Acumatica
The Cloud ERP

Key Performance Indicators for Distribution

Every company that handles a physical product is, in fact, a wholesale distributor and needs the information and tools to effectively monitor and manage the distribution side of the business. This applies to manufacturers, wholesalers and logistics specialists, in every industry segment from retail to e-commerce; from health and beauty to electronics; from consumer goods to industrial equipment. All rely on measurements to monitor business activities and performance, document successes and challenges, and help direct management decision-making. Of course, we measure a number of parameters simply to comply with mandatory accounting and reporting requirements, but smart management will incorporate those measurements into valuable intelligence that helps run the business more effectively and more efficiently.

Properly designed measurements can be used to improve performance and results in wholesale distribution and logistics. Thousands of measurements have been defined over the year including many "common" measurements that virtually every distributor can use – things like profit and loss, cash flow, inventory turns, and the like. **In addition, there are a number of measurements that are particularly important for distribution and some that apply to specific situations and needs within the distribution universe.**

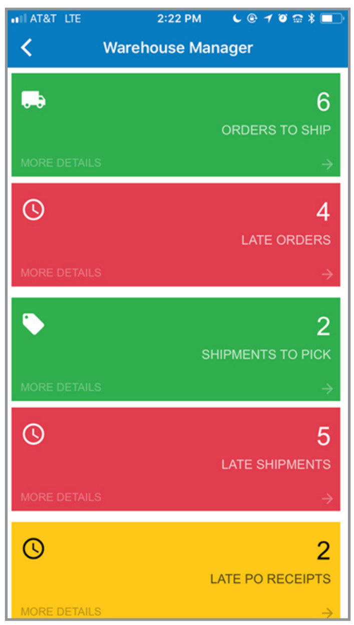
There can be too much of a good thing, however. Information overload is a real problem when the important gems of intelligence are buried in masses of data. Decision-makers can easily miss the critical early warning while spending entirely too much of their valuable time buried in reports.

Among this wide array of possible measurements, each industry has a relatively small number of measures that are particularly important for monitoring the overall health of the business. Commonly called Key Performance Indicators (KPIs), these measurements are often gathered together into an executive dashboard display with graphics that provide an at-a-glance picture to help executives quickly zero in on opportunities or challenges.

These dashboards offer drill-down for analysis of the details and can be adapted to provide key measurements to individual departments or functions within the organization, focused on the specific measurements that are important in their individual span of interest.

Most distribution management software, sometimes called back office, ERP (Enterprise Requirements Planning) or DRP (Distribution Requirements Planning) systems, offer such an Executive Information System with a variety of pre-defined KPIs which the various users within the company can pull together and tweak to fit their specific situation.

KPIs are a natural on mobile devices to stay on top of the business while in the field.



We are in what might be called a golden age of business intelligence and KPIs. While the proliferation of connected sensors and smart devices, commonly referred to as the Industrial Internet of Things (IIoT), provides unprecedented visibility and control, it also multiples the information overload problem. Fortunately, technology is also presenting solutions to that problem in the form of powerful yet user-friendly analytics and data visualization tools that are, in effect, extensions or enhancements to the Business Intelligence / Executive Information Systems we've just discussed. And all of this data, analytics, and business intelligence is made practical and functional by the cloud because only cloud deployment offers the connectivity, integration, security, scalability and capacity necessary to harness all of this data and make the intelligence accessible wherever it's needed, whenever it's needed.

Types of KPIs

When we think of measurements and KPIs, we are most likely thinking about what can be called historical measurements – summaries and analyses of events and data. KPIs compile this data into usable forms that target the specific interest of the viewer, the functional area of the business and the needs of that specific industry and activity.

