

ACHIEVING  
**END-TO-END PO  
VISIBILITY**  
**WITH SUPPLIERS**



A PRACTICAL GUIDE FOR PURCHASING AND SUPPLY CHAIN  
MANAGERS

# Achieving End to End PO Visibility with suppliers



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# TABLE OF CONTENT

Introduction.....	6
Chapter 1: Understanding end-to-end PO visibility.....	9
What is End to End PO visibility? .....	10
Chapter 2: Importance of End-to-End Purchase Order Visibility .....	18
Importance of End-to-End Purchase Order Visibility .....	19
Improved Collaboration:.....	20
Suppliers Lead Time.....	21
Improved demand planning .....	21
Visibility aids risk management. ....	22
Visibility makes the supply chain more resilient....	23
More visible and long-lasting .....	23
Chapter 3: Areas of end-to-end visibility.....	25
Areas of end-to-end Purchase Order visibility .....	25
Suppliers' On-Time Delivery .....	26
Supplier's manufacturing process .....	26
Suppliers' traceability and visibility .....	27
Suppliers' risks management .....	28
Suppliers' communication .....	28
Supplier knowledge.....	29
Suppliers' performance .....	29

Predictive analytics .....	29
Chapter 4: Methods to increase supplier engagement.....	33
Ways to increase supplier engagement.....	34
Build long-term relationships.....	36
Make use of the supplier portal.....	36
Risk Assessment and Monitoring.....	37
Supplier agreements that are detailed and fair.....	37
Take and Give.....	38
Recognize Achievements.....	39
Chapter 5: Obstacles to improving end-to-end purchase order visibility.....	40
Status Tracking and visibility .....	40
Managing the flow of information and communication .....	41
Managing multiple systems to complete the same task.....	42
Third-party logistics visibility outsourcing.....	42
Governance Issues.....	43
Chapter 6: Technology to enhance and achieve an end-to-end PO visibility.....	45
PWC Digital Procurement Survey 2022 .....	45
Supplier portal - PO Life Cycle Visibility .....	46
Parts Prediction Algorithm - On-Time Delivery Risk Management.....	47
Intelligent Manufacturing Collaboration.....	49

Big Data Analytics .....	50
B2B Integration Tool.....	53
Supplier risk management – Supplier scorecard ....	54
Conclusion .....	56

## **Introduction**

End-to-end purchase order (PO) visibility is a major challenge in the supply chain world. According to Gartner, over half of Supply Chain Executives cite a lack of supply chain visibility as their top challenge. A recent report from *The Association for Supply Chain Management*

(ASCM) and the Economist Intelligence Unit cites a lack of supply chain visibility as their ultimate challenge.

While many factors beyond a company's control contribute to supply chain disruptions, businesses are not entirely powerless. Companies can better manage such lack of visibility and collaboration by achieving end-to-end PO visibility - from the factory to distribution center and assembly lines - **and stop constantly chasing products, past dues, suppliers, and line stoppages** with the right mix of technology, methodology, and a proven workflow.

I have written this book with a clear goal: Help purchasing and supply chain managers smoothen their end-to-end PO visibility process. This book will examine how end-to-end visibility can be achieved by providing a comprehensive view of the entire process from purchase order to delivery.

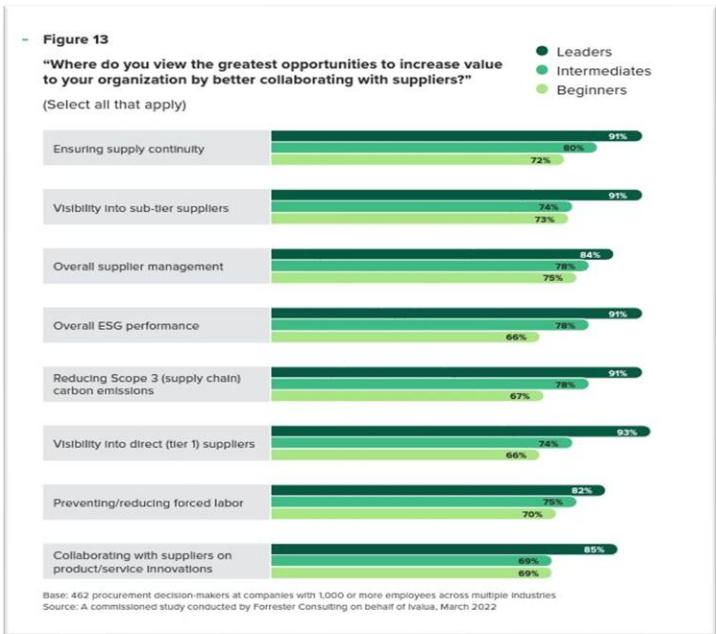
I will also describe how this can be achieved and how it can be applied in real-life situations to streamline the supply chain and improve collaboration. I'll also go over some of the difficulties of implementing such a system and possible solutions that might help overcome these challenges.

The modern supply chain must evolve to meet new demands and supply chain challenges, and supply

chain managers must plan ahead of time to keep everything running smoothly. The impact of technology is not left out in the supply chain sector, as I have also listed various latest technology tools that can help your organization enhance and achieve end-to-end PO visibility.

# Chapter 1: Understanding end-to-end PO visibility.

Have you ever wondered where you view the greatest opportunities to increase value to your organization by better collaborating with suppliers?



