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The Must-Have Benchmarks for Measuring Supplier Quality in 2021 and Beyond

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Introduction

Auditing your suppliers can help you identify specific risks at each point of your supply chain. While there are a number of line items to choose in a supplier audit, it is helpful to understand how other suppliers are performing across the industry, so you can determine if your supplier is on par or needs improvement.

In this report, we analyzed specific metrics that measure the communication and reliability of suppliers. Because supply chain disruptions are inevitable, having reliable, high-quality suppliers that respond to your needs, communicate accurate timelines, and keep organized documentation can make your job easier when costly issues occur.

Using data from over 3,000 suppliers that use the Anvyl platform, we arrived at industry benchmarks for the following standards: how often an order is shipped on time, how long a supplier should take to respond to an email, how complete documentation is for an order, and what quantity variance is acceptable for quantity discrepancies.

Each of these metrics have a downstream impact on your supply chain, as they relate to additional time and resources it would take to course-correct. To avoid potentially costly issues, review these benchmarks and regularly monitor, assess, and communicate your expectations with your suppliers. This will become an integral part of your growth strategy as you diversify your supply base.

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Industry Benchmarks for Supplier Performance

The following supplier benchmarks are meant to assess how your suppliers are doing when compared to other businesses in the world. If you notice your suppliers are underperforming, you can use these benchmarks and recommendations to set better expectations and get your suppliers back on track.

On-time rate

On-time rate is measured by assessing how often a supplier has shipped products on or before their estimated ship date.

On-time rate (percent of orders shipping on or before target date) from Q4 2020	
Very Poor	0-40%
Poor	40-65%
Fair	65-80%
Good	80-90%
Excellent	95-100%

Recommendations

To mitigate issues with on-time shipments, we recommend setting up recurring meetings with your suppliers to update them on your planning forecasts. Similar to the forecast planning you are doing with your internal finance and inventory teams, it is important to keep your suppliers in the loop on a regular schedule.

Additional touchpoints with suppliers allows both of you to discuss what's going on with your business, while giving suppliers additional opportunities to provide more accurate updates with your current or future orders, should they be at risk. Finding the time to be proactive with supplier communication will go a long way in understanding what possible delays could occur.

Responsiveness

Responsiveness assesses how long it takes for a supplier to respond to an email.

Time for response (days to respond to an open milestone)	
Very Poor	4+
Poor	3-4
Fair	2-3
Good	1-2
Excellent	1 or less

Recommendations

To improve supplier responsiveness, we recommend a few different strategies.

First, you should always know who your primary contact is. When you are first working with a supplier, have a conversation with the management team and let them know you would like their support if needed. This helps knowing what the reporting structure is at your supplier's company and gives you alternative people to reach as necessary.

Implement a service level agreement (SLA) with your supplier. If you already have one, ensure you know what the agreement is and hold your suppliers accountable to it. For example, if they've agreed to reply within 12 hours and you haven't received a reply, you can escalate the inquiry to the appropriate individual when you need to. Other examples that could appear in your SLA include dedicated production time or lead times.

Lastly, as you become more familiar with your supplier, you can introduce other advanced metrics for measuring their quality and build these into your SLAs. For example, you can measure how quickly they upload required files or complete a required task, and use these data points to accelerate timelines and negotiate better raw material prices.

Document centralization

Document centralization measures the organization skills and accuracy of your supplier. It is not uncommon for documents to be sent in various email threads so we recommend brands require their suppliers to upload related purchase order documents to the same email thread or cloud-based folder to eliminate wasted time searching for the documents later.

Documentation centralization (% of orders with a file of this type)			
	Invoice	Packing List	Bill of Lading
Very Poor	Less than 25%	Less than 10%	Less than 5%
Fair	25-75%	10-25%	5-10%
Excellent	75% or more	25% or more	10% or more

Recommendations

Assessing your suppliers on their document completeness and centralization examines how well they know how to do their job, complete the required documents, and centralize them with the associated order. This measures not only their organization skills, but also the accuracy of their work.