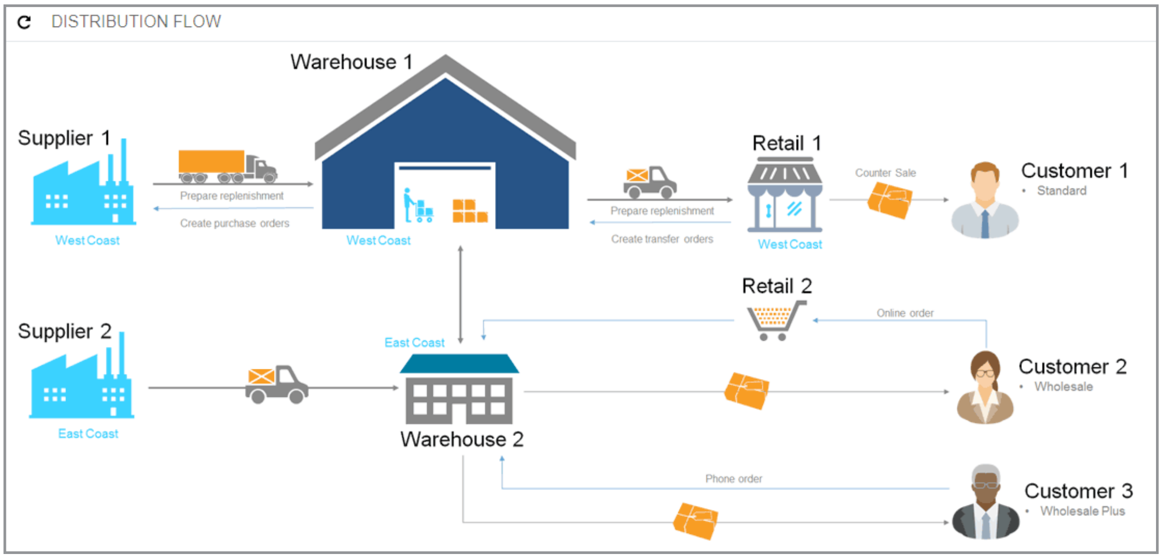
Many KPIs are financial, as finance is the common language of general business management in distribution and all other industries. Common financial KPIs in every industry monitor sales, costs, margins, cash flow, and asset utilization. But many more KPIs are operational measurements that managers and executives use to focus in on specific activities and interests relative to transportation schedules, inventory, on-time delivery, backorders, customer service and more. All of these kinds of KPIs can be classified as historical measurements since they focus on analysis of data from activities that have already occurred. We can speculate and try to project how things will play out in the future, and we do that of course, but that is not built into the structure of the measurements.

Historical KPIs can be set up with alerts and warnings that monitor and detect exceptions, calling attention to issues through graphic characteristics like traffic lights (green = all okay; yellow = an indicator that something is not quite optimum; red = cause for concern) or "push" alert messages sent via email or text.

Predictive KPIs use what can be thought of as leading indicators to project performance expectations into the future. Management can use these projections to steer decisions and actions aimed at avoiding undesirable outcomes or enhancing desirable results. Predictive KPIs for distribution may use economic indicators, demographic trends, or specific industry indicators like housing starts (indicator of future demand for plumbing fixtures, windows, carpeting, furniture, etc.) or health trends (future demand for medications or supplies), for example.

Distribution Flow Dashboard

It can be hard to find problems without an overall picture. However, you can show your processes and KPIs on a dashboard. Operational distribution KPIs can be tailored to track overall business status and performance as well as specific areas of operations. Each node of the distribution network can be monitored individually or in combinations across multiple factors. You can look at factors like inventory, on-time shipments, profitability, etc. for a single warehouse or leg of the supply chain or other groupings or categories.

