

## DISCUSSION QUESTIONS

1. Discuss the potential impact that each of the following may have on the design of a planning and control system. Will the impact change if the organization is more focused on products rather than services?

- a. Location proximity to customers

Location proximity to customers for a manufacturing site is primarily important because of the impact on distribution – both from a cost and time perspective. It is much more important to a service organization, which generally uses location as a primary strategic consideration for delivery, flexibility, and cost.

- b. The introduction of new technology impacting the design

New technology, depending on the nature, may well impact all strategic aspects – cost, quality, delivery, and/or flexibility. This is true for both manufacturing and services. In some cases it may impact services more, as it will potentially change a key aspect of the face-to-face aspect of many services. ATMs in banks are a good example.

- c. Customers demanding faster delivery

Customers demanding faster delivery will again impact both, but in many cases will impact manufacturing to a greater extent. Services typically will have their operations focused on fast delivery since they often have little time between the recognition of demand and the expected delivery. Manufacturing, on the other hand, will have an impact on capacity buffers (for flexibility), order entry, product design, and distribution in cases where customer demand fast delivery.

- d. Customers demanding lower prices

Customers demanding lower prices will imply a focus on cost reduction for both manufacturing and services. This usually implies a focus on automation, reduction of flexibility in design, and a focus for using inventory effectively (manufacturing). Both manufacturing and services will be impacted, but manufacturing will usually incur more expense for the automation.

2. Discuss the potential impact that the evolution of “quasimanufacturing” organizations can have on planning and control. An example of quasimanufacturing is the development of large consumer credit organizations (typically classified as a service organization) within automobile manufactures.

Quasimanufacturing of services impacts the focus on cost with less demand on flexibility and delivery. The planning and control systems should reflect this focus, meaning more automation, focus on standards, and fewer capacity buffers.

3. What are the possible consequences on planning and control if the organization has a wide cross-section of product types (MTS, ATO, MTO) within the same organization?

If the organization has a cross-section of product types, the planning and control system will tend to be different for each type, since each type has its own demands with respect to flexibility, cost, and in some cases, delivery. The priorities will have to be assessed and the planning and control system modified as appropriate based on the demands for the specific product type.

4. Describe the possible cost implications of producing a standard product in a job-shop environment

Production of a standard product in a job-shop environment will typically be a mistake, in that the cost implications of using skilled workers (with typical high labor costs) and general-purpose equipment (generally slow as compared to automation) will produce a high-cost, low-profit product. In addition, the company will have lost the opportunity to utilize the same resources for a lower volume, higher variety product that usually is not price sensitive.

5. Discuss possible implications on planning and control if the customer base changes to the extent that an order qualifier has shifted to become an order winner.

The planning and control system should certainly change its focus in most cases when an order qualifier changes to an order winner. If a dimension of competition is a qualifier,

the company only has to operate at an acceptable level to qualify for consideration as a supplier. In the case of an order winner, the company should strive to be the best in the market for that dimension. The planning and control system should be modified as appropriate to focus attention on the order winner.

6. Is it possible that there can be more than one order winner in a defined market?

Why or why not?

It is possible for more than one order winner to exist, but it is unlikely. In most cases it is only one dimension of competition that provides the final basis for selection of a product or service.

7. What is the potential impact on planning and control if the organization has several types of customers, each with a different order-winning characteristic?

If the company has several different customers with different order-winning characteristics they need to adjust the planning and control system to accommodate each order winner. This may be difficult to accomplish for a single system, implying that in some cases there may be more than one system, each focused on the needs of a particular set of customers.

8. Discuss how a change in a product design could produce a change in the design of a planning and control system.

While many product design changes are relatively harmless in the impact on the planning and control system, others could mean significant changes. The key issue is whether the design change implies a change in product type (MTS, MTO, ATO), or whether the design change implies a change in order winners or qualifiers.

9. Would a change in process design necessarily imply a corresponding change in the design of a planning and control system? Why or why not?

If the design change is minor (such as a plastic part replacing a metal part), the change would have little or no impact on planning and control. On the other hand, a change in the amount of customer influence on final design or a change in implicit order winners or qualifiers could produce a major planning and control design impact.