

Supply Chain Management KPIs



Whether you're part of a massive global conglomerate, a small business, or a startup, supply chain management is a critical part of keeping the economic engine that drives your business humming.

Finding (and keeping) the right suppliers, ensuring on time delivery, and keeping total costs low while maximizing value are all essential to reaching your goals for performance and profitability.

The lasting success of your supply chain relies on feedback from *key performance indicators*, or KPIs.

Measuring supply chain performance can be a complex endeavor, but it's not an impossible one—and the process is greatly simplified once you've identified the key performance indicators that matter most to your business.

Taking advantage of high-tech tools can help, too.

The Importance of Supply Chain Management KPIs

As with other areas enhanced by continuous improvement, making the most of

your supply chain relies on making informed decisions based on data from the right KPIs.

To be effective, a supply chain needs to feed a steady stream of performance data to your procurement team for analysis and process refinement.

Think of these metrics as both a filter and an irrigation system.

Tracking supply chain KPIs turns what could be a vast and confusing sea of information into precise streams of actionable information that can be directed to the areas that support healthy growth.

The true value of these metrics lies in their ability to create positive change within your organization.

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Essential Supply Chain Management KPIs

You might be asking, “Which KPIs are the “right KPIs” for *my* business?” Perhaps unsurprisingly, there’s no “one size fits all” solution.

However, a smart place to start is with the key performance indicators that touch on areas critical to the majority of businesses operating today.

The Supply Chain Council publishes the *Supply Chain Operations Reference* (SCOR) to provide businesses with a simplified guide to basic metrics for supply chain management while also outlining guidance for procedural optimization and improvement.

The SCOR is focused on creating excellence in three areas: Products, Service, and Operations.

Product Excellence is a priority for companies looking to streamline every step of their production and sales workflows.

Maximum value at minimum cost is supported by a focus on supplier availability and reliability, as well as supply chain cost compared to value generated.

Service Excellence drives companies who prioritize customer service.

They seek an adaptable and real-time-ready supply chain that supports their drive to exceed customer expectations—and their own high standards for internal process efficiency and efficacy.

Operations Excellence is the name of the game for businesses who build value by eliminating waste.

They pursue tactical cost efficiency through lean, data-driven systems that seek to predict and eliminate delays, errors, and other roadblocks before they can create problems.

SCOR VARIABLE	RELATED METRICS	PURPOSE	CREATES VALUE THROUGH:
Total Cost	<ul style="list-style-type: none"> ● Cost of Goods Sold (COGS) ● Total Supply Chain Costs ● Return on Investment (ROI) ● Carrying Cost of Inventory ● Productivity 	Tracking total cost of procurement and the variables affecting it.	Operations Excellence
Reliability	<ul style="list-style-type: none"> ● Fill Rates ● Perfect Order Tracking ● Delivery Quality ● Inventory Turn Rate ● Order Status 	Measuring the company's ability to consistently deliver the correct products to its customers within the promised timeframe.	Product Excellence

Adaptability	<ul style="list-style-type: none"> ● Flexibility of Production Processes 	Measuring the company's ability to adjust its operations in order to address new or changed requirements.	Service Excellence Product Excellence
Asset Efficiency	<ul style="list-style-type: none"> ● Inventory on Hand ● Cash-to-Cycle Time ● Asset Turn Rate ● Repair and Maintenance Cycle 	Tracking the company's ability to manage working and fixed capital effectively.	Operational Excellence
Performance	<ul style="list-style-type: none"> ● Lead Times (Order Fulfillment) ● Late Orders <ul style="list-style-type: none"> ● Order Accuracy ● Inventory to Sales Ratio 	Measuring the speed and accuracy with which the company delivers goods to customers.	Service Excellence

Let's take a closer look at three of the most important supply chain KPIs from each category:

Product Excellence KPIs

1. Perfect Order Tracking

The quest for perfection is as old as humanity itself—and sadly, remains elusive for the best of us. But using this metric to track your percentage of orders without any errors can help you get as close as possible.

$$((\text{Total Orders} - \text{Orders with Errors}) \div \text{Total Orders}) \times 100 =$$

Percentage of Perfect Orders

You can further refine this metric by each stage of the Procure-to-Pay process, including forecasting, procurement, production, and transportation and storage. So, for example, you may have a 99.97% perfect order rate for procurement, but a 98.97% perfect order rate for transportation, highlighting a need for further refinement.