To improve shortcomings with your supplier, it is important to discuss your requirements with them and ensure they can accommodate this. While our study only looked at the centralization of basic documents required for a purchase order, you, as a brand, can bake in other documents into your SLAs with your suppliers.

For example, should you need a certification of authenticity to ensure the quality of the goods, you could run into an issue if your supplier isn't able to provide this to you relatively quickly. Therefore, going forward, requiring this document with every purchase order will allow you to course correct and discuss these challenges with your suppliers.

Completion rate

Completion rate assesses the acceptable variance for order quantity discrepancies.

Completion rate (average absolute % deviation of shipped vs. ordered quantities)	
Poor	10% +
Fair	6-10%
Good	3-6%
Excellent	3% or less

Recommendations

Acceptable variances can depend on the complexity and cost of the product being produced--our benchmarks in this case are rough global guidelines. Variances can be problematic because any time there is a discrepancy from what was shipped, you may suffer from inventory out-of-stocks and/or overpaying for units that were never received.

When you are short-shipped, make sure you understand how many and why you were short-shipped. Some common reasons include:

- Didn't order enough materials
- Didn't run enough material in the production line
- Quality issue that prevented them from ordering or producing enough

The remainder will likely be fulfilled, but many times it will be late. This is when your SLA could come into play. For example, you can have clauses in your SLAs when goods are late, the supplier must:

- Complete a missed order by X amount of time
- Pay for freight related to the late order
- Be liable for lost sales

Keep in mind most manufacturing processes account for scrap and waste. Discuss what makes sense with your supplier to ensure they can adhere to these standards and meet the order quantities in the future.

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Our Methodology

In the following sections, we've outlined the data sets and methodologies used to calculate each of the benchmarks presented in this report. At Anvyl, we work with hundreds of brands and thousands of suppliers. Our platform contains information about several thousands of orders and suppliers which we analyzed over the period of 2020. Using these data analyses, we arrived at industry benchmarks for on-time rate, responsiveness, document centralization, and completion rate.

