LSCM UNIT 4.3 MODULE 4

 **INVENTORY**

The term inventory refers to the raw materials used in production as well as the goods produced that are available for sale. A company's inventory represents one of the most important assets it has because the turnover of inventory represents one of the primary sources of revenue generation and subsequent earnings for the company's shareholders. There are three types of inventory, including raw materials, work-in-progress, and finished goods. It is categorized as a current asset on a company's balance sheet.

KEY TAKEAWAYS

* Inventory is the raw materials used to produce goods as well as the goods that are available for sale.
* It is classified as a current asset on a company's balance sheet.
* The three types of inventory include raw materials, work-in-progress, and finished goods.
* Inventory is valued in one of three ways, including the first-in, first-out method; the last-in, first-out method; and the weighted average method.
* Inventory management allows businesses to minimize inventory costs as they create or receive goods on an as-needed basis.

Inventory is a very important asset for any company. It is defined as the array of goods used in production or finished goods held by a company during its normal course of business. There are three general categories of inventory, including raw materials (any supplies that are used to produce finished goods), work-in-progress (WIP), and finished goods or those that are ready for sale.

As noted above, inventory is classified as a current asset on a company's balance sheet, and it serves as a buffer between manufacturing and order fulfillment. When an inventory item is sold, its carrying cost transfers to the cost of goods sold (COGS) category on the income statement.

Inventory can be **valued in three ways**. These methods are the:

* First-in, first-out (FIFO) method, which says that the cost of goods sold is based on the cost of the earliest purchased materials. The carrying cost of remaining inventory, on the other hand, is based on the cost of the latest purchased materials
* Last-in, first-out (LIFO) method, which states that the cost of goods sold is valued using the cost of the latest purchased materials, while the value of the remaining inventory is based on the earliest purchased materials.
* Weighted average method, which requires valuing both inventory and the COGS based on the average cost of all materials bought during the period.

Consider a fashion retailer such as Zara, which operates on a seasonal schedule.2 Because of the fast fashion nature of turnover, Zara, like other fashion retailers is under pressure to sell inventory rapidly. Zara's merchandise is an example of inventory in the finished product stage. On the other hand, the fabric and other production materials are considered a raw material form of inventory.

**INVENTORY MANAGEMENT**

Possessing a high amount of inventory for a long time is usually not a good idea for a business. That's because of the challenges it presents, including storage costs, spoilage costs, and the threat of obsolescence.

Possessing too little inventory also has its disadvantages. For instance, a company runs the risk of market share erosion and losing profit from potential sales.

Inventory management forecasts and strategies, such as a just-in-time (JIT) inventory system (with backflush costing), can help companies minimize inventory costs because goods are created or received only when needed.

Inventory management refers to the process of ordering, storing, using, and selling a company's inventory. This includes the management of raw materials, components, and finished products, as well as warehousing and processing of such items. There are different types of inventory management, each with its pros and cons, depending on a company’s needs.

KEY TAKEAWAYS

* Inventory management is the entire process of managing inventories from raw materials to finished products.
* Inventory management tries to efficiently streamline inventories to avoid both gluts and shortages.
* Four major inventory management methods include just-in-time management (JIT), materials requirement planning (MRP), economic order quantity (EOQ) , and days sales of inventory (DSI).
* There are pros and cons to each of the methods, reviewed below.

A company's inventory is one of its most valuable assets. In retail, manufacturing, food services, and other inventory-intensive sectors, a company's inputs and finished products are the core of its business. A shortage of inventory when and where it's needed can be extremely detrimental.

At the same time, inventory can be thought of as a liability (if not in an accounting sense). A large inventory carries the risk of spoilage, theft, damage, or shifts in demand. Inventory must be insured, and if it is not sold in time it may have to be disposed of at clearance prices—or simply destroyed.

For these reasons, inventory management is important for businesses of any size. Knowing when to restock inventory, what amounts to purchase or produce, what price to pay—as well as when to sell and at what price—can easily become complex decisions. Small businesses will often keep track of stock manually and determine the reorder points and quantities using spreadsheet (Excel) formulas. Larger businesses will use specialized enterprise resource planning (ERP) software. The largest corporations use highly customized software as a service (SaaS) applications.

