ANNUAL SURVEY AND REPORT ON INDUSTRY METRICS

WERC®

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DC Measures

2022 Snapshot in Time

COMPLETE 2022 *DC MEASURES* REPORT AVAILABLE ONLINE AT WERC.ORG

"My motto was always to keep swinging. Whether I was in a slump or feeling badly or having trouble off the field, the only thing to do was keep swinging."
–Hank Aaron

"Rather than just reacting to the waves of things that come, ride them with deliberate intention." –Craig Groeschel

Unpredictable. That's one word for the current supply chain environment. Needless to say, this past year provided quite a ride for DC managers working to get their customers the inventory they needed to serve their end customers. The 2021 environment made it impossible for firms to continue to maintain targeted performance levels across the supply chain. Everyone struggled with performance, even as revenues continued to increase. This rollercoaster is reflected in this year's Top 12 metrics.

As for what 2022 might look like, the environment is not getting any easier. We are now dealing with the global supply chain implications of Russia's invasion of Ukraine and the world's response. China continues to go on full lockdown in cities where someone tests positive for COVID-19. The U.S. still has a significant labor participation rate challenge. Supply chain managers everywhere are facing pressures to perform against capacity shortages, labor scarcities, unprecedented inflation rates, and the government's attempt to create helpful policies that will most certainly have unintended consequences across the supply chain. The question instead, we believe, is how to think about strategies for performance moving into 2022?

One thing is certain, even as uncertainty continues to abound: The supply chain industry is full of innovative thinkers and passionate leaders who will continue to work diligently to serve society with both essential and non-essential goods. Keep swinging folks. You are making a difference and the world needs you!

Continued >>

"The 2021 environment made it impossible for firms to continue to maintain targeted performance levels across the supply chain."

WERC Thanks These Study Sponsors: KENCO Logistics Yale FORTNA | OPTRICITY

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SENIOR LEADERS' RISING INTEREST IN PERFORMANCE

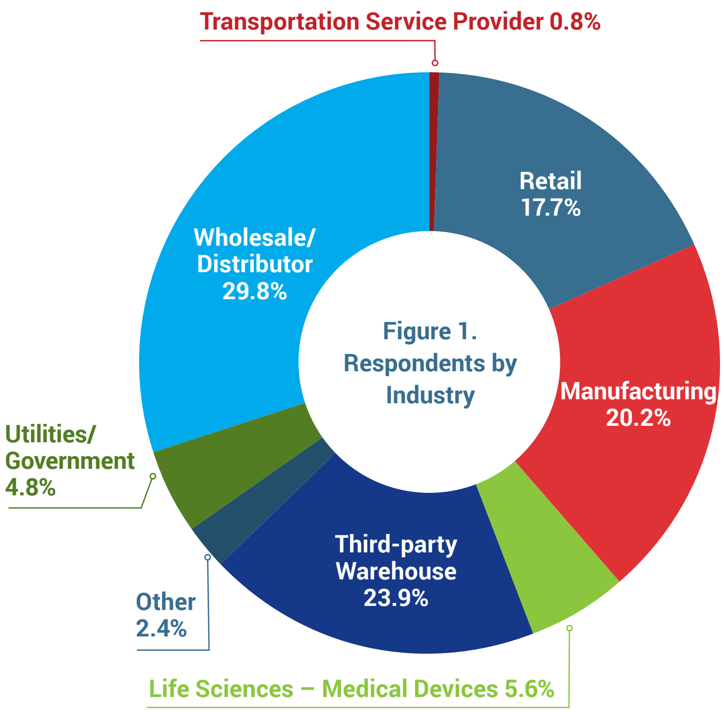
The excuse of supply chain issues on earnings calls, being mentioned about 3,000 times[1], is finally catching the attention of top leadership. Senior management's interest in the metrics study increased from 2021, with 40.2% of respondents indicating they report directly to the "C Suite" and/or the Board of Directors. This is up significantly from 32.4% from last year.