On-time rate

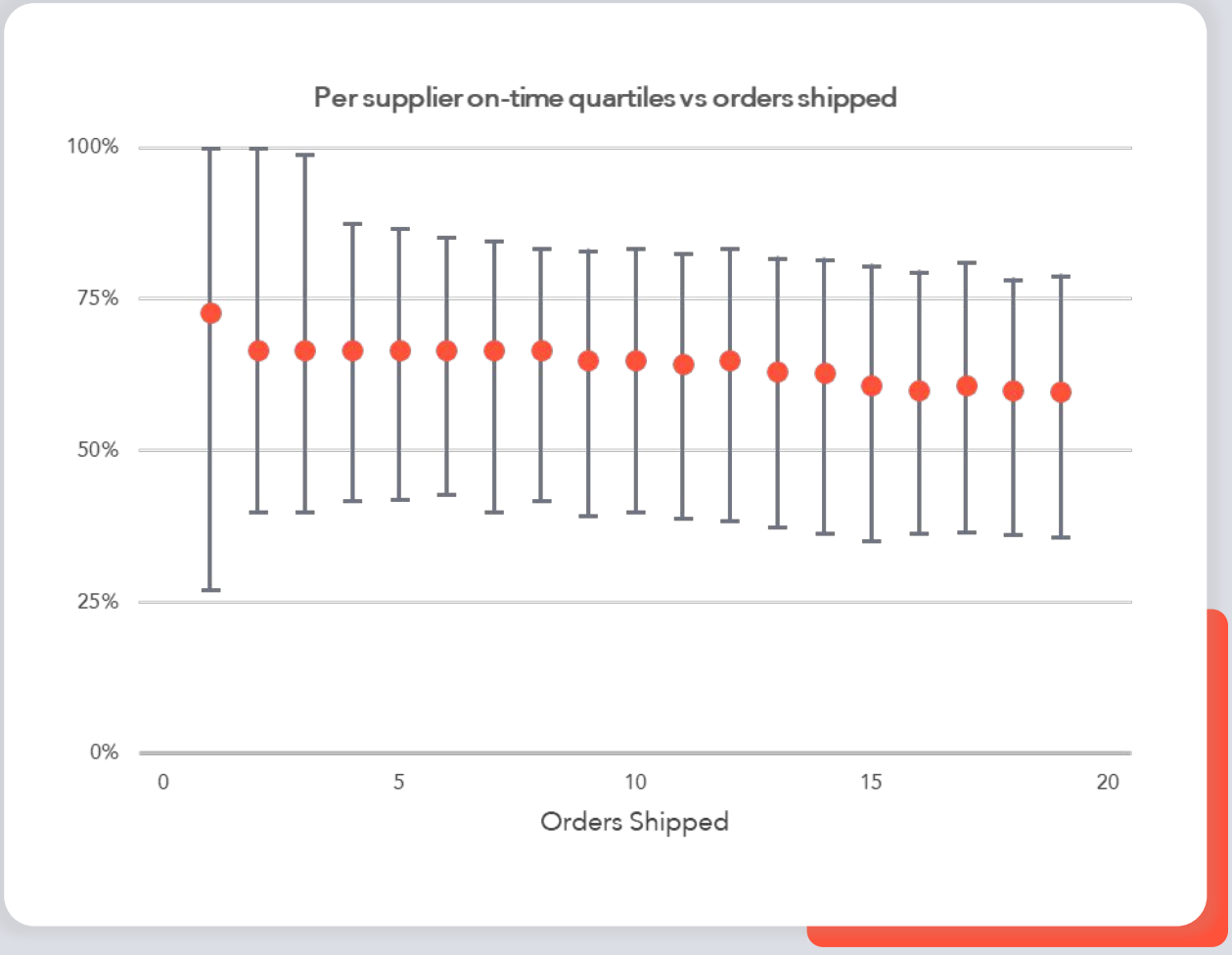
On-time rate refers to how often a supplier has historically shipped products on or before their estimated ship date. On the Anvyl platform, the estimated ship date is a date that is agreed to by suppliers when they accept a purchase order and throughout the project life cycle. To arrive at the benchmark, we assessed data from 2020 and calculated the per-supplier on-time rate.

The data set

We chose to use data from the second half of 2020 because the first half was biased downwards, which we attribute largely to the pandemic.