Forrester Research "Chain Reaction: Holistic Supplier Management Is Key To Business Success."

In the supply chain world, end-to-end PO visibility is a hot topic. It's easy to see why: you can't

measure or improve what you can't see. In today's world, many purchasing managers often struggle with purchase order visibility because they require so much monitoring and visibility. Even for the most basic of businesses, the end-to-end PO visibility can be extremely long and complex, involving numerous suppliers, third parties, and steps. It is necessary to see what is happening in the planning, sourcing, manufacturing, and transportation stages to properly manage one's supply chain. But what exactly is PO visibility by definition? This chapter will discuss what end-to-end PO visibility is all about.

## **What is End to End PO visibility?**

End-to-end PO visibility is a methodology used by supply chain teams to efficiently track and analyze their orders in order to assess whether they will be delivered on time or if they will be late. It impacts the manufacturing plans as a supply chain team can see the problematic suppliers, purchase orders, and parts.

Despite a growing trend toward investing in technology and qualified personnel, many purchasing and supply chain managers struggle to achieve end-to-end PO visibility across the entire supply chain. It is necessary, but responding to all purchase order events that could impact customer

experience and companies' profitability is difficult in a competitive global environment.

More often than not, end-to-end PO visibility will adhere to the following formula:

- Supplier risk management
- Lead time management
- Inventory and procurement management
- logistics and planning
- Operations
- Customer service

A purchase order visibility encompasses the product's entire lifecycle, from design to raw material sourcing, manufacturing, and last-mile delivery to the company's warehouse. Supply chains have advanced significantly since each stage was handled manually and separately. Nowadays, more complexity is involved, resulting in a delicate chain advanced by technology.

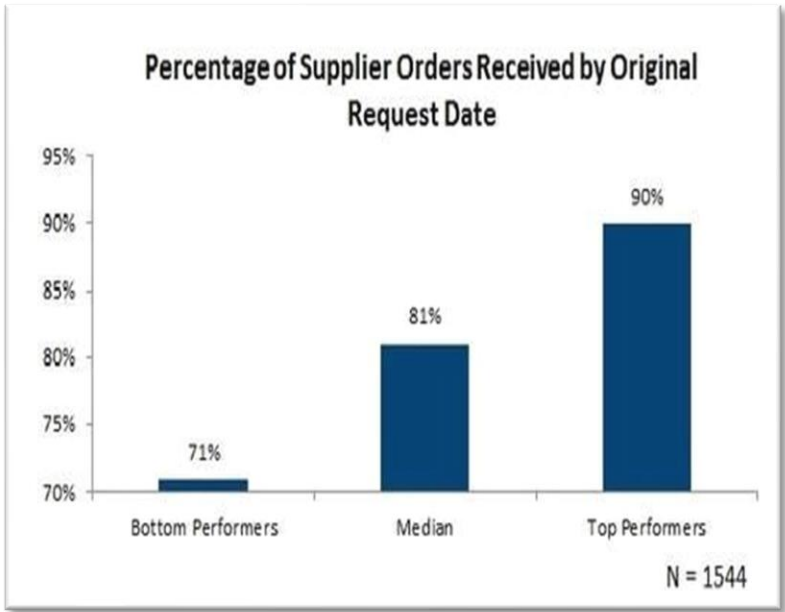
Due to a lack of operational visibility, some supply chains make difficult work of purchase order operations, choosing to leave them unable to oversee a long and intricate chain with many suppliers and steps. On the other hand, modern purchase order management should include supplier management, scheduling, production, and distribution with a more holistic end-to-end

focus. Purchase order managers can measure, optimize, and improve their purchase orders. Purchase order managers can quantify and improve their purchase orders' resiliency. Purchase order visibility is critical for businesses to communicate more effectively and solve problems more effectively and in real-time through increased teamwork and better service for clients and partners. Visibility into an end-to-end purchase order creates a unified view across the organization, incorporating data from suppliers, retailers, manufacturers, and outsourced partners. This enables enterprises to quickly identify any inbound and outbound issues, allowing them to solve them more quickly and mitigate the effects of deviations and exceptions.

Because the purchasing environments are becoming more dynamic and interconnected, many best-in-class organizations rely on technology to foresee, audit, register, quantify, and report purchase order disruptions.

It is difficult for supply chain teams to oversee operations without a predefined end-to-end PO visibility methodology. They require data and knowledge from various sections of the supply chain to determine how they perform, separately and in conjunction with additional areas or functions, all of which must be calculated, optimized, and enhanced for greater value.

Suppose supply chain teams lack visibility to all purchase orders. In that case, this can, in turn, impact efficiency and productivity, affecting the manufacturing departments and, at the end of the chain - customer satisfaction and companies' profitability. So having visibility means organizations can streamline their procurement activities, improve visibility across departments and make their purchase order on-time delivery reliability as high as possible. It is crucial, as a purchase order concerns numerous partners that can benefit in these areas from end-to-end visibility. Most organizations today are dealing with underperforming suppliers. Below is a chart that shows the percentage of bottom performers to top performers



End-to-end PO visibility enables the supply chain to better serve all other internal departments and customers by increasing overall production efficiency and reducing delays due to earlier detection of potential issues throughout the purchase order life cycle.

Companies that want to become customer-centric can increase transparency and traceability by effectively utilizing advanced machine learning and artificial intelligence tools to foresee supply issues and provide real-time insights on inbound transportation operations and the estimated time of arrivals.