DIVERSE INDUSTRIES, OPERATIONS, AND FIRM SIZES

The total number of individual responses in 2022 was 240. Since not every question was answered and to increase the predictive powers of the benchmarks, responses from 2021 were added to this year's data set after validating that there were not significant differences between the two years. A reversal in respondent titles occurred, with a more than 30% increase in Senior VP participation (27.4%) compared to prior years. The largest group of respondents reported their title as Director (29.8%), down slightly from 29.9% in 2021. Executives represent 7.3%, increasing another 46% from the 2021 study.

DEMOGRAPHICS BY INDUSTRY TYPE

Figure 1 provides a breakdown of the various business segments that participated in the study. Overall shifts by industry were relatively small compared to prior years. Wholesale/Distributors remain the largest segment by industry, representing 29.8% of the respondents. Manufacturing squeezed back into second with 20.2% of respondents. Third-party Warehouse respondents represent the third largest industry group in the study, at 18.6%. Retail increased participation in the study to 17.7%, up 12% over last year's 15.8%.



[1]Source: https://www.businessinsider.com/supply-chain-is-the-biggest-buzzword-in-company-earnings-calls-2021-10

HOW DO YOU PICK?

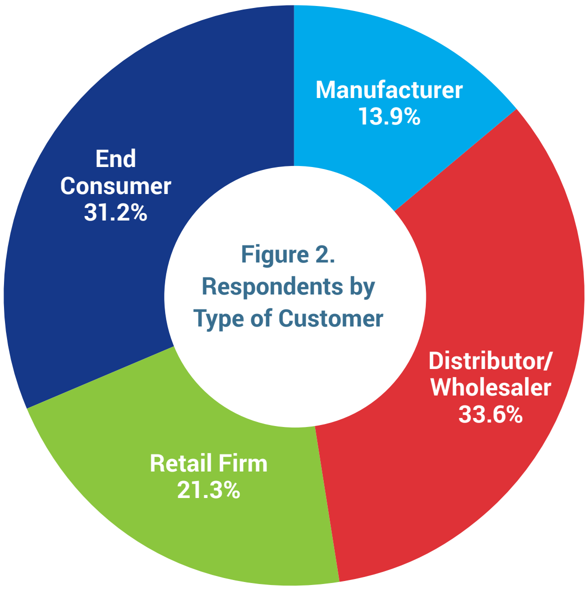
The majority of facilities (65.1%) are picking cases rather than pallets. In calculating percentages for the type of work performed, we only used responses where a majority of the respondent's activity was in one of the four classifications.

Broken case picking (or piece picking) remains the majority type of distribution operation. Compared to 2021, however, broken case picking decreased by 18.5% to 35.2% of operations. Part of this may be attributed to the move to fulfill customer orders directly from stores with grab-and-go order pickup options. This makes sense as we see capacity constraints and delays with parcel shipping companies. Note that this doesn't negate end consumers continuing to place smaller, more frequent orders using e-Commerce tools. We expect this trend to increase considering the pandemic and overall behavioral changes in consumers.

With the continued impact of import delays and the growth of e-Commerce, it is no wonder that partial pallet operations increased more than 130% from 2021's study. Moving from "Just-in-Time" to "Just-in-Case" translates into the need to ship received items as soon as they are available. We believe this is leading to the increase in partial pallet picking. Full pallet picking remained static.

WHO DO YOU SERVE?