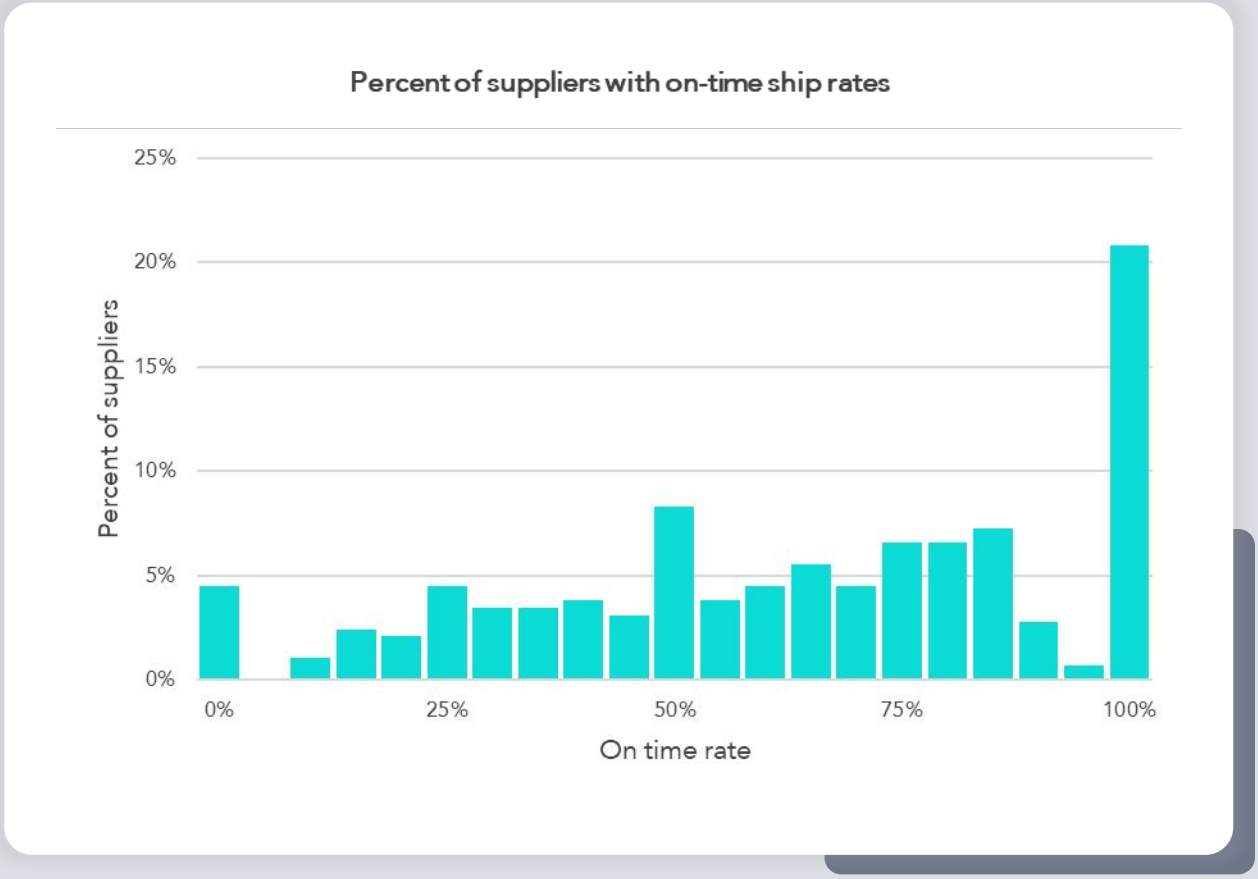
Calculating per-supplier on-time rate

In order to ensure there was enough data to accurately measure the distribution of supplier on-time rates, we chose to require a minimum number of orders delivered to be included in the distribution. To determine what the minimum order count would be, we assessed how the quartiles of per-supplier on-time distributions evolved as we increased the minimum number of orders a supplier must have shipped to be considered.



This diagram shows that a substantial change in the distribution occurs when 4 or more orders are measured, and no major discrete changes occur thereafter. Therefore, we limited this study to include only suppliers that shipped at least four orders in 2020.

Limiting to suppliers that shipped 4 or more orders, we see this distribution of supplier on-time rates:



From the above visualization, we observe:

- 100% of on-time orders is the mode; 21.4% of suppliers shipped all their orders on time
- 4.5% of suppliers were never on time
- The remaining three quarters of suppliers have on time rates between 9.1% and 95.5%, with a bias toward higher on time rates

The numerical summary for per-supplier on-time rate in Q4 of 2020 is as follows:

Min	1st Quartile	Median	Mean	3rd Quartile	Max
0%	42.6%	75%	67.2%	100%	100%

Industry benchmarks

With this information, we can apply a range to categorize suppliers into the following buckets:

On Time Rate (percent of orders shipping on or before target date)	
Very Poor	0-40%
Poor	40-65%
Fair	65-80%
Good	80-90%
Excellent	95-100%

Responsiveness

In many cases, brands are unable to measure a supplier's responsiveness against another supplier's because it would require a lot of manual reporting for every interaction had with a supplier. The Anvyl platform, however, is uniquely positioned to measure this at a more macro-level as we have access to thousands of supplier-brand interactions and the latency period between each response.

In this study, we measured how long it takes for a supplier to respond to an email. With these benchmarks, you can assess your own supplier interactions and response times, and determine a strategy to improve them, if needed.

The data set

To understand how we calculate responsiveness, there are some concepts from the Anvyl platform that are applied to measure this:

- Each purchase order has a minimum of four emails to which suppliers must respond. We call these order milestones:
    - Accepting the purchase order
    - Confirming the order has started production
    - Confirming the order will ship on time
    - Confirming the order has shipped
    - Optional: Confirming the delivery of an order
- We track every time an order milestone email is sent and this milestone enters the "awaiting confirmation" state.
- Based on how much time elapses, this determines the "time-to-response."

