SUPPLY CHAIN ANALYTICS

Tools And Tips For Continuous Improvement

Your warehouse manager notices a drop in performance of cases shipped versus cases ordered. By looking at a detailed dashboard report, he sees it's the result of one hot item holding up other orders. Another report shows him the item is on a container waiting to be received. He notifies the receiving manager to prioritize that shipment and directs his purchasing manager to re-order more because of the spike in demand. This enables the business to meet customer delivery windows and maintain excellent service.

SUPPLY CHAIN ANALYTICS: TOOLS AND TIPS FOR CONTINUOUS IMPROVEMENT

INTRODUCTION

If you're not measuring the results of your enterprise, you can't declare victory or defeat. And yet, investing time and resources into performance management is often too low on a company's list of priorities.

Analytics are especially important to have in place before a major upgrade or implementation of a new technology, like a warehouse management system (WMS), as well as prior to changes in processes. How else can you maximize your investment and really know whether the system has improved your operations or helped you reach your goal? How would you be able to test the concepts behind certain workflows? Only by tracking your operations can you know where you're going and how quickly you'll get there.

Whatever your industry, key performance indicators (KPIs) can help you make the best short-term and long-term decisions for your business. But that's easier said than done. In fact, according to supply chain industry analytics, challenges with implementing metrics are often the result of not having a clear understanding of what to measure.

In addition to uncertainty around what to measure now, we find that many companies are very aware that certain metrics will likely change in the future. In other words, being prepared for what comes next is just as important as knowing what's happening today – and will also help you maximize the cost and use of your analytics technology.

A QUICK REVIEW: THE BENEFITS OF SUPPLY CHAIN ANALYTICS

Running a warehouse may feel like you're constantly putting out fires. With the right analytics, you can tell which emergency is a small kitchen fire and which may burn down the entire house. That's why it's beneficial to measure both short-term and long-term KPIs: Long-term helps you understand the trends so that you're not making drastic changes to your operations on account of a few bad days; and knowing your short-term analytics via real-time data informs the smaller adjustments you should make on a case-by-case basis.

Other benefits of tracking and measuring your operations with supply chain analytics include:

- **Increase efficiency:** Pinpoint stumbling blocks and how to remove them
- **Maximize labor resources:** Track productivity and compare your teams
- **Quickly identify errors:** Fix little problems before they become big ones
- **Meet customer demand:** Know where you can make adjustments that keep costs in line while meeting customer expectations for speed and accuracy.

WHAT TO MEASURE?

The answer to the common question "What should we be measuring?" is twofold: At its core, a supply chain analytics solution should provide an enterprise-level view of warehouse operations, empowering your team with timely, meaningful information that drives process improvements. This should include a set of industry-standard, best-practice KPIs for your operations. But to maximize your investment, your supply chain intelligence software should include tools that allow you to create metrics based on your company and its own way of doing business.

DASHBOARDS AND METRICS

Let's first look at the foundation of metrics you may consider as a starting point. Metrics should generally fall under

dashboards that address a specific area of your organization, such as inbound or outbound operations. In some instances, the dashboards have drill-down capabilities where a more granular layer of information is presented.

Any software provider should offer, at a minimum, the foundation for best practice analytics. Compare these to what you're already tracking, and consider which ones to add or remove.

Your metrics should cover these dashboards or areas:
1. Inbound
2. Outbound
3. Order Accuracy
4. Customer
5. Quality
6. Capacity and Utilization

The following is a breakdown of each dashboard and the KPIs to track with each.

1. Inbound
    a. Dock-to-Stock
    b. Percentage of Supplier Orders Received Damage-Free
    c. Orders (POs) and Lines Received per Hour
    d. Suppliers On Time

2. Outbound
    a. Line Fill Rate
    b. Order Fill Rate
    c. Fill Rate Percent
    d. Lines Picked and Shipped per Hour
    e. Orders Picked and Shipped per Hour
    f. On Time and Ready to Ship

3. Order Accuracy
    a. Order Pick Accuracy
    b. Order Pick Accuracy by Type
    c. Orders Shipped Complete
    d. Cases Shipped vs. Cases Ordered

4. Customer
    a. Percent of SKUs In Stock
    b. Cycle Time Percent (Internal versus External)
    c. Back Order Percent
    d. On-Time Shipments

5. Quality
    a. Percent Unsaleable
    b. Inventory Count Accuracy
    c. Inventory Shrinkage by Month
    d. Inventory Shrinkage by Type

**6. Capacity and Utilization**
    a. Honeycomb Percent
    b. Days on Hand by Inventory Type
    c. Days on Hand by Item
    d. Percent Capacity Used by Storage Device
    e. Shelf Capacity Used by Inventory Type

TOOLS FOR MAXIMIZING YOUR ANALYTICS

Metrics aren't helpful if they are rigid, lack context or can't be manipulated and investigated to help you determine the best course of action.

