancies in system output. Further data discovered in the Appendix, e.g., lead times, safety stocks, planning calendars, and lot-sizing rules, also have a direct influence on net requirement quantities. As an example, poor lead times resulted in untimely order releases, and poor safety stock settings resulted in excessive inventory. They are in line with ERP best practices, which observe that correct planning parameters promote performance in MRP (Al-Assaf et al., 2024). The basis of these calculations is master data elements, including material master records, supplier data, and work center capacities. The Case Study explains how the old forms of procurements and wrong minimum order quantity exaggerated the purchase recommendations, and the Appendix mentions the non-excessive supplier delivery tolerances, which influenced the order timing. In simple terms, MRP results are only as good as the master data and transactional data behind them. If the data is wrong, the system's output will be wrong too. Finally, the system needs good forecast information, inventory positions, a correct BOM, planning parameters, and quality of the master data to create quality material requirements.

Advantages of Material Management Team

Regular updating by the Materials Management team of the data and processes that feed into MRP helps to ensure that the material requirements are based on the real intended needs and close working with the production and planning departments. According to the Case Study, the problems in the correctness of material requirements were greatly caused due to incorrect posting of the inventory, an aged amount of Supply BOM, and mismatched lead-time parameters, so continuous checking of the data integrity should be taken. The Appendix shows that some of the parameters related to planning were not updated to suit the performance of suppliers, leading to some distorted system calculations. In line with known

advice related to supply chain, regular BOM audit, regular counts of cycles, and a regular review of the parameters used in planning are necessary to ensure system accuracy (Kurniadi & Ryu, 2021). Besides, the MM team is advised to carefully consult exception messages in the ERP system since they usually indicate discrepancies between the planned and actual situations. Cross-functional meetings between MM, Production Planning, Engineering, and Procurement are to make sure that changes of operation, like new production requirements or delay of suppliers, are converted into new system data on time. To sum up, the MM team can improve the quality of coverage of planned organizational needs by disciplined data maintenance, system monitoring, and collaboration with operating departments so that material requirements are actually planned.

Situations Where Manual Review Is Useful

Manual review of material requirements may be found useful in those cases where the data generated by the system does not completely represent operational reality or when change occurs rapidly to an extent that master data may not keep up. As the Case Study shows, system recommendations could be inaccurate until a correction of data was made in response to unexpected supplier delays, temporary factory shutdowns, and mid-cycle engineering changes. Under such circumstances, planners intervened to adjust the purchase levels or to overrule recommended order dates. The cases of discrepancies caused by the absence of lead-time entries and improper settings of safety stocks that altered the MRP outputs and had to be corrected manually are also listed in the Appendix. ERP studies find that MRP does not fully reflect and take into consideration qualitative judgments like reliability of suppliers or unexpected operational hiccups as compared to routine planning that is automated by MRP (Tarigan et al., 2021). Manual review is especially useful when products are launched, demand is high, or there is uncertainty in the supply chain. To sum up, manual inspection is applicable when disruptions, inconsistencies in data, and abnormal-demand situations arise, so that the procurement decisions can not be out of touch with reality.

Documentation and Procedures to Ensure Material Requirement Accuracy

Proper documentation practices and a defined set of procedures that regulate data creation, update, and review are in order to maintain the correct material requirements. The Case Study mentions repeat misrepresentation by missing BOMs, unequal lead-time responses, and uneven inventory reports, which can be attributed to the lack of format standard operating procedures (SOPs). This is further supported in the Appendix by indicating that there was no standard workflow consensus to approve the update of master

data; thus, most times errors occurred that were carried across the MRP cycles. Introducing the formal change request process, tracking of this process, and cross-departmental approvals is the process that ensures accuracy and auditing of updates. Procedural manuals and user manuals also help employees adhere to standardized practices and minimize random or incomplete data entry. Structured documentation helps clarify accountability and reduces the risk of erroneous data affecting procurement decisions. Conclusively, an amalgamation of SOPs, review processes, approval processes, and training materials creates a disciplined environment that supports effective and reliable material requirements planning.