Considerations

This study omitted certain data points based on these considerations:

- The study does not take into account proactive un-prompted communication from suppliers. It only includes reactions to email prompts that were sent from the Anvyl system.
- If the milestone was fast tracked or proactively updated without an email prompt, we omitted this in our study.
- If the response took 30 or more days, we considered this a stale response. We assume stale responses resulted from data artifacts: the communication happened, but the platform was not updated until much later when someone had time to fill in the data. Because these are not included in the time-to-response calculation, we report on stale response rate to confirm that these artifacts are rare.
- The time difference between when responses came in and the relevant dates to which they pertained is not something we factored into this study.

Another factor to consider is that milestones can be updated by either the supplier or the brand. Suppliers are expected to update the milestone after they receive an email prompt, but there are times when brands take the initiative to update the milestone to ensure their data is correct. Therefore, stale response rates and time-to-respond are both very sensitive to whether the respondent is a supplier or a brand user of Anvyl.

Response Comes From	Avg. Time to Respond	% of Responses < 5 days	Stale Response Rate
Supplier	2.9 days	82.8%	3.9%
Brand user	4.7 days	68.6%	10.2%

The data set

As the above table makes clear, the time-to-respond is sensitive to the role of the respondent. Because we can't know ahead of time whether a supplier or brand will respond to any given milestone, we categorized suppliers by how often a supplier user is the respondent. We then looked at the effect of this categorization in our time-to-response and stale response rate calculations.

The two categorizations of suppliers that we looked at were:

- Engaged suppliers: those who responded 90% of the time or more
- All other suppliers

We focused the benchmark on engaged suppliers who had a stale response rate of 2% or less, across at least 10 responses

We then produced a numerical summary of the per-supplier average time to respond.

	Min	1st Quartile	Median	Mean	3rd Quartile	Max
Engaged Suppliers	0 days	0.8 days	1.9 days	2.7 days	4.1 days	15.2 days

There appeared to be no appreciable change in these metrics over the course of 2020, so we included all of the data from this time period.

Industry benchmarks

Based on the study, we arrived at the following benchmarks for a supplier's average email response time:

Time to response (days to respond to an open milestone)	
Very Poor	4+
Poor	3-4
Fair	2-3
Good	1-2
Excellent	1 or less