Another important consideration is the location of the company within in the supply chain. We were curious to learn if companies that are upstream suppliers used a similar set of measures to that of their customers or their customers' customers. Respondents were asked to classify who their primary customers were in the supply chain **(Figure 2).**



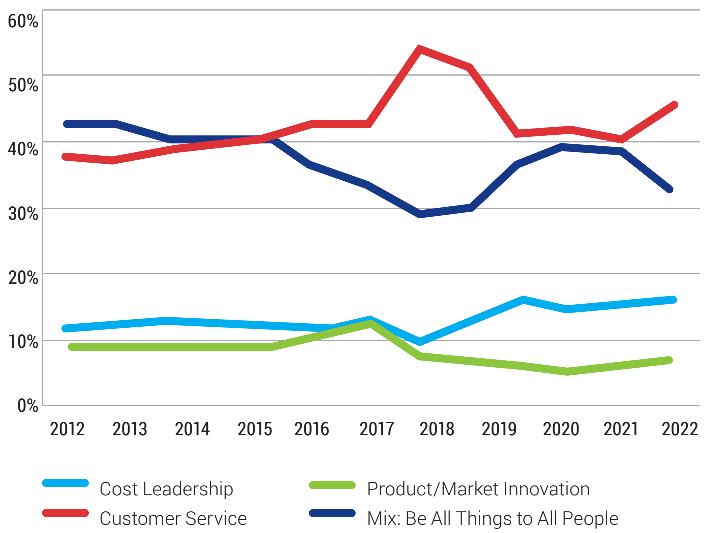
In past studies, a majority of respondents have been at or near the tip of the supply chain. That trend continued this year, as 52.5% of respondents identified their primary customer as a Retail Firm or End Consumer. This is not a small change; firms serving End Consumers increased 20.4% from 2021. And respondents continue to move away from supporting a Manufacturer to Distributors/ Wholesalers. Distributors/wholesalers as a primary customer increased 3% again this year. Manufacturers declined another 21%.

HOW ARE YOU COMPETING?

Business strategy impacts a facility's performance in a number of ways. **Cost Leadership** reflects an importance on volume movements and reducing costs. **Innovation** strategy is focused on velocity by creating new or refreshed versions of products and services on a specific time cycle. **Customer Service** values veracity (or doing what we say we're going to do). The **Mix** strategy strives to be cost and customer focused while being innovative at the same time. Each strategy requires a different set of measures to know whether the facility is successful at achieving the vision of the organization.

To determine the effect business strategy has on performance, we asked respondents to indicate the overall business strategy for their business unit or division **(Figure 3)**. The movement between strategies over the years is interesting to watch. Business strategy allows us a glimpse into the minds of executives and boards and to see what they must do in order to be successful in the marketplace. Cost Leadership and Innovation have remained relatively consistent. This year, those reporting that they follow a Cost Leadership strategy has evened out, slightly up from 14.9% in 2021 to 15.6% of respondents this year.

Figure 3. Respondents by Business Strategy



While these two strategies have remained relatively constant and unchanged over the past dozen years, the same cannot be said for firms utilizing a Mix or Customer Service strategy. When economic times are good, firms are more willing to follow a Mix strategy to gain more customers and market share. Yet, when the economy tightens up, they revert to simpler strategies. Not surprisingly, Customer Service was utilized by 45.1% of the respondents (up from last year's 40.8%), and Mix declined from 38.4% to 32.7%.

STRATEGY ALIGNMENT

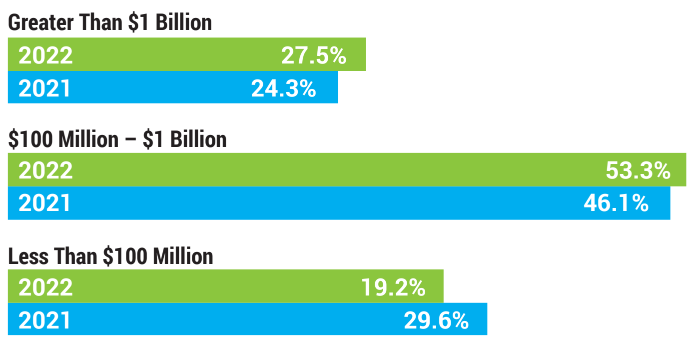
Every year we ask respondents what their business unit's or division's primary goal or objective is. Goals or objectives must be balanced with strategy, as strategy helps an operation determine the tradeoffs it needs to make when trying to achieve its goals. This year, respondents continue to shift their focus from Reducing Costs to Increasing Customer Satisfaction. 26.4% of respondents report Reducing Costs as their goal, a 20% decrease from 2021. Increasing Customer Satisfaction rose 24.1%, from 32% in the 2021 study to 39.7% this year. This makes sense with the ongoing response to the pandemic and the many choices end consumers have in deciding where to shop, thanks to the increased use of e-Commerce.