Project Duration and Teams Involved

An eight- to twelve-week project designed to increase the accuracy of material requirements, through cleansing of data, system updates, etc., is typically a cross-functional work activity and is often based upon the magnitude of data cleansing and system upgrades required. As depicted in the Case Study, it required a lot of coordination to resolve BOM inaccuracies, lead time corrections, and inventory discrepancies, which is indicative of the complexity of these initiatives. The Appendix indicates that some of the master data fields were more than one year old without review, an expansion of scope. Research on ERP implementation shows that the process of conducting data correction is typically divided into the stages of auditing and data cleaning, validation, and stabilization, with each stage presupposing specific skills (Tirumala Rao Chimpiri, 2024). The teams are often Materials Management (data cleansing), Production Planning (accuracy of scheduling), Engineering (BOM verification), Procurement (supplier master data updates), IT/ERP (system configuration), and Quality Assurance (checking inventory accuracy). The time frame will be based on the amount of materials, complexity of the system, and the degree of cross-departmental cooperation needed. This timeline shows that fixing data isn't just a technical task. Different teams need to agree and work together, which is what usually makes these projects take longer. Finally, a typical data accuracy project covers 8-12 weeks and involves many different departments organized with MM, Planning, Engineering, Procurement, IT, and Quality participating.

ERP Configurations Needing Review to Ensure Purchase Order Quality

To guarantee a quality purchase order, there are several settings within the set of ERP configurations and master data that define the number of required procurement needs as determined by the MRP. According to the Case Study, the mistakes were made due to the wrong kinds of procurement, obsolete methods of dealing with lots, and improperly aligned planning strategies, all of which influenced purchase orders created by the system. The

Appendix further elaborates that order recommendations were further distorted by missing supplier delivery allowances and out-of-date information records. The study of the ERP setup reveals that the lead times, safety stock, planning due dates, and batch-sizing regulations, among other parameters, should be configured based on the reality of operations in order to generate correct results (Saad et al., 2017). Fields such as MRP type, MOQ, rounding values, sourcing details, and replenishment strategy fields are also to be periodically checked to avoid systematic error. Similarly, supplier master data and source lists should be up to date to enable the system to get the correct vendor. Analytically, due to the reliance of MRP logic on the accuracy of the configuration, even small parameter errors can have ripple effects, giving rise to major procurement discrepancies. Finally, considering the planning settings, procurement settings, mastery of materials, BOMs plan, and supplier files is necessary to keep the quality of purchase orders high.

ERP Transaction Data Needing Review to Ensure Purchase Order Quality

Accurate transactional data is critical because the system uses it to calculate what materials are needed. If receipts, issues, or inventory records are wrong, the planned orders will also be off. As described by the Case Study, the late receipts of goods, postings of inventory data inaccuracies, and dated production order data fooled the system and resulted in incorrect procurement quantities. The notes to the Appendix reveal discrepancies in the open purchase order record and the records, which indicate an incomplete goods movement record, which in turn targets planning outputs. According to the research, MRP builds its computations using transactional data in order to identify the availability of materials and when to be available, and thus the accuracy of data is significant in ensuring purchase efficiency (SAP, 2025). The transactional aspects that need regular check-in involve inventory balances, goods receipts and issues, open purchase orders, supplier delivery information, and the outcomes of inspection lots. When these records are not indicative of physical reality, i.e., physical goods receipts not posted, or wrong consumption bookings, the system will overestimate or underestimate actual needs. Analytically, the difference between the physical and recorded inventory affects the application of MRP as the system assumes accuracy in real time. To sum up, quality control of purchase orders involves regular checking and rectification of transactional data, such as inventory flows, open order files, and delivery performance logs.

Recommendations

Based on the case, I think there are three practical steps Dupry Beauty can take to improve the accuracy and efficiency of their material requirements process. First, the

company ought to adopt an organized master data management program, such as regular audits on BOMs, materials master records, supplier information records, as well as purchasing information records. BOM errors and supplier configurations based on miscalculated MRP result in the case study, and the Appendix presents old master data that led to purchase order discrepancies. With proper and full data, the Materials Management team can make sure that automated purchase orders are based on actual needs in terms of operations. Second, Dupry needs to develop standardized operations of data management on transaction data based on consistent inventory reporting, receipt of goods, and reconciliation. According to evidence described by the case, physical inventory and ERP records had discrepancies, which made the planners manually correct material requirements, which took up a lot of staff time. Third, the company is to implement the exception-based MRP monitoring as well as cross-functional interaction. The MM team is able to work on flagged anomalies rather than having to scan through all the purchase orders manually. Human intervention was a common occurrence in the case study due to unforeseen delays by suppliers, alterations in production, and new introduction of new products in the market. With the combination of exception reporting and input provided by Production, Procurement, and Engineering, the team will be able to effectively solve the most important problems by working less with manual work. All these recommendations enhance accuracy, efficiency, and decision-making based on data.