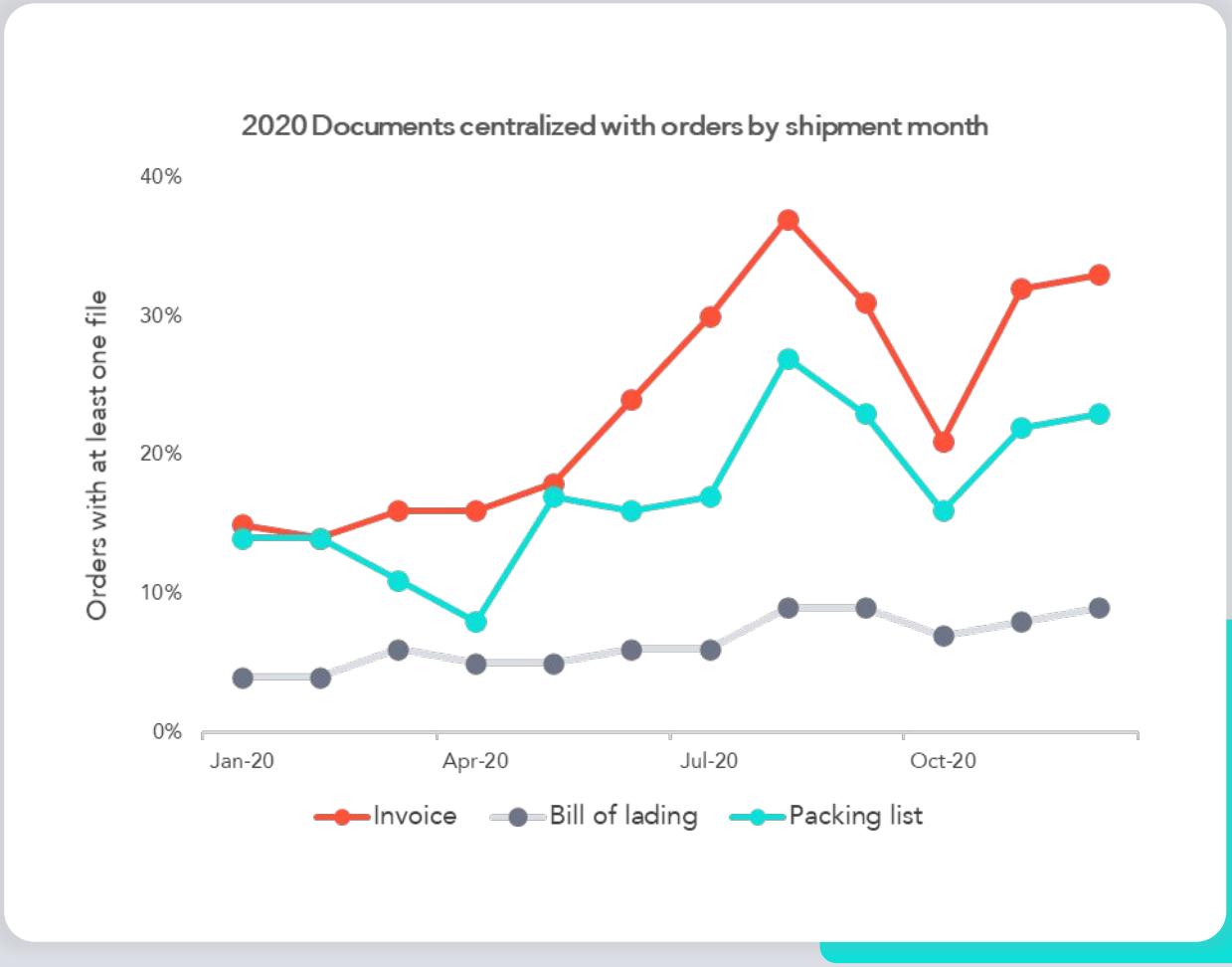
Document centralization

In order to assess the centralization of a supplier's documentation, we first needed to determine what a complete set of documents consisted of for any given purchase order. We then calculated the per-supplier inclusion rate of each of the stated documents for each purchase order on the Anvyl platform.

The data set

For the purpose of this study, we considered document centralization when purchase orders had the following documents added to them:

- Bill of Lading
- Packing List
- Invoice



The presence of all three documents rose through 2020, though they remained rare. Invoices are the most common, but even they are only included with about one-third of the recently shipped orders. Separately, just 4.5% of orders shipped in 2020 had all three files attached.

Given the volatility of the data and instability during the first half of 2020, we focused our data analysis on the second half of 2020, starting in July.

Calculating per-supplier inclusion rate

There is not a lot of variability in the per-supplier inclusion rate for these three documents. In all three cases, suppliers tend to have 0% inclusion. The distributions tend to be polarized, so that 100% inclusion is usually the second-most common scenario, without much happening in the middle.

Because these documents are always matched to a purchase order, yet most suppliers have a 0% inclusion rate, we can assume they are likely sending the files to brands in some other way. It is not uncommon for these documents to be sent in a different email thread than the original purchase order thread. We recommend brands require their suppliers to keep the documents together on the same thread to reduce the extra step of downloading the document and finding the original purchase order before the two can be matched.

Industry benchmarks

Based on each document type, we arrived at the following benchmarks for measuring suppliers:

- Invoices are included in 75%+ of their orders
- Packing List is included in 25%+ of their orders
- Bill of Lading is included in any order

As mentioned above, the documents should exist somewhere, but enforcing supplier compliance to centralize the documents in the same place will drive more efficient workflows when you need to refer back to them later.

Based on this benchmark, it seems that many suppliers do not incorporate document centralization into their workflows. As a best practice, enforcing a higher standard than these benchmarks would be advised.

