LOGISTIK MANUFAKTUR

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Figure 12.1 A basic input–output transformation diagram

Typology of operations

- The means of production of the goods or services may take many different forms. One way of classifying them is through a system known as the four:
- •• volume – the amount of goods and/or services produced;
- •• variety – how many different products and/or services are offered;
- •• variability – to what extent the demand for the goods and/or services fluctuates;
- •• visibility – refers to how much of the process of delivering the product and/or service is revealed to the customer. Face-to-face services where the customer interacts directly with the provider have a high level of visibility, whereas the consumer of a massproduced item purchased from a third party will have a low level of visibility.

Manufacturing process types

- The volume of product to be produced and the variety of products will dictate the most appropriate process type to use. Process types for products may be categorized as follows:
- Project – very low volume (one-off) and high variety. For example, building a ship. Usually large scale, complex, and the product is stationary.
- Jobbing – low volume and high variety such as building a customized product for a customer. For example, custom-made furniture.

- Batch – medium volume and medium variety. The classic example is the small bakery thatproduces several types of bread to serve the local community.
- Mass – high volume and low variety. A car manufacturing plant is a good example of A mass production process.
- Continuous – very high volume and very low variety. An oil refinery would be a good example.

Service process types

- The equivalent process classification for service processes based on volume and variety are as follows:
- Professional services – low volume and high variety. A good example would be a business consultant service.
- Service shops – medium variety and volume. The services delivered by a high-street bank fit this category.
- Mass service – high volume and low variety. Rail services and airports would be classified as mass service.

Operations management performance objectives

- These have been defined as encompassing five crucial areas of producing goods and/or services:
- Quality – right first time, fit for purpose.
- Cost – minimizing cost without compromising quality, and making a profit.
- Speed – delivering as fast as practicable.
- Dependability – delivering on promises made to the customer in full.
- Flexibility – adapting what you do or how you do it to reflect changes in customer or market requirements.

Push and pull systems

- A ‘push’ system of manufacturing is one where goods are produced against the expectation of demand, which includes both known demand in the form of existing orders and forecast demand. In other words, goods are not produced specifically to order but are produced against a forecast demand.

Dependent and independent demand

- Once a decision has been made to manufacture a given product either to fulfil a customer’s order or for stock, a requirement is created for the constituent parts of this product. This requirement, which is contingent on the production of the product in question, is known as dependent demand. In other words, because it is planned to make a given finished product, this decision triggers the demand for all the constituent parts of that product.

Just-in-time

- Waste within the just-in-time environment means waste in all its manifestations. It seeks to reduce what is known as ‘the seven wastes’:
- 1. overproduction;
- 2. waiting;
- 3. transporting;
- 4. inappropriate processing;
- 5. unnecessary inventory;
- 6. unnecessary motions;
- 7. defects.

Elimination of wasted time

- Because only customers' orders are being produced and the speed of the production process is known, it is possible to synchronize deliveries of raw materials to the end of the production line (or to the precise point on the production line in some cases) with little time to spare before use.

Movement through the manufacturing process

- If materials move through the system in a straight line it is reasonable to suppose that the minimum distance has been covered. In many manufacturing systems this is not always possible. In fact it has been identified in some manufacturing processes that components and sub-assemblies are moved around the factory in a very erratic pattern before they all come together in the finished product. Attempting to minimize the overall distance that materials have to travel through the system helps avoid wasted travelling time and effort.

Manufacturing resource planning

- Areas outside an MRP system but included in an MRPII system usually are:
- •• maintenance management;
- •• cost accounting;
- •• stock management;
- •• sales orders;
- •• procurement;
- •• personnel levels.

Material requirements planning

- This principle of production scheduling is based on the premise that if one knows what product needs to be produced then one should also know how many constituent parts are required in order to make the product. A useful analogy is the preparation of a meal. Let us say that the meal in question is a traditional cooked breakfast.

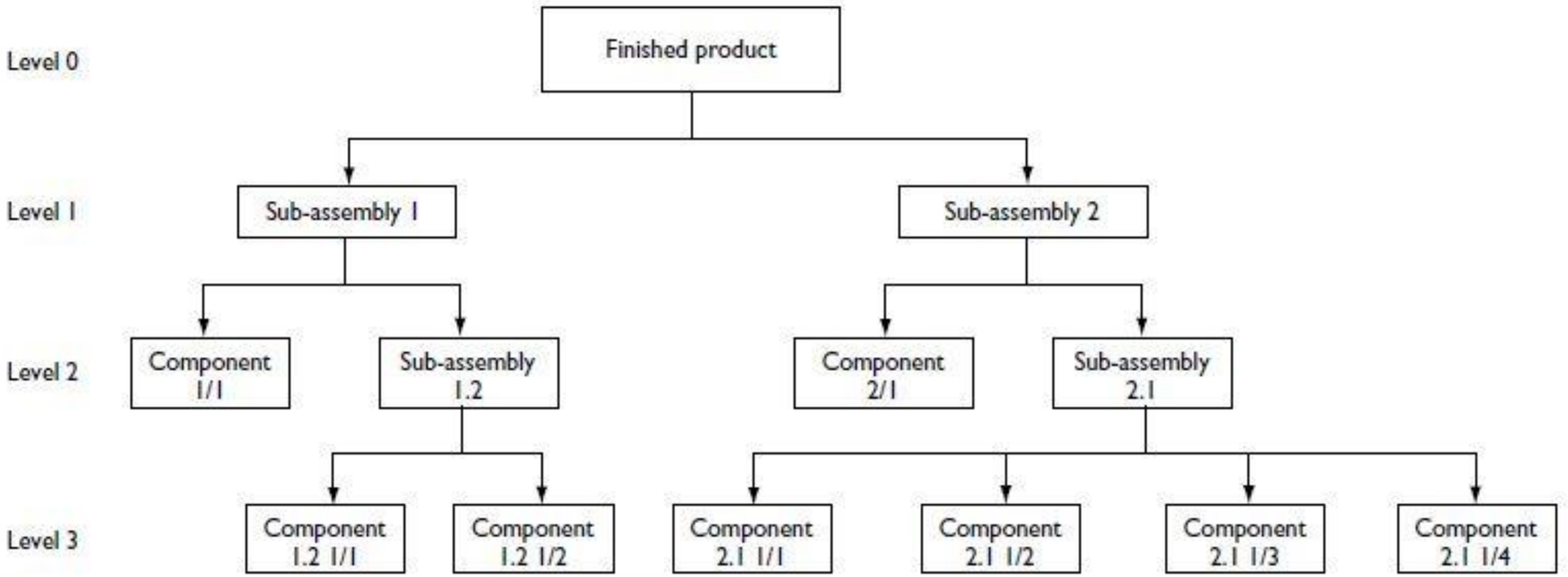

Figure 12.2 A bill of requirements for one product

REFLEKSI

Informasi penting hari ini

Manfaat penting dari informasi penting hari ini

Tindak lanjut yang dapat saudara lakukan

Thank you!

Any questions?