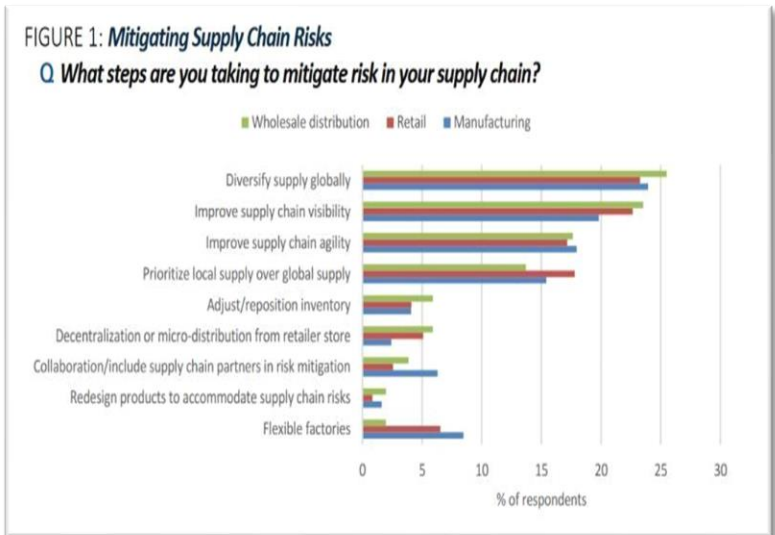
Having end-to-end PO visibility means that you can see any issues or problems before they happen. This allows you time to address them before they become an issue for your customers. If an issue occurs, you can fix it immediately and keep your customers happy, rather than dealing with angry customers when they discover a problem.

Other advantages of end-to-end PO visibility are;

- Improved supplier risk management
- Improved customer relationships.
- Risks and operating costs are reduced.
- Improved ability to predict and plan for market changes.
- Transparency and visibility of "blind spots."
- Continuous flow of activities throughout the purchase order
- Reducing delays through the ability to detect any problems in the purchase order in advance.
- Improved supplier and customer relationships.

According to APQC (American Productivity & Quality Centre article), in a survey where respondents were asked the steps to take in addressing supply chain risks, improving the

supply chain visibility ranked second. The survey's results are displayed in the chart below.



(From a recent APQC (American Productivity & Quality Center) article, "EXTEND VISIBILITY BEYOND TIER 1 SUPPLIERS")

## Key Takeaways

In this chapter, you have learned all but not limited to, the following;

- End-to-end PO visibility is a methodology used by supply chain teams to track and analyze their orders better to assess whether they will be delivered on time or if they will be late and will impact manufacturing. Despite a growing trend toward investing in technology and qualified personnel, many businesses struggle to achieve end-to-end PO visibility across the entire supply chain.
- End-to-end PO visibility is one of the top priorities for supply chain teams in years to come.

# Chapter 2: Importance of End-to-End Purchase Order Visibility

*"Supply issues ... is on a gradual rise, having more than doubled in magnitude annually for the past two years... market volatility has turned that dependency into vulnerability, disrupting supply lines for commodities and raw materials...Supply instability has been on a steady rise over the past two years due to market volatility's direct impact on supply chain globalization. Assuming a continuation of this trend, commodity and material constraints can only worsen". (KPMG and ASCM latest September 2022 report - "Seeking supply chain stability in an era of volatility - The rising frequency and intensity of crises call for new insights"...)*

End-to-end PO visibility is one of the most important aspects of any supply chain operation. Having a clear picture of what your purchase order life cycle looks like is essential. This can be used for strategic planning, business analysis, supplier performance KPI's and day-to-day operations. As I have said in the previous chapter, End to End PO visibility are complex networks that involve many different parties and processes. Unfortunately, purchase orders are often not as transparent as they could be, leading to inventory management

control problems and delivery delays. One way to improve purchase order visibility is through [advanced digital tools](#) that provide end-to-end visibility across suppliers, third parties, factories, and distributors. These tools allow you to track product availability at every point along the purchase order – from PO placement through the supplier manufacturing processes to when it arrives at your doorstep. It is the easiest way to ensure on-time deliveries and meet expected suppliers KPI's. It is a must for any business that wants to improve its bottom line and ensure supply chain resilience. It is one of the essential concepts in supply management, but not many people talk about it. Once you understand what end-to-end purchase order means and why it is so important, you will realize how much you can improve your company's efficiency and profitability by implementing a supply chain visibility program today. In this chapter, I shall discuss with you some of the importance of end-to-end PO visibility.

## **Importance of End-to-End Purchase Order Visibility**

## Improved Collaboration:

Industries spend more time and money on communication mechanisms with suppliers that are not effective. To improve their performance, they need 24/7 sharing and updating data on purchase orders, manufacturing processes, and deliveries.

Using [supplier collaboration tools](#), AI and ML algorithms will allow them to track suppliers' PO life cycle immediately, do in-depth performance analysis to predict problems in delivery schedules, and anticipate solutions to avoid running out of supplies.



APQC (American Productivity & Quality Center) 2022 Supply Chain Management Priorities and Challenges research.

## **Suppliers Lead Time**

Supplier Lead Time is the time that typically elapses between when a supplier receives an order and when the order is shipped.