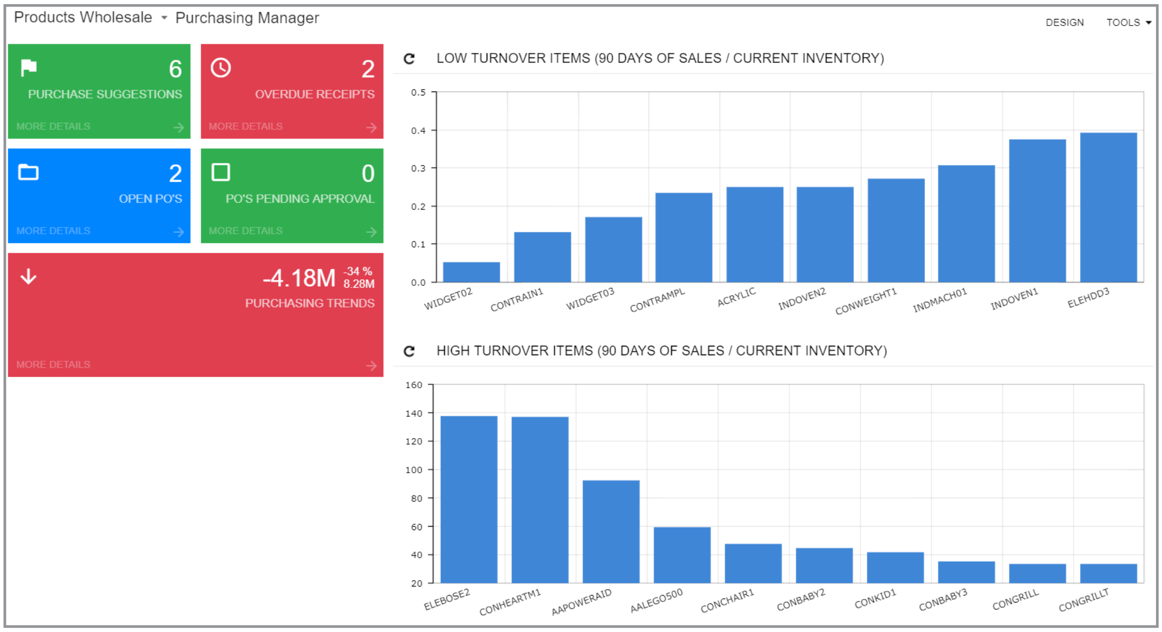


KPIs for Distribution

As mentioned above, a number of basic KPIs measure financial performance and apply to all kinds of businesses – sales and margin, return on equity, cash flow, and the like. Operational KPIs that are focused on distribution may include common indicators that everybody already watches like the Inventory Turnover Ratio as well as others that focus more on specific areas of distribution operations.

Inventory Turnover Ratio

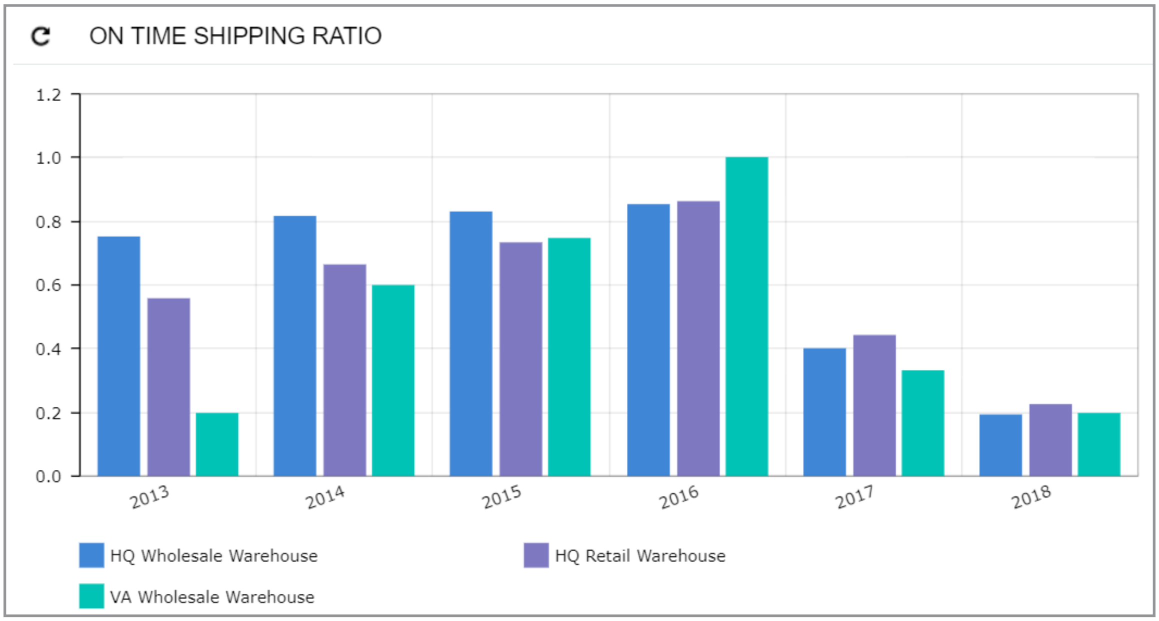
This display shows inventory turns for two different groups of items – low turnover items and high turnover items. This snapshot shows the current status in the familiar ratio format as well as some key indicators that a purchasing manager might want to watch like open POs and purchasing trends. These core metrics are extremely relevant, and each user can create their own view.