What to make of all of this? It's clear that firms are working hard to figure out how to serve their customers despite a very tight labor market, soaring transportation rates with limited capacity, a lack of inventory, and bottlenecks throughout the supply chain. They're working closely with customers and doing everything in their power to get them what's needed as quickly as possible. As we see with the shifts in strategy and organizational goals, Customer Satisfaction is on top of everyone's mind, with the primary motivator being customer retention!

WHAT ABOUT SIZE?

Once again, companies of all sizes are participating in the study, supporting our philosophy that everyone should benchmark and focus on performance regardless of their size. Companies with annual sales less than $100 million comprised 19.2% of our total respondents, down 35% from 2021. Participants having greater than $1 billion in annual sales increased 13.2% from 2021 to 27.5% of respondents. Those companies reporting annual sales between $100 million and $1 billion represent the largest group at 53.3% of the respondents **(Figure 4)**.

Figure 4. Respondents by Company Size



WHAT TYPE OF FACILITY ARE YOU?

Regional, Omni-Channel, Centralized, and Wholesale facility types make up the top four types of facilities in the study. In addition, we provided further clarification for what an Omni-Channel facility is in the survey. Thus, the increase in the number of respondents reporting their facility type as Omni-Channel **Figure 5**.

FACILITY LOCATION?

As more warehouses and DCs outside of North America continue to report their findings, we will be able to provide statistically viable benchmarks based on location. This year 84.7% of the respondents reported North America as their location, while the remaining 15.3% are from countries outside of North America.

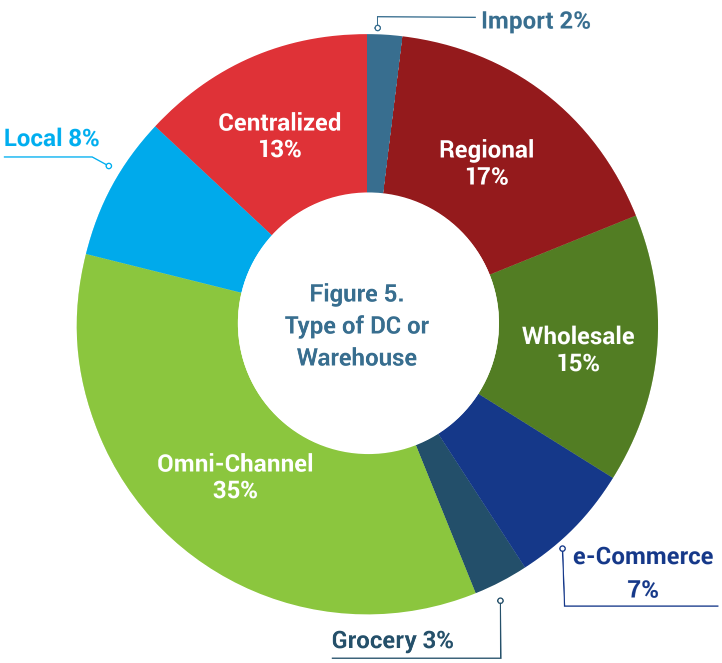


Figure 5. Type of DC or Warehouse

TOP METRICS: OPERATIONAL SHIFT TOWARDS THE CUSTOMER

Each year we identify the Top 12 most popular measures based on the number of respondents to report results for each metric. **Table 1** shows the Top 5 of 12 most popular metrics used and how that has changed since the 2021 study. This year's most frequently employed metrics were Average Warehouse Capacity, Order-picking Accuracy, and On-time Shipments, suggesting a bit more balanced approach to managing the DC than we have observed over the past couple of years.