The four types of inventory management are just-in-time management (JIT), materials requirement planning (MRP), economic order quantity (EOQ) , and days sales of inventory (DSI). Each inventory management style works better for different businesses, and there are pros and cons to each type.

 **TYPES OF INVENTORY**

The four types of inventory are raw materials, work-in-progress (WIP), finished goods, and maintenance, repair, and overhaul (MRO) inventory. Knowing which items belong to which category allows you to optimize your operations and account for each step of the production process more efficiently.

1. **Raw materials**

Raw materials are all the items that your business uses to manufacture finished products.

These materials can be sourced, produced by your company, or [procured from a supplier](https://katanamrp.com/blog/purchase-order-management/). Raw materials can be further classified into two categories:

* Direct raw materials
* Indirect raw materials

Direct raw materials

Direct raw materials are the components that are used directly in the final product. These materials are easy to quantify and account for per unit or per batch basis.

**Indirect raw materials**

Indirect raw materials are the components that are not part of the final products but are used during the production process. Indirect raw materials are harder to identify and account for since they can’t be traced to specific batches or units. However, these are essential for the production process.

1. **Work-in-progress (WIP)**

All the materials that your factory floor has started working on, but the product isn’t quite finished yet, consist of your work-in-progress (WIP) inventory.

It can comprise direct and indirect raw materials — the only thing to note here is that the product is not complete and is a work in progress.

Continuing with the Acme Corp example, let’s assume that every couch has a production time of one week. So once the metal frames, foam, and leather has been cut to size and the factory has started working on a couch, those materials stop being part of the raw materials and should be considered WIP inventory.

1. **Finished Goods**

All the items ready to be sold are considered part of your finished goods inventory.

Of course, depending on the workflow you adopt, this could mean slightly different things.

If you follow a make-to-order workflow, then the final product is made and can already be shipped to your customers. Whereas, if you follow the make-to-stock workflow, the inventory will have to be stored in a warehouse until an order comes through. In either case, your finished goods inventory should be pretty clear and straightforward to account for and track.

1. **Maintenance, Repair, Operations (MRO)**

As the name suggests, maintenance, repair, and operations (MRO) inventory is essential to keep your factory operational. MRO inventory is strictly for your consumption and is not available for customers to purchase.

For example, Acme Corp maintains extremely clean and safe working environments for its employees.

So every day the facilities are cleaned by a team of janitors. All the equipment and materials required to accomplish this job, like vacuum cleaners and cleaning supplies that the janitors use, are part of the MRO inventory. Similarly, the tools and spare parts required to repair and fix broken machinery are also part of the MRO inventory.

 **INVENTORY CONTROL**

Inventory control, also called stock control, is the process of ensuring the right amount of supply is available in an organization. With the appropriate internal and production controls, the practice ensures the company can meet customer demand and delivers financial elasticity.

Successful inventory control requires data from purchases, reorders, shipping, warehousing, storage, receiving, customer satisfaction, loss prevention and turnover. According to the 2017 “State of Small Business Report”, almost half of small businesses do not track their inventory, even manually.

Inventory control enables the maximum amount of profit from the least amount of investment in stock without affecting customer satisfaction. Done right, it allows companies to assess their current state concerning assets, account balances and financial reports. Inventory control can help avoid problems, such as out-of-stock (stockout) events. For example, Walmart estimated it missed out on $3 billion worth of sales in 2014 because its inadequate inventory control procedures led to stockouts.

An integral part of inventory control is supply chain management (SCM), which manages the flow of raw materials, goods and services to the point where the company or customers consume the goods. Warehouse management also squarely falls into the arena of stock control. This process includes integrating product coding, reorder points and reports, all product details, inventory lists and counts and methods for selling or storing. Warehouse management then synchronizes sales and purchases to the stock on hand.

Inventory management is a higher-level term that encompasses the complete process of procuring, storing, and making a profit from your merchandise or services. While inventory control and inventory management may seem interchangeable, they are not. Inventory control regulates what is already in the warehouse. Inventory management is broader and regulates everything from what is in the warehouse to how a business gets the product there and the item’s final destination.

Inventory control practices and policies should apply to more than just finished and raw goods. The following graphic shows all the things a business might manage using these practices.