Most enterprise purchasing systems enter supplier lead times upon the supplier agreement signature. They are kept as static data on a part level that is not updated frequently or at all. Since supplier lead time plays a critical role in the timing and sizing of purchase order decisions, many purchasing professionals have recognized this importance. They are looking to accurately predict lead times and develop strategies for coping with problems created by lead time variations.

## **Improved demand planning**

Manufacturers are at the top of the purchase order and rely on their downstream partners to deliver goods on time to consumers. Markets' purchasing habits change all the time, making production planning difficult—seasonality in purchasing trends aids manufacturers in anticipating spikes

in demand. However, marketing and business considerations must also be factored into production schedules. For instance, before launching a special offer, manufacturing departments must ensure enough product is on store shelves for consumers. Manufacturers must rely on a wide range of data to ensure successful production. Vendor performance, as measured by on-time delivery and inventory levels.

Accurate demand schedules can be easily created and potential losses avoided by having visibility into related data collected at every stage of the purchase order process.

## **Visibility aids risk management.**

The world of today is becoming more complex and interconnected. Purchase orders are growing in length and complexity. To keep shipments on track, you must collaborate with an ever-increasing number of stakeholders, from suppliers to ocean carriers. When there is a disruption in one step of the purchase order, it causes a ripple effect. End-to-end PO visibility, enabled by real-time data on each step of the purchase order, assists supply chains in detecting risks and adapting before problems arise.

## **Visibility makes the supply chain more resilient**

Visibility can assist supply chain teams in identifying inherent suppliers and purchase order risks and developing contingencies in place, in addition to detecting immediate risks such as production delays and capacity issues. Structural issues emerge, whether related to your suppliers' capabilities or the inherent complexity of the markets in which you operate. You can strengthen your defenses if you understand your vulnerabilities. You regain control in even the most difficult situations by creating contingencies for high-risk steps in your supply chain.

## **More visible and long-lasting**

Building sustainable chains require visibility. Supply chain stakeholders must work to demystify delivery processes as customers become more aware of their goods' origin and manufacturing conditions.

Tracking condition-related data is a significant first step. Still, access to it must be made available to everyone in the organization if it is to reach its full potential.

## **Key Takeaways**

In this chapter, you have learned all but not limited to, the following;

- End-to-end PO visibility is one of the most important aspects of any supply chain team operations. A clear picture of your purchase order life cycle is crucial.
- In order to improve their performance, supply chain teams need 24/7 sharing and updating data from suppliers on purchase orders, manufacturing processes, and deliveries.
- Visibility can assist businesses in identifying inherent purchase order risks and developing contingencies in place, in addition to detecting immediate risks such as production delays and capacity issues.

Now that you know how crucial visibility is for your purchase order, it is essential to understand how to go about it. I shall outline various end-to-end PO visibility areas in the next chapter.

# Chapter 3: Areas of end-to-end visibility

*"Today's supplier interactions are largely tactical and lack real insight or platform integration. That's why the future of procurement is expected to depend on creating a new operating model that drives supplier and third-party performance and relationships to a new level. Ones in which analytics and data play a role by providing a means for measuring performance, identifying opportunities, mitigating risk, and helping move the organization from being reactive to proactively engaging with its suppliers. Working with suppliers closely can help you gain better visibility into the supply chain to more easily anticipate any supply issues across the tiers of your supplier base..." (Future of Procurement KPMG Annual Report).*

In the previous chapter, I discussed some of the importance of end-to-end PO visibility; Many factors can contribute to a lack of visibility into the inner workings of your suppliers' relationships. This chapter will discuss some of the most common end-to-end PO visibility areas.

## **Areas of end-to-end Purchase Order visibility**

## **Suppliers' On-Time Delivery**

Suppliers' on-time delivery assesses the dependability of the company's suppliers in terms of timely delivery of shipments. A low value for this KPI may indicate that the company uses ineffective delivery scheduling methods because it is not adequately managing or interacting with its vendors. If suppliers consistently fail to deliver on time, the company may need to spend time and resources looking for new vendors. Suppliers' on-time delivery can be increased by better visibility and collaboration with suppliers, specifically defining on-time deliveries in vendor contracts and offering incentives for on-time delivery.

## **Supplier's manufacturing process**

The lack of real-time tracking of suppliers is a growing concern for many supply chain and procurement professionals in the wake of the current supply chain worldwide chaos. Knowing suppliers' manufacturing process progress and delivery schedules allow procurement teams to make informed decisions when placing purchase orders.

Having real-time access and complete visibility into the progress of the manufacturing process allows them to predict lead times and develop tactical strategies to address problems caused by

delays in the manufacturing process or unexpected changes in lead times.

Gaining [Intelligent manufacturing collaboration](#) with your suppliers is a must for many organizations. This can be achieved using manufacturing collaboration tools that continuously update WIP and stock levels, manufacturing routings, and first article orders.

Using such tools provides early predictions of OTD problems and may help avoid production line downtime. In addition, it allows immediate attention to be focused on the parts and suppliers that need it.

## **Suppliers' traceability and visibility**

Supply chain traceability is the process of tracking the provenance and journey of products and their inputs from the beginning of the supply chain to its end. There are numerous reasons to pursue traceability, and some industries have been doing so for many years, such as food and pharmaceuticals, where safety is critical. Traceability allows companies to find supply chain efficiencies, meet regulatory requirements, connect with and understand the actors in the upstream supply chain, and, of course, tell consumers about the provenance and journey of

their products, often by using pictures or scannable QR codes on packaging.

