



Title

Description



CIPS members
can record
one CPD hour

Case Study - MRP Introduction Saves Time and Money

Betty owns a company that produces personalised t-shirts and hats. Her business started as a very small enterprise but after nearly two years Betty was creating and shipping up to 50 garments per day.

Whilst Betty was making a profit, she knew that when she looked at her turnover she should really be earning a higher return.

The stock of blank garments ready for customisation and personalisation in Betty's small warehouse comprised of various sizes, colours and styles of t-shirts and hats made from a variety of different materials. Some of those garments had in fact not moved from the racking since the business was started and Betty bought her first amount of stock.

Whilst the warehouse had lots of garments that did not appear to be moving through the supply chain there were also instances when Betty kept her customers waiting because she did not have the correct colour or sized garment available. In such circumstances Betty had to order the garment in response to the sales order and advise the customer that there would be a slight delay. Most customers were understanding but sometimes after Betty had placed the order for the required garments and advised the customer of the extended lead time, she would get a call the following day cancelling the order. Then she amassed more stock that had no direct demand.

Betty's son, Joel, who had not been working for his mother for long quickly worked out that for Betty to earn a larger profit she had to be more efficient, order only what was needed and have garments in stock to meet customers' demand.

Joel spoke to his mum about introducing a basic Materials Requirement Planning (MRP) system to help her manage the manufacturing process.

Betty was not au fait with such things but trusted Joel and suggested he investigated it further.

Joel produced a basic business plan for his mother showing her what she should need to do for an MRP system to work and explained how the process could benefit the business.

Joel's plan contained the following:

- Create Bills of Materials for all products
- Calculate buffer stock requirements for all garments
- Establish accurate lead times from suppliers
- Generate cycle times for products being made
- Do an accurate stock check
- Understand trends and customer demand

Joel explained that if Betty knew what was coming into the business in the form of sales orders she could be proactive rather than reactive and always have garments available to meet the demand. Joel also described how, if Betty knew exactly what stock was in the warehouse, the MRP system once set up could run a report to show what garments needed ordering and when to avoid any stock outs or overstocking problems.

Knowledge Case Study

For Betty, who just enjoyed making personalised garments, it sounded like a lot of work, but Joel explained how he could manage the project and with Betty's help he could create the BOMs and cycle times. Betty could continue doing what she loved, and Joel could help her make more money.

Finally, Betty agreed, and Joel was given delegated authority to manage the project.

Due to the processes involved within Betty's organisation not being too complex Joel was able to have his chosen software purchased and in use within three months.

Three months after its introduction Betty knew things were better as she no longer had a spreadsheet called "overdue orders" and no customers had cancelled an order in several weeks. Aside from that ordering from suppliers has become a much easier job and Betty just ran a report once a week and placed orders in accordance with what the system suggested.

After a further two months it was Betty's organisation's year end, and she submitted her documents to the accountant. The feedback from the accountant amazed Betty, she was manufacturing and shipping over 70 garments per day and her profit was up by 20% and that included the purchasing of the software going out of the bank.

When Betty looked back as to how she used to manage her stock and orders she was astounded that she managed to get the number of orders shipped that she did – whilst once sceptical about introducing an MRP system Betty is now converted and has even suggested to Joel that she may consider upgrading to a basic ERP programme to help her manage the payroll and marketing side of her ever-growing business.

(Source: Jarvis-Grove, 2020).

Further Resources

You can also access further MRP resources [here](#).