In fact, while Capacity is still top of mind, a greater focus on Operations has significantly changed the make-up of the Top 12 metrics for 2022. It's clear to see the impact that a shift to Customer Service strategy and organizational goals affected the metrics. Customer metrics, such as On-time Shipments, moved up. So did Outbound Operations metrics focused on Ready to Ship and Fill Rates.

TABLE 1. TOP 5 OF 12 METRICS FOR 2022

Metrics	Category	2022	2021
Average Warehouse Capacity Used	Capacity	1	1
Order-picking Accuracy (Percent by Order)	Quality	2	2
On-time Shipments	Customer	3	4
On-time Ready to Ship	Outbound Operations	4	10
Peak Warehouse Capacity Used	Capacity	5	3

If we consider that more than 52% of our respondents ship directly to End Consumers or Retailers, these metrics make sense. The pressure to perform and get inventory to End Consumers is enormous. If retailers don't receive the inventory they need, they cannot serve their end consumer and will look to other channels. If consumers cannot get their orders fulfilled, they will shop with another retailer. There's also pressure to get orders ready to ship on time and be accurate. Otherwise, the risk of a lost sale—or worse, a lost customer—increases.

Overall, performance continued to suffer universally this year. As we examine the results of all the benchmark performance measures, we think about what it means to focus on continuous improvement and how difficult it is to maintain consistent performance over time. This is especially true when we don't control all of the levers or resources needed to successfully manage global supply chains. Maybe it's time to reset the goal posts for what success looks like in the world we work in right now.

Considering changes in performance from year to year, minimal gains were made. In terms of performance improvement, Major Opportunity took the lead again, improving performance on nine of the 37 measures. Best-in-Class made some gains this year by improving performance on eight of the measures. Median performers improved performance on six measures. That's the good news.

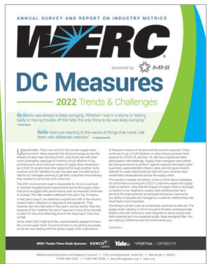
Unfortunately, being consistent is necessary for success and performance management thrives on consistency. No one group of performers has really shown through the pandemic. Declining performance was noticed on 23 of the 37 measures for Major Opportunity performers. Best-in-Class performers saw performance decrease on 25 measures. Median performers continue to slide with declining performance on 26 measures.

There were so many declines it is hard to pinpoint one specific cause. Median and Major Opportunity experienced significant challenges around the employee metrics; Best-in-Class performers experienced similar declines.

> "This year's most frequently employed metrics were Average Warehouse Capacity, Order-picking Accuracy, and On-time Shipments...."

Using *DC Measures* Effectively

RESOURCES FOR BENCHMARKING 2022



2022 *DC Measures*

Begin by identifying the quantitative metrics your operations will focus on and noting how your facility ranks compares to others. Are you tracking the metrics that will produce the best return for your company?

The full study report captures 37 key operational metrics that are most meaningful for distribution professionals. The measures have been grouped into sets–customer, operational, financial, capacity/quality and employee/safety, perfect order, and cash-to-cash cycle measurement. There's a list of definitions for each metric AND how to calculate each. Used from year to year and across your network, these details provide a strong base and consistent approach to reporting performance.

Online Benchmarking Tool

Filter through a compilation of all *DC Measures* data since 2013 with WERC's new online benchmarking tool. Accessible via werc.org/metrics with a paid subscription, this tool allows users to customize benchmarking data to best meet internal evaluation needs at an unprecedented rate of speed. Adjustable parameters include industry, operation type, preferred metrics, and more. Each report can be saved and downloaded in a choice of formats instantaneously.

Warehouse Manager's Guide for Benchmarking, 2nd Edition

This publication explains the kinds of benchmarking, why it's important to benchmark, how to choose the right metrics, how to analyze your company's performance, and techniques for communicating to get the results you need. Additionally, you'll find methods for tracking and communicating plans and progress to others. Consider it a road map as you plan for the future.

