

9.2: Inventory Management Models

Generally speaking in inventory management, we look at the demand as an either known or more steady demand versus uncertain demand. We also have other factors to impact the type of model used. Lead time is one of these factors. Lead time is defined as the time from when you place an order to a supplier until you receive that order. Another factor is the review time. Review time is referring to how you review your inventory levels. For example, one method is called continuous review, which means that your information system will automatically check your inventory level at all times and when the inventory level hits a certain point, which we call the reorder point, the system will notify us that we need to place an order or even in more automated systems the system may automatically place the order and that way, we do not have to do anything. The order will automatically be placed to the supplier that we have an agreement with already.

Another type of review method that we have is called periodic review or fixed order interval. In this method, we check the inventory level at the end of certain fixed order intervals and if our inventory is less than a certain maximum level (which we can optimally determine beforehand), we will calculate how much difference is there, and we will place an order for that amount.

There are also other factors to be considered which we are not going to go into that much detail of those things here. For example, if there is any perishability or obsolescence, especially for items like food that can get perished. If so, that can make the inventory models a bit more complicated. In that case, we should consider the life span of the product that is perishable to make sure that we are not bringing in too much, or otherwise, it will be perished or obsolete, and the whole thing would be a total waste of our money.

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