## **Suppliers' risks management**

Supplier risk management is the method of identifying, assessing, and controlling risks to an organization's capital and earnings caused by its supply chain. Companies that have implemented supplier risk management plans typically appoint a chief risk officer (CRO) to oversee the effectiveness of the organization's supplier risk management strategy. When possible, an effective plan reduces supply chain risk and anticipates how the organization will respond quickly to supply chain disruptions. Supplier risk management plans should address the numerous areas where supplier issues may arise. These stages include onboarding (starting a relationship with a supplier), financials, supplier collaboration, mergers, integrated supply chains, natural or geopolitical disasters, and criminal or terrorist threats to the supply chain.

## **Suppliers' communication**

Suppliers' communication is a technique used to communicate with suppliers. It identifies how you can best communicate with them in order to get the job done. Suppliers' communication also helps

you to understand what they need from you and how you can help them achieve their goals.

## **Supplier knowledge**

In the past, organizations faced laborious processes that took several weeks to gather internal and structural data from the operations and transactions of the company and its partners. [But today, at a significant speed](#), in real-time, in many cases, all of the diverse structural, nonstructural, internal, and external data generated from automated processes are made available to these organizations. Basing supplier selection, monitoring, and control on more data and information will improve procurement performance at the supplier level.

## **Suppliers' performance**

The adoption of big data in the procurement process improves [suppliers' performance](#), mainly in terms of time, quality, innovation, flexibility, and sustainability.

## **Predictive analytics**

[Predictive analytics](#) is a subset of advanced analytic tools that uses historical data to predict

future outcomes using statistical modeling, data mining techniques, and machine learning. Companies use predictive analytics to identify risks and opportunities by finding patterns in data.

Big data and data science are frequently associated with predictive analytics. Companies today are inundated with data from transactional databases, equipment log files, pictures, videos, sensors, and other data sources.

As supply risk continues and effective suppliers' relationship management and assurance become even more challenging, as can be seen by recent 2021 research findings:

- 41% of firms reported needing to expedite shipping to keep critical supply lines flowing
- 36% losing revenue due to supply shortages
- 11% realizing brand damages as a result of supplier issues
- Only 26% can predict risks at their supply base



## Key Takeaways

- Supplier risk management is the method of identifying, assessing, and controlling risks to an organization's capital and earnings caused by its supply chain
- Suppliers' on-time delivery assesses the dependability of the company's suppliers in terms of timely delivery of shipments
- Traceability allows companies to find supply chain efficiencies, meet regulatory requirements, connect with and

understand the actors in the upstream supply chain.

# Chapter 4: Methods to increase supplier engagement

*“Recent research has revealed that 66% of organizations believe better collaboration with suppliers is needed to help increase supply chain resilience. The growing number of Black Swan supply chain events, such as the war in Ukraine and the COVID-19 pandemic, has led many organizations to work to minimize the impact of disruptions. However, key barriers remain, including an inability to assess risk and collaborate with suppliers and inadequate technology for defining and triggering a response to supply chain disruption.”*

**"Chain Reaction – Holistic Supplier Management is Key to Business Success" study, conducted by Forrester Consulting.**

In the previous chapter, I discussed the areas of end-to-end PO visibility. In this chapter, I shall examine some of the methods by which you can increase supplier engagement. Suppliers like you want to establish relationships — ideally, partnerships. They want clarity, a better understanding of the specifications and expectations, and the capability to participate in all purchase demands. However, many procurement professionals keep their suppliers in

the dark, causing significant disruption to their supply chains and negatively impacting their companies bottom lines. In this chapter, I shall outline some methods to increase supplier engagement. Let's take a look at some of these methods to follow

## **Ways to increase supplier engagement**

- Keep communication lines open.

Ensure you regularly communicate with your suppliers to stay up-to-date on their performance and any changes that might affect your purchase orders. This communication can take many forms, but the [supplier portal](#) is the best tool for communication. Your organization can benefit significantly from a self-service supplier portal. You can drastically reduce, if not eliminate, the time you spend answering routine calls from suppliers with questions about PO changes, invoices, and payments.

- Be clear about your expectations.

It is essential to be clear about your expectations for supplier performance from the outset. Make sure you communicate your expectations clearly

and concisely so there is no room for misunderstanding. Once these expectations are established, you can hold suppliers accountable for meeting them. This will help to ensure that your supply chain runs smoothly and efficiently.

- Offer incentives for good performance.

One way to keep suppliers engaged and motivated is to offer incentives for good performance. These can take many forms, from financial bonuses to preferential treatment in future business. Whatever form they take, these incentives can be a powerful motivator for suppliers to maintain high-performance standards.

- Be willing to negotiate.

Suppliers are more likely to be engaged if they are treated fairly. As such, it is essential to be willing to negotiate with suppliers on terms such as prices and delivery schedules. By showing that you are ready to compromise, you can build trust and goodwill with suppliers, which can help to keep them engaged in the long term.

## **Build long-term relationships.**

Supplier engagement is often more successful when part of a long-term relationship. By taking the time to build strong relationships with suppliers, you can create a sense of loyalty and commitment that can be difficult to achieve with one-off transactions. These long-term relationships can be beneficial for both sides, as they provide stability and predictability in an otherwise uncertain world.