Warehousing and Fulfillment Process Benchmark & Best Practices Guide, 2nd Edition

Complementing the *DC Measures* report is this 3-ring binder that explains qualitative warehousing best practices. It can be used as a workbook to rank your operations against industry standards in eight specific process areas using a quintile format similar to *DC Measures*. Use it to complete your overall performance improvement program for maximum benefit.

WERC Warehouse Assessment and Certification Program

In full cooperation with your team, the WERC assessor comes to your facility to assess its capabilities and performance on core warehousing functions. The review is based on well-vetted industry standard-grading methodology by independent certified auditors who benchmark your warehouse operations against a 5-point scale. In a presentation scheduled by you, the researcher explains the process, outlines your specific results, holds a workshop with your team that includes suggestions for improvements and leaves your team with a beginning action plan.

VISIT WERC.ORG/METRICS FOR ORDERING INFORMATION

Why WERC?

In an increasingly complex world, warehousing, distribution and fulfillment professionals make sense of things, so that people get their products and services, companies deliver on their commitments, economies grow, and communities thrive.

WERC powers distribution logistics professionals to do their jobs, excel in their careers, and make a difference in the world.

Questions? Contact WERC at wercoffice@werc.org or 630-990-0001

PERFORMANCE RESULTS

Table 2 is a summary of the Top 5 metrics in this study.

Column 1: Metric Being Examined (metric definitions can be found on pages 9–11 of the full *DC Measures* report).

Columns 2–6: Quintile Rankings

- **Major Opportunity:** Lowest 20% of responses
- **Disadvantage:** Responses in the 20-40th percentile
- **Typical:** Responses in the 40-60th percentile
- **Advantage:** Responses in the 60-80th percentile
- **Best-in-Class:** Top 20% of responses

Column 7: Median (the actual median performance of all respondents).

TABLE 2: QUINTILE PERFORMANCE CLASSIFICATION FOR TOP 5 METRICS

Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
Customer Metrics*	Major Opportunity	Disadvantage	Typical	Advantage	Best-in-Class	Median
1. Average Warehouse Capacity Used	Less than 75%	>= 75 and < 83.64%	>= 83.64 and < 89%	>= 89 and < 95%	>= 95%	85.70%
2. Order-picking Accuracy (Percent by Order)	Less than 97%	>= 97 and < 99%	>= 99 and < 99.5%	>= 99.5 and < 99.85%	>= 99.85%	99.20%
3. On-time Shipments	Less than 86.7%	>= 86.7 and < 95%	>= 95 and < 98.22%	>= 98.22 and < 99.8%	>= 99.8%	96.80%
4. On-time Ready to Ship	Less than 87.2%	>= 87.2 and < 95%	>= 95 and < 99%	>= 99 and < 99.9%	>= 99.9%	97.50%
5. Peak Warehouse Capacity Used	Less than 85%	>= 85 and < 95%	>= 95 and < 98%	>= 98 and < 100%	>= 100%	96.00%

Legend: > greater than; >= greater than or equal to; < less than

***Note:** Average and Peak Warehouse Capacity does not always reflect best practices. Due to the calculations for quintiles, we have continually reported that Best-in-Class is above 90%. A high average warehouse capacity is not beneficial; studies have shown that an average warehouse capacity between 80 and 85% allows the warehouse to respond to shifts in demand.

About the Study

WERC Thanks Its Research Partner: DC VELOCITY

2022 marks the 19th year of the *DC Measures* study. The heart of this study is to eradicate bad warehousing practices. Every January, the survey is launched via an email invitation to WERC members and *DC Velocity* readers. Survey participants are asked to report their actual levels of performance for 2021. The study captures 37 key operational metrics that are close to the heart of most distribution center professionals. The measures have been grouped into five balanced sets—customer, operational, financial, capacity/quality and employee—plus the additional set related to cash-to-cash cycle measurement.

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