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## Chapter IX

# Capacity Management Business Processes

The company is always aware of what it wants to produce because it is defined by the market pressures or by demand. However, what the company wants to make must be rationalised against what it *can* make. The issue of balance between requirements and capacity relates to a type of trade off. On one hand, the company wants to satisfy demand, but on the other hand, it may not have the capital resources to do so. At the senior management strategic planning level, long-range investment decisions are made that can increase the company's capacity resources. Commonly however, the additional capacity lags behind the pressure to produce more product more quickly. In these cases, management must make choices. A company must select carefully how to manage its limited asset of resources to achieve the greatest benefit to the company.

Capacity type investments in plant and people are expensive. In some cases, the management may decide to invest in more productive capacity, but in many others, the emphasis is placed on trying to make the existing capacity do more, through better planning and better management. The approach to this problem starts with a definition at every planning level of:

- 1 What do we want to produce; that is, the demand (requirements planning).
- 2 What are we able to produce (capacity planning).

The first definition, requirements planning, is therefore never a production plan. It must be modified by the reality of the company's ability to produce, before a production plan is derived. In this balancing and rationalising phase of capacity planning, choices again must be made on how to optimise the use of capacity for the best resulting profitability.

The conclusion is that we must always have two procedures in the planning process: one to establish what the production requirements are, and the other to ensure that adequate capacity exists to carry out the production intentions.

In the following section, we will discuss the situation when only the first procedure, requirements planning, is used.

## **Requirements Planning**

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In many companies, the focus of production planning is placed solely on the requirements side of the problem. A full requirements planning system uses a four-level requirements chain that consists of long-range forecasts, shorter-term forecasts, a MRP calculation, and a system of work order releases (see Figure 9.1)

This system effectively tells the company what it has to make so as to satisfy demand. It not only gives the volumes, but also provides the latest start dates for each work order so that due dates can be achieved.

The concept of requirements planning is proven and robust, and so many companies restrict their production planning to just this challenge, without considering capacity. However, to accept orders into a requirements planning system without reference to the capacities available is possible only when a

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