



taking appropriate measures

It's one thing to measure DC performance.

It's another to do the job right.



MAYBE DC MANAGERS SHOULD take some cues from baseball. As baseball fans are well aware, some of the most successful pro teams have made big changes in the way they evaluate players in the past few years. Gone are some of the old standbys like batting average, runs batted in or earned run average. In their place are newer stats like on-base percentage and slugging percentage that better predict how much a player will contribute to the desired outcome—a win.

There could be a lesson in that for the DC world. Asked what measures they use to evaluate their operations' performance, managers in DCs across the country reel off their own old standbys—inventory count accuracy, cost per unit shipped or processed, or on-time delivery. Problem is, the measures they're using are oftentimes not aligned with their overall business strategies. Their metrics may tell them many things, but not what's really important: how far they've come toward achieving their corporate goals and how far they have to go.

To find out more about how met-

rics are used in today's supply chain operations, *DC VELOCITY* and a research team from Georgia Southern University and the University of Tennessee launched a two-part study earlier this year. By the time the survey cutoff date rolled around, more than 700 of *DC VELOCITY*'s readers had responded to a pair of online questionnaires. (A full report of the findings for both surveys is available online at our Web site, www.dcvelocity.com.) When the tabulations were complete, it was clear that plenty of DCs are measuring their operations' performance. What wasn't so clear was whether they're doing it right.



No standards

When it comes to the metrics companies are using today, are there "baseline" metrics that everybody applies? Most emphatically not. There's no single set of metrics in widespread use; in fact, there's no single universally accepted logistics measure—no supply chain equivalent of baseball's slugging percentage or on-base percentage. Indeed, there's nothing even close. Asked to indicate which metrics they used (from a list of 80), the respondents' answers ranged all over the map. When all the results were tallied, not a single metric—even basic measures like on-time

broad categories: time-based measures, financial measures and service quality measures.

Within each of those categories, however, usage scores for the individual metrics varied widely. Among the time-based measures, for example, on-time delivery topped the list, mentioned by more than two-thirds (68 percent) of the respondents. Next on the list was orders shipped on time (63 percent), followed by finished-goods inventory turns (57 percent) and number of overtime hours logged (55 percent). At the bottom of the list was dwell

time (12 percent). It seems safe to say that nobody cares much about dwell time as long as an order departs and arrives on time.

As for financial metrics, cost per unit shipped or processed topped the list (63 percent), followed by total cost per order shipped (55 percent). Moving further down the list, fewer than half the respondents said they measured transportation as a percentage of revenue (47 percent), return on investment (43 percent) and cost per order (42 percent).

To measure service quality, companies typically resort to traditional inventory-based measures. The most commonly used metric was inventory count accuracy (71 percent), followed by overall customer satisfaction (54 percent). Other service metrics in relatively widespread use focused on order fulfillment; these included order picking accuracy (51 percent), picking errors (50 percent) and order fill rate (49 percent).

What measure to take?

Given that there are no clear industry standards where metrics are concerned, how do companies decide what to measure? Logic would dictate that they're choosing measures that best indicate how they're performing against the company's strategic goals. But surprisingly, that's not the case.

Respondents to the first part of the study were asked to identify not only the metrics they used but also their companies' overall strategy (in broad terms). Though you might assume that the companies whose focus was on, say, cost containment would focus on financial metrics, that wasn't the case. The researchers were unable to establish any real correlation between the metrics companies said they used and their corporate objectives (broadly categorized for survey purposes as cutting costs, maximizing asset utiliza-

deliveries or cost per unit shipped—scored in the 90-percent range.

Though they could not identify a single universally accepted measure, researchers were able to identify basic groups of metrics that seem to be in fairly widespread use. Regardless of industry or type of business, most respondents used metrics from at least one of the following three

EXHIBIT 1

Who's using what metrics?

Respondent's Primary Customer	Commonly Used Metrics	Less Commonly Used Metrics
Manufacturers	Customer satisfaction Cost to serve Units processed per labor hour	Forecasting accuracy
Distributors or wholesalers	Units processed per labor hour	
Retail companies	Inbound freight Inventory obsolescence	Units processed per labor hour
End consumers	Customer satisfaction Returns Shrinkage Inbound freight Inventory obsolescence	

SOURCE: GEORGIA SOUTHERN UNIVERSITY, UNIVERSITY OF TENNESSEE AND *DC VELOCITY*

tion, increasing customer satisfaction or maximizing profitability).

Researchers did find a stronger link between the metrics used and a company's "location" within the supply chain—that is, whether its primary customers were end consumers, manufacturers, distribu-

tors/wholesalers, or retailers. That's not to say that all companies serving, say, retailers used the same set of clearly defined measures. Yet researchers were able to identify some statistically significant differences from group to group. (See Exhibit 1.)

Take units processed per labor hour, for example. Companies whose primary customers are retailers rarely track these numbers. But those that provide service to manufacturers and distributors/wholesalers live and die by this measure. Perhaps manufacturers are accustomed to thinking in terms of labor costs and time-motion studies. Or perhaps these are critical measures given the labor intensity and repetitive nature of their industries. Whatever the reason, most of them can quote this number down to the fraction of a unit.

Beyond measure

Given the apparently scattershot approach to metrics in the nation's DCs, it appears there's an opening here for companies seeking a competitive edge. It seems safe to say that a company that adopts metrics aimed at satisfying customers and supporting corporate strategy—not to mention increasing operational efficiency or cutting costs—could reap rich marketplace rewards.

But it won't just happen automatically. Becoming a "power user" where metrics are concerned means getting familiar with the corporate strategy. It means adopting and using metrics that align with that objective. And above all, it means finding out what customers regard as key metrics. (Many times, customers will provide scorecards to identify what they see as critical measures.)

All that requires time and effort, to be sure. But it could put you on track for a winning season. □

Editor's note: This study represents the first step in what's expected to become a continuing investigation. Possible topics for future studies include developing a more in-depth understanding of benchmarking levels, defining specific metrics and perhaps developing recommendations for the best metrics for different types of companies to use.

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