## **Make use of the supplier portal**

A [supplier portal](#) enables supply chain management teams to save time and money by optimizing the life cycle and response time of their POs, sharing and presenting information, and providing users with a holistic experience. To give more visibility to your suppliers, you can make use of the [Proactive supplier portal solution](#). This Supplier Portal solution is easy to use and highly efficient. It is a tool that provides complete and accurate information on active orders, prices, characteristics, quantities, lots, destinations, shipments, estimated delivery time, and delivery confirmations. The portal solution provides a secure and efficient online environment, increasing supplier participation rates and information sharing.

## **Risk Assessment and Monitoring**

Always assess the risks of partnering with a supplier, particularly a new supplier, especially if your supply chain is complex. Gathering the correct supplier data is critical for provider selection and evaluation. Inquire about references, examples of previous projects, years in business, fields of expertise, how they handle crises, what they did the last time they faced a crisis, and so on. Are they reasonably priced? Do they have the necessary experience? Do they have the ability to handle your orders? Is their financial situation stable? These are just a few of the inquiries you should make. Perhaps the supplier you choose is not the cheapest but guarantees 100% on-time delivery; you can deal with that since a chain is only as strong as its weakest link. If your vendor fails you, your entire supply chain may be jeopardized, affecting your ability to deliver to your customers.

## **Supplier agreements that are detailed and fair**

Supplier Agreements with a powerful contract management process are required if you buy from a vendor regularly. Everything is fine until it isn't, so make sure you have a contract in place. Make a

list of everything that all parties expect from your partnership, such as the product or provider characterization, price, terms of delivery, payment terms, communications, and so on, and have both parties sign it. Depending on your company's needs, this could be a simple or complex document. A very well Supplier Relationship Agreement will decrease the likelihood of misunderstandings or disputes. It's a good idea to create a process flow chart to explain the procedure to your team so that everyone understands their roles and can spot problems in the workflow. If the accord is fair and reasonable to both parties, it will be easier to comply with the terms. Avoid attempting to impose unreasonable expectations.

## **Take and Give**

A good relationship has a 50/50 split, but a great relationship has a 100/100 split. Businesses are frequently so focused on what they require that they fail to consider the perspectives of their suppliers.

Simply asking your suppliers for feedback, questions, and goals can inspire them and significantly impact your relationship. Suppliers value the chance to interact with someone who will listen, learn, and consider what they have to offer. This dialogue will also enable your suppliers to identify current or unforeseen account issues

and educate you on changes in their business models.

## **Recognize Achievements**

Celebrate accomplishments and milestones, no matter how minor they appear. Appreciation is critical to maintaining the relationship and inspiring future engagements. A conference call or a simple thank-you mail can serve as an acknowledgment. Recognizing a supplier's hard work, no matter how you do it, will only encourage continued success.

## **Key Takeaways**

- Celebrate accomplishments and milestones, no matter how minor they appear. Appreciation is critical to maintaining the relationship and inspiring future engagements.
- Always assess the risks of communicating with a supplier, mainly a new supplier, especially if your supply chain is complex
- 66% of organizations believe better collaboration with suppliers is needed to help increase supply chain resilience.

# Chapter 5: Obstacles to improving end-to-end purchase order visibility

As you know, End-to-end PO visibility is critical for a company to run smoothly and efficiently. It can reduce costs, increase profits and improve the customer experience. Various challenges come in the way of effective end-to-end PO visibility, which we will discuss here in this chapter.

## **Status Tracking and visibility**

One of the biggest challenges in purchase order management is status tracking and visibility. Many suppliers, manufacturers, warehouses, and retailers are often involved in getting a product or service to the customer. This can make it difficult to track where things are at any given time and to identify potential problems.

## **Managing the flow of information and communication**

Another challenge is managing the flow of information and communication between the different partners. This can be difficult because each partner may have their systems and processes, and there may not be a common platform or language for communication. Purchase order disruptions can also be a significant challenge. Disruption can occur at any point in the purchase order and can have a ripple effect that impacts all other partners in the final product assembly. Purchase order disruptions can be caused by several things, including financial and geopolitical risks. Purchase order management is a complex process, and many potential challenges can impact the performance of the purchase order. Limited access to information: Information about the status of individual parts in different parts of the purchase order is often not accessible by all members of the organization (e.g., the manufacturer doesn't know what part has been received). This limits their ability to respond quickly when events occur that could affect their ability to provide parts promptly...

## **Managing multiple systems to complete the same task**

Operational delays are unavoidable when information is dispersed across various applications and tools. For example, a team may check multiple carrier systems for updates while emailing error-ridden spreadsheets.

[Reconciling all of this information](#) consumes valuable time. It also complicates procurement and supply chain tasks, resulting in significant inefficiencies that raise costs and affect on-time delivery.

## **Third-party logistics visibility outsourcing**

In some industries, outsourcing to third-party logistics providers is unavoidable, not to mention a practical necessity for big enterprises with nationwide or even global footprints. In addition, unproductive third-party partnerships can significantly impede the overall purchase order visibility, with ripple effects throughout the enterprise. Relying on third-party assistance for logistics visibility raises issues similar to those raised in the first item above: Time-consuming and costly fragmentation. Having data points like carriers readily available in one online platform, on the other hand, vastly simplifies transportation management. The outcomes frequently speak for

themselves. Because of features such as centralized data repositories, a more streamlined supply chain is both cost-effective and simple to manage.