Beyond the set of best-practice metrics for measuring your operations, you'll also need tools that allow you to create metrics based on your company and its way of doing business to give you a better understanding of what's really going on in your operations.
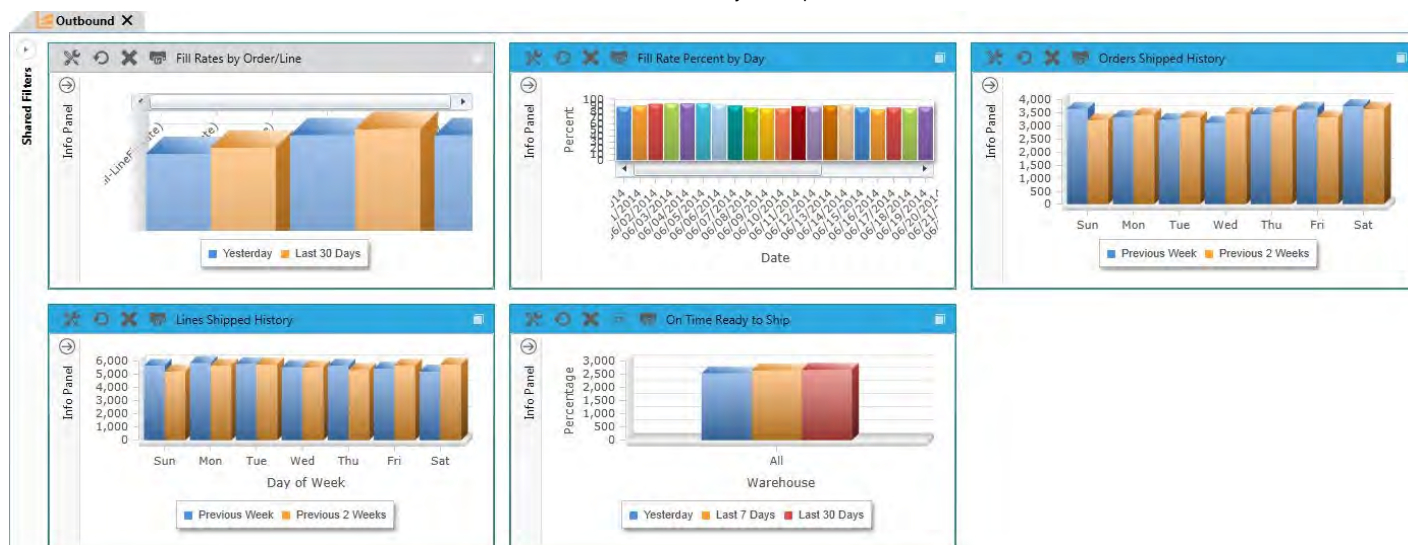
Outbound Dashboard Tracking Four Metrics

FLEXIBILITY

This is one of the most important factors when considering performance management software: There will invariably be your own company-specific metrics that you'll want to measure. Make sure any solution you choose gives you the unlimited flexibility to create and refine your own metrics so that the software is adapting to your needs – not the other way around.

ONE VERSION OF YOUR OPERATIONS

By pulling key performance indicators from disparate components of your operation – such as warehouse management, parcel shipping, EDI trading partner network and your ERP – each role within your organization can have one or several views (or dashboards) delivering the right information, at the right time, in the right context and format to inform your decisions.

CUSTOMIZED DASHBOARDS

Does your vice president of supply chain want to check on the same metrics as your warehouse floor manager? Probably not. That's why it's important for your analytics software to give you choices as to how to organize your metrics, including customized dashboards that provide just the right metrics and amount of detail that's relevant to the user.

ALERTS

Whether you're veering off course or have achieved a measurement goal, supply chain analytics software can alert you to when important thresholds have been crossed. Via emails, text messages, or dashboard notices, you'll have immediate knowledge of a success to be celebrated or a critical challenge to be addressed.

HISTORICAL AND REAL-TIME DATA

Dashboard tools can help you analyze historical data for strategic decision-making, as well as real-time intelligence that informs your tactical, day-to-day actions. You'll have a better understanding of when a measurement is due to the context of one day, or whether it's a larger trend that needs to be addressed.

INTUITIVE

The data should also be intuitive and easy to read, with a graphically rich presentation via charts, graphs, data grids, reports and more.

WHERE DO YOU STAND?

Whether or not you're planning to implement a new workflow or not, it's important to pause, take stock of where you stand on KPIs for your industry and company, and set your benchmarks so you're maximizing your investment in both your analytics and any other warehouse technology. Having a foundation of best practices, along with the flexibility and other tools that help you leverage the data according to your needs, will help you improve the tactical and strategic nature of your operations every step of the way.

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