

# Distribution KPIs

KPI	Formula	Definition
Average Inventory	$((\text{Beginning Inventory} + \text{Ending Inventory})/2)$	The average of inventory is the average amount of inventory available in stock for a specific period. Average inventory period is important because it shows how inventory turnover changes over time. This allows management to better understand its purchasing happens and sales trends in an effort to reduce inventory carrying costs.
Warehouse Space Utilization	$(\text{Total amount of storage space being used} / \text{Total storage space})$	It's the actual physical capacity of the space dedicated for storage. This number should be no more than 27% of total storage space and no less than 22%. If percentage is higher than 27%, this would likely mean your staff is having a difficult time moving around the warehouse to pick and restock items. This can result in high labor expenses. However, a warehouse space utilization of under 22% of your facility's total storage capacity would indicate that you may be wasting potential storage space due to the layout of your warehouse.
On-Time Delivery Ratio	$\text{Units or orders delivered on time} / \text{Total units or orders shipped}$	Helps determine how efficiently a company is meeting customer's agreed deadlines. If the figure is too low or below the benchmark it could be used as a signal that somewhere along the supply chain there are bottlenecks, inefficient or time-consuming processes which are not adding value and warrant further investigation, or a slower delivery method is being employed.
Backorder Rate	$(\text{Number of undeliverable orders} / \text{total number of orders}) * 100$	A company's backorder rate is the percentage of orders that cannot be delivered at the scheduled time but that will be delivered at a later date.
Distribution Cost per Unit Shipped	$\text{Total Freight Costs} / \text{Number of Units Shipped}$	Helps determine the cost of each unit that a company ships. If this figure is too high, then the company should try and find ways of reducing this number to increase their bottom line.
Inventory Carrying Cost	$(\text{Storage Costs} + \text{Employee Salaries} + \text{Opportunity Costs} + \text{Depreciation Costs}) / \text{Total Value of Annual Inventory}$  *Storage Costs = rent, taxes, insurance, Inventory Investments, etc.  *Opportunity Costs (if able to calculate) = The money spent on carrying inventory that could be spent more productively in ways that help you scale your business.  *Depreciation costs = spoiled/expired, out-of-season inventory, no longer has value	Inventory carrying cost is the cost of holding and storing inventory in a warehouse or inventory storage facility. Usually a company's carrying cost will generally total about 20-30% of its total inventory costs. By reducing the inventory you hold, you free up both cash and time for better, more revenue-generating facets of the business.

Obsolete Inventory Percentage	Book value of Obsolete Inventory / Total inventory book value	This measurement is needed to derive the portion of the inventory that is no longer usable
Repeat Purchase Rate (RPR)	Number of Customers who bought more than once (365 days) / Total number of customers (365 days)	A calculation that shows you the percentage of your current customer base that has purchased at least a second time. This metric is influenced by your customer retention efforts and is a good indicator of the value you are providing your customers.
Purchase Frequency (PF)	Number of orders (365 days) / Number of unique customers (365 days)	Is a metric that shows the average number of times a customer makes a purchase within a set time frame. This provides you with insight on how to structure your marketing to best suit the buying behavior of your audience. PF can be utilized in different ways by changing the time frame. Generally, you should be looking at data during a one-year period to have a broad view of consumer buying habits (like holiday and sale shopping).
Labor Efficiency (Store Front Labor as % of Sales)	$\left( \frac{\text{Standard Labor Hours}}{\text{Amount of time worked}} \right) * 100$ <p>*Where Standard Labor Hours is the standard amount of time it should take for an employee to complete a project</p>	While productivity measures quantity, efficiency measures quality. You could calculate a very high productivity number per employee, but that number alone doesn't give you any insight into the quality of work (in theory, an employee could seem very productive, but actually be producing horrible outputs).
Picking Accuracy	The total number of orders picked and verified to be accurate prior to shipment divided by the total number of orders picked over the same period of time	Order Picking Accuracy is an indicator of the controls set in place in order to ensure that shipments to customers contain the correct goods or materials.

**For a review of your KPIs, [contact us](#) for a free consultation!**