2. Fill Rates

Tracking order fulfillment rates, this metric is important both as its own specific measurement of order fulfillment and as a critical component of your Perfect Order rate.

You can break fill rates into three distinct categories:

- **Order Fill** is the percentage of orders correctly filled from available stock.
- **Line Fill** is the percentage of lines correctly filling their scheduled orders
- **Unit Fill** is the percentage of items produced and delivered successfully compared to the total order

By tracking these three individually, you can gain insight into specific issues within each area of production as well as your total Perfect Order ratio.

3. Inventory Turnover

This metric simply measures the number of times your company's inventory turns over (or cycles) in a given year.

$$\text{Cost of Goods Sold (COGS)} \div \text{Average Inventory} = \text{Inventory Turnover}$$

In this case, the higher the value, the better. A low turnover rate can be a sign of a sluggish supply chain in general and an inefficient logistic or sales workflow in particular.

Service Excellence KPIs

1. Supply Chain Cycle Time

How long would it take to fill a customer's order if your warehouses were completely empty? This metric seeks to provide an answer.

Add together the longest lead times for each stage of your supply chain cycle; the sum is how long it would take you to fill that order "from scratch." If any one segment is too long, further analysis and process adjustment can help keep this KPI as low as possible, ensuring a sprightly and reactive supply chain.

2. Days Sales Outstanding (DSO)

Knowing how quickly you can collect from customers is a key part of effective spend planning.

$$\text{(Accounts Receivable} \div \text{Sales)} \times \text{Days in Accounting Period} = \text{DSO}$$

As with Supply Chain Cycle Time, keeping this metric as low as possible improves overall efficiency and ensures you have plentiful revenue for all your business needs (including meeting customer demand and expectations).

3. On Time Shipping Rate/Late Orders

Keeping customers happy means delivering what you promised, when you promised it. This supply chain KPI measures the percentage of goods that arrives on or before the scheduled ship date.

$$\text{(Total Number of On-Time Goods} \div \text{Total Number of Goods)} \times 100 \\ = \text{Late Orders Rate}$$

Strive to keep this metric as high as possible to ensure optimal customer satisfaction.

Operations Excellence KPIs

1. Cash-to-Cycle Time

This metric measures the time between purchasing materials and being paid by your customers for the products produced with those materials. Your operating capital is bound in your raw material until it's transformed into customer payments, so keeping this metric low is a good sign of profitability and efficiency.

Note: Since finished goods often have a wide variety of raw materials as components, this metric can be applied as an average for materials across a given period (e.g., weeks, months, etc.).

2. Average Production Material Payment Period

You want your customers to pay you as quickly as possible, but stretching out your own payments to suppliers can benefit your business by boosting available capital to improve efficiency and flexibility.

$$\text{(Total Payables for Production Materials} \div \text{Total Cost of Materials)} \\ \times \text{Days in Accounting Period} = \text{Average Production Material} \\ \text{Payment Period}$$

3. Total Supply Chain Costs (As a Percentage of Total Sales)

Comparing the operational costs generated to your total sales, this metric gives you a macro view of how much you're spending to generate revenue. It's usually expressed as percentage, thusly:

$$\text{(Total Supply Chain Costs} \div \text{Sales in Accounting Period)} \times 100$$

While this "rule of thumb" metric provides a useful overview, it's a good idea to track other KPIs in this category as well (e.g., shipping costs, purchase order preparation costs, etc.) to provide a detailed, granular

picture that empowers you to focus on areas most in need of improvement.

Tech Takes the Pain Out of Supply Chain Metric Tracking

Every company is different, and each has a unique supply chain it is constantly refining (or should be) to fit its ever-changing needs.

That said, supply and inventory management becomes much simpler when you bring automation and artificial intelligence (AI) into your workflow.

No matter which KPIs your company relies on to monitor and improve supply chain performance, a centralized software solution facilitates more effective communication and reduces logjams.

It also cuts costs and builds value by greatly reducing human error and the wasted time and resources that would otherwise be dedicated to chasing exceptions, missing or delayed shipments, and rogue spending.

Get More from Your Supply Chain Operations

Like a garden, a healthy and productive business needs to be fed and watered to grow.

But instead of water, your company needs rich and actionable data, provided by the right KPIs, to eliminate waste, optimize processes, and leverage capital effectively.

Make tracking the metrics of supply chain management part of your business strategy, and protect your hard-earned success from withering on the vine.

What's your goal today?

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