Documentation centralization (% of orders with a file of this type)			
	Invoice	Packing List	Bill of Lading
Very Poor	Less than 25%	Less than 10%	Less than 5%
Fair	25-75%	10-25%	5-10%
Excellent	75% or more	25% or more	10% or more

Completion rate

When studying completion rate, we assessed variances in order quantities for purchase orders issued in the second half of 2020.

The data set

This study measured every time a shipped order quantity differed by the original ordered quantity. When a discrepancy was reported, a quantity warning was shown to the brand. In this study, we established a benchmark for the deviation. Our platform started tracking this during Q3 of 2020, so we looked at month-over-month trends in H2 of 2020.

With remarkable consistency month over month, about 5% of orders shipped had at least one quantity warning.

In addition, the percent of suppliers that had at least one quantity warning was appreciably higher, meaning that some suppliers apply quantity warnings some of the time, which is preferable to all suppliers either always or never applying them.

For the rest of the study, we examined the months of September to December 2020, as the feature allowing us to report on this was still new in August, so the data from that month does not tell the full story.

Considerations

We considered the possibility that suppliers may not have used the feature to report quantity discrepancies, rather than not needing to report the quantity discrepancy. Therefore, to understand the distribution of quantity deviances, we assessed two groups of orders:

- Those that had a quantity discrepancy.
- Those that were issued to a supplier who reported at least one quantity discrepancy. This establishes that the supplier is at least aware of and able to use the feature.

The orders we looked at did not include a split shipment, as this could have skewed the data.

Out of all of the orders that had a quantity discrepancy, 4.6% of them had a line item that was completely zeroed out, while 1.5% of them shipped a quantity where the purchase order asked for zero of that item. These behaviors make calculating percentages awkward, and they are relatively rare, so to simplify our analysis, we ignored them.

By assessing the remaining 80% of these suppliers, the average absolute deviation was 11% or less. Out of all of the suppliers that had at least one order with a quantity warning, 80% of these suppliers had an average absolute deviation of 3.5% or less.

Industry benchmarks

We arrived at the following benchmarks for measuring supplier quality with their completion rate.

Completion Rate (average absolute % deviation of shipped vs. ordered quantities)	
Poor	10% +
Average	6-10%
Good	3-6%
Excellent	3% or less

Conclusion

When your business scales, supplier diversification becomes more important for contingency planning. Start your relationship with new suppliers on the right foot by communicating your standards and expectations with a formal SLA. The SLA should provide proposed resolutions when things do not go as planned.

As you work through each line item on your SLA, base your ask on the volume of your orders, how often you plan to order from a given supplier, the shipping requirements you have set up with them, and the documents you need to ensure your supply chain runs smoothly. You can work towards a stronger SLA that suits your needs over time, rather than requiring everything upfront.

To start optimizing the quality of your suppliers today, you can manually track these metrics against the industry benchmarks with a spreadsheet or your own knowledge of working with the suppliers. Alternatively, if you're looking to scale faster, you can use platforms like Anvyl to automatically calculate and surface this data as you place more orders with your suppliers.

As supply chains are rapidly advancing with new technology and additional solutions to optimize the journey of a purchase order, it is crucial to measure supplier quality through other performance metrics outside of cost and lead times. This will allow you to make better strategic decisions when your business grows.

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About Anvyl

At Anvyl, we believe that a fully digital and transparent supply chain is as important to a brand's success as the business model itself. Anvyl is a supply chain relationship management (SCRM) platform that allows companies to oversee production, streamline collaboration between teams, and automate manual tasks. Our production hub houses historical supply chain data, integrates with most ERPs, and offers collaboration across both internal and external counterparts.

End-to-end, Anvyl provides brands greater visibility into their supply chains, helping companies achieve operational efficiencies, cut costs, and lower risk in an agile supply chain. The cloud-based software lets users work from anywhere in the world, and customers are up and running within 24 hours.

We are a global operation with teams in New York and China. Connect with us at hello@anvyl.com