## **Governance Issues**

Because there is no transparency in the process, the lack of visibility into stock levels creates governance issues. The ability to manage stock levels and receipts issued is critical, and purchase order players require a complete view of stock in, stock out, invoices issued, and more. Governance across these touchpoints is crucial for a profitable business, necessitating integrated systems and a clear view of the purchase order from beginning to end.

[An integrated, mobile, and cloud-based system](#) that provides the necessary visibility across the purchase order life cycle is required to address these challenges. An ecosystem that provides full visibility to all parties, complete with real-time stock levels and online collaboration capabilities, can significantly increase efficiency. Supply chain teams can better manage their inventory, warehousing, and personnel; stock can be tracked at any point along its journey.

Furthermore, the loop can be ended to include intelligent monitoring systems to interpret the data against key performance indicators and

deliver real-time actionable insight once they have this data. Structured reports can be accessed anytime, and automatic **proactive** alerts can be set up in case of an exception. **This enables proactive business management in real-time.** Data from the purchase order will also be used for predictive analytics, allowing for more agile and effective decision-making from the board.

## **Key Takeaways**

- One of the biggest challenges in purchase order management is status tracking and visibility. Multiple parties are often involved in getting a product or service to the customer.
- Connecting all parties enables a **proactive** business management methodology in real-time.
- Data from the purchase order will also be used for predictive analytics, allowing for more agile and effective decision-making from the board.

# Chapter 6: Technology to enhance and achieve an end- to-end PO visibility

*In times of supply bottlenecks, rising commodity prices, and growing inflation, procurement departments around the globe focus on the essentials: Reducing costs and managing risks. As the pandemic subsides, however, the digitalization of procurement is again coming into focus. Companies are willing to invest a lot of money to make the idea of digital procurement a reality. 72% is the expected rate of digitalization by 2025”-*

## **PWC Digital Procurement Survey 2022**

Modern IT systems can give companies in a broad range of industries the comprehensive visibility and collaboration they require with their suppliers. Companies today must have sufficient oversight to rely on in the supply chain. Complete supply chain transparency, achieved through the most advanced technologies, can assist companies in mitigating risks, lowering operational costs, and collaborating with their suppliers to achieve on-time deliveries and meet market demands as they arise.

The most innovative collaborative suppliers' tools that put the latest artificial intelligence (AI) and machine learning (ML) technology at your disposal to perfect your supply chain and logistics process can optimize your organization's supply chain and procurement operations and services. This chapter will examine the technological tools that can be used to attain end-to-end PO visibility

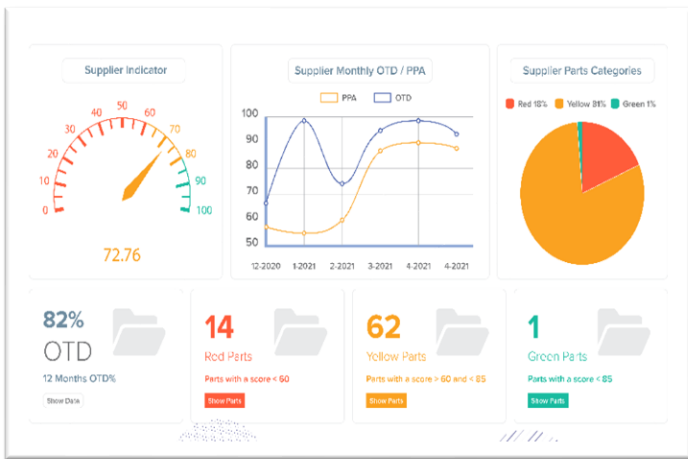
## **Supplier portal - PO Life Cycle Visibility**

Using the Supplier Portal Solution to give your suppliers more visibility is essential. Supplier Portal is a simple and effective tool that offers complete and accurate information on active orders, prices, characteristics, quantity, forecasts, lots, location, shipments, estimated delivery time, manufacturing status (WIP, Stock, Lead Times), and delivery confirmations. This tool provides a safe and efficient online environment, increasing supplier participation and information sharing.

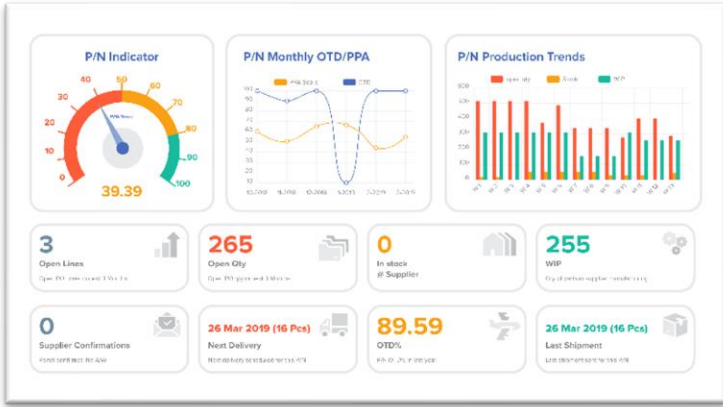
With over 50% of PO lines changing weekly, relying on manual methods of communication like email, phone, and fax to communicate with your suppliers makes it harder to handle these changes efficiently, especially during a major disruption.



algorithms with big data analytics, you can optimize on-time delivery performance and analyze and predict production problems in advance. [This prediction system](#) gives an indicator for manufactured parts at suppliers. It provides supply chain managers with the tools to communicate and make the right decisions to achieve on-time deliveries. It also eliminates hidden factory costs of late parts, redeploys labor from expediting to value-added activities, and focuses on growth, not resolving delivery issues.