On Time Shipping Ratio

This example compares on-time shipping performance for custom orders at three different warehouses over a span of several years. While it is informative to see how the different warehouses do compared to each other, it is interesting – and disturbing – to see that all three warehouses are showing a marked decrease in on-time shipments for the most recent two years.

Custom orders are a challenge for any business, and they can either strengthen or weaken customer relationships Was there a policy change in this case? A supplier cost cutting or inventory reduction initiative that took effect between 2016 and 1017? This basic display quickly eliminates warehouse specific concerns and leads the analyst toward system-wide concerns that can be researched through drill-downs from this starting point.



Profitability by Item

Sadly, not all customers are equally profitable to serve. Nor are all items, markets or channels equally profitable. Savvy distributors are well-advised to periodically review the relative profitability of customers, markets, channels and products as they formulate sales and distribution plans and budgets to optimize overall business plans and strategies. This example of Sales and Profitability by Item Class and Item illustrates the power of KPIs to sort and summarize masses of data to provide insights you can use to better understand your business.

Sales Profitability by Item Class and Item

Company:	PRODUCTS	From Date:	6/2/2017	Page:	1 of 4
User:	admin, admin	To Date:	6/25/2018	Date:	6/25/2018 6:44 AM
					Released Transactions Only

Branch: PRODWHOLE

Item Class: ALLOTHER - - **Item Class Descr.:** All Others

Inventory ID	Inv. Description	Currency	Net Sales	Cost	Margin	Margin %
SPECIALORD	Special or custom order	USD	1,824,000.00	720,000.00	1,104,000.00	60.53
	Item Class [ALLOTHER - -] Total:		**1,824,000.00**	**720,000.00**	**1,104,000.00**	**60.53**

Item Class: CONSUMER - - **Item Class Descr.:** Consumer Goods

Item Class: CONSUMER -100- **Item Class Descr.:** Consumer Goods / Baby Products

Inventory ID	Inv. Description	Currency	Net Sales	Cost	Margin	Margin %
CONBABY1	South Shore Savannah Changing Table	USD	245,787.54	158,104.72	87,682.82	35.67
CONBABY2	Little Tikes Bold n Bright Table & Chairs	USD	1,072,948.40	570,276.18	502,672.22	46.85
CONBABY3	Grac Pack N Play with Newborn Napperstation	USD	262,196.55	168,258.82	93,937.73	35.83
CONCHAIR1	Caravan Canopy Recliner	USD	20,588.40	13,786.62	6,801.78	33.04
	Item Class [CONSUMER -100-BABY]		**1,601,520.89**	**910,426.34**	**691,094.55**	**43.15**

Getting Started with KPIs

Your Executive Information System will come with a selection of pre-defined KPIs 'right out of the box', as they say, and that's not a bad place to start. But consider these pre-defined KPIs to be training wheels that are helpful in letting you find your balance but are not intended for long-term use. Familiarize yourself with how those KPIs work, how to manage the alerts and warnings, and how to change them to make them more relevant and more useful in your business.

Define a small number of high-impact KPIs (for an individual user)—no more than 8 or 10—aimed at the critical factors for that department or project.

As soon as you are comfortable, start to identify new KPIs that focus on the major functions of your business. The goal is to replace the training wheels with high-performance tires that are just right for you – whether they are racing slicks, mud and snow tires, those nubby mountain bike tires, or efficient highway cruisers.

Many companies getting started with KPIs will become excited by the new insights and visibility and keep defining new ways to look at the business. That is a good thing, of course, but often leads to a proliferation of KPIs that can quickly become counterproductive… again, too much of a good thing. Best practice is to have a relatively small number of high-impact KPIs (for an individual user) – no more than 8 or 10 – aimed at the critical factors for that business, department, project, or area of responsibility. A flexible Business Intelligence system will support drill-down for easy analysis and the easy creation of new ad-hoc measurements for those times when an unusual situation or new idea mandate a different view.

KPI development and use must be done with the involvement and cooperation of the ultimate users of the KPIs – never a secret project that presents the finished product to the unprepared users as a done deal. The users must understand the system and the measurements and tailor them to their specific needs. This is the only way to build a personal connection – ownership – in the KPIs that is required for them to be truly effective.

Make sure that the KPIs are more than just window dressing. They must drive decisions and actions. If they are believed, trusted, and relevant, appropriate decisions and actions will follow. Be sure that incentives line up with measurements; people respond to the way they are measured only when incentives are properly aligned.

Systematizing the KPI Process

Use your initial experience to refine and expand your KPIs. In fact, regular KPI 'maintenance' should be a part of your overall management strategy. Your business continually changes. Certainly, customer preferences and markets change. The advance of technology is having an impact on every business, and static measurement systems inevitably become less relevant and useful if not maintained.

The good news is that today's KPI dashboards are truly flexible, adaptable, and user-driven. There's no need to draw up a detailed description of the changes and beg IT to recode the reports. User-friendly tools make changes and new reports simple and easy, putting the user firmly in the driver's seat. Acumatica Distribution Management is cloud-based so the information is readily available on any device, at any time, from anywhere. And Acumatica's cloud-based applications are built for real-time updates and a high level of flexibility so your KPIs remain dynamic and responsive in every sense of the word.

Based on a broad system like Acumatica Distribution Management, linked to other data sources such as your warehouse management system or transportation management system, along with outside resources like demographics, or economic trends, your KPI dashboard is the control tower for your business. You gather data from current sales activity and forecasts, inventory deployment, procurement and/or production, and outside factors to build a dynamic and valuable view of every aspect of your business; then maintain that view to focus on the most important factors for your continued success. Acumatica makes it easy to collect, distribute and communicate that intelligence and information.

Conclusion / Recap

KPIs may have originated in large, complex organizations but their value is universally recognized, and technology has made powerful, flexible measurement systems with KPI capability both affordable and user-driven so smaller organizations can benefit as well.

Many KPIs are historical in nature, focused on summarization, presentation, and analysis of data commonly found in distribution management systems. User-managed alerts and alarms highlight activities and business areas that need attention, relieving busy managers from the need to pore over endless reports and screens. Built-in tools enable fast, intensive analysis to get to the heart of the problem and make sound, informed decisions.

KPIs are great for uncovering conditions or actions that adversely affect operations (problems) so they can be addressed quickly before losses pile up. KPIs are also good for identifying things that are doing particularly well and exceeding expectations, so that management can find out what is behind the improvement and how to replicate it throughout the organization.

Predictive KPIs take it all a step further by using current patterns and external information to project operational results like revenue, profit, margin, workload/backlog, etc. in the future. Using these projections, management can be proactive in adjusting operations to produce better results and avoid undesirable outcomes.

Keep in mind that KPIs can and should routinely change. For example, when a company has critical issues in one area, it can create appropriate KPIs to monitor the situation and track the effectiveness of the remedial actions. Once the situation has been corrected and stabilized, the KPI becomes less important and should be modified or replaced to track the next critical management issue. Note that this is an important procedure for limiting the growth of KPIs to the point where the forest obscures your view of the trees. Remember that the ideal number of KPIs to watch on a regular basis (daily?) is no more than 8 to 10.

KPIs are a standard business management tool that is becoming both more powerful and at the same time easier to use thanks to packaged Business Intelligence and Executive Information Systems applications that are part of a comprehensive back office software system like Acumatica Distribution Management.