This is of huge potential benefit to companies, especially those that rely on just-in-time component and materials delivery, and will improve OTD rates and assemble line shutdowns with the costs associated with such problems.



## Intelligent Manufacturing Collaboration

Buyers can make informed decisions when placing purchase orders when they know their suppliers' current lead times, stocks, manufacturing process advancement, and delivery schedules.

Operation#	Operation Name	Process Time	Location	Qty	Start Date	Sch End Date
0010	RAW MATERIAL	56	In	0		
0020	Cutting Raw Material	3	In	0		
0030	Turning & Milling	14	In	0		
0040	Bench Deburring	3	In	0		
0050	Flourescent Penetrant Inspection	5	In	0		
0060	Bench Deburring	3	In	0		
0070	Part Marking / Identification	3	In	0	18 October 2021	21 October 2021
0080	Final Inspection	3	In	0		
0090	Cleaning & Packaging	2	In	0		
0100	Stock	2	In	0		
0110	Shipping	14	In	0		16 November 2021

Having real-time access to and complete visibility into the manufacturing process allows them to predict lead - time and develop tactical strategies to deal with problems caused by manufacturing process delays or unexpected changes in lead times. [Intelligent manufacturing collaboration](#), which processes, synchronizes, and synthesizes information from suppliers, closely tracks problems in the suppliers' manufacturing process and can help you make the most of your suppliers' data.

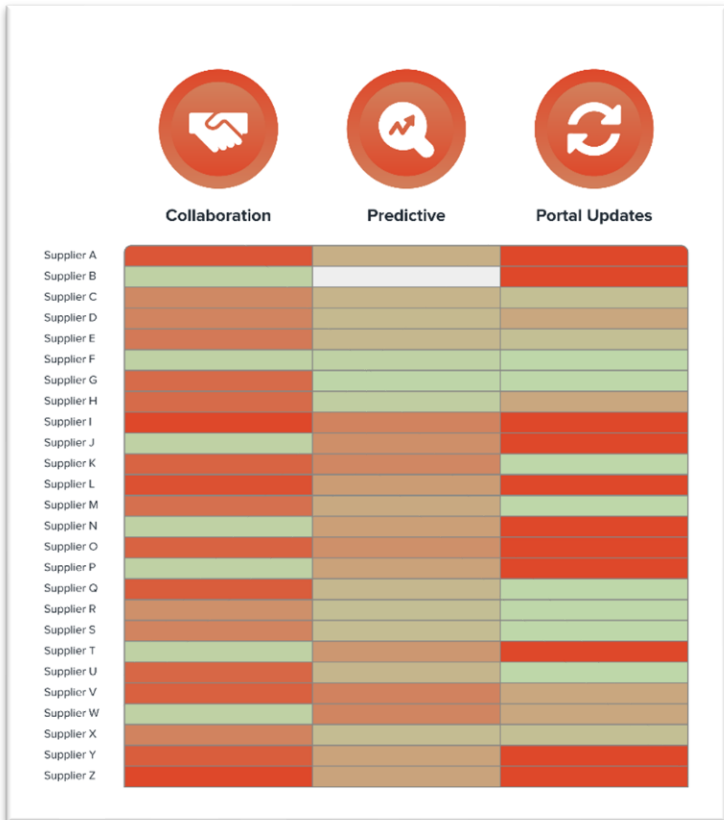
## Big Data Analytics

Traditionally, purchasing and supply management (PSM) has strongly relied on data management, as procurement managers need to dispose of, clean, and update data of different

natures to compare suppliers' performance, and 20% to 50% of working time in procurement is related to searching for information Accordingly. Big data analytics have apparent applications and represents a new era in the PSM field as they link and aggregate all relevant information, significantly facilitating and speeding up strategic and operational procurement activities. They are a critical source of meaningful information that can help supply chain stakeholders to gain improved insights, gain a competitive advantage, maximize speed and visibility, improve supply chain relationships, and enhance supply chain agility. Most companies are unaware of big data analytics' great value and potential for efficient supply chain management. The poor use of the organization's information indicates a precarious vision of its capabilities. In addition, it prevents them from structuring new production processes and evaluating and exploring new routes of action to meet production objectives successfully.

Harnessing advanced data analytics can help you save more. You will better understand your suppliers' lifecycle and performance, sync information from different systems by networking with your suppliers and create consistent and efficient workflows using big data analytics. Use advanced analysis techniques such as Data Mining, ML, and artificial intelligence to gain a

complete and in-depth understanding of your supply base.



In the above picture: Heatmaps are used to **show relationships between a number of variables, one plotted on each axis**. By observing how cell colors change across each axis,

you can observe if there are any patterns and analyze supplier performance trends.

## **B2B Integration Tool**

Innovative B2B tools enable fast and efficient integration with companies on-premise IT systems, like the companies' ERP, creating a cloud-based environment that maximizes the benefits of the enterprise's infrastructure investments and maximizes the level of supplier collaboration.

While B2B integration between organizations is not an easy task, it enables to build a successful business network by utilizing APIs that create an efficient digital architecture for electronic data exchange.

B2B integration automates the PO life cycle, allowing for real-time monitoring of operations, the progress of manufacturing processes, and the continuous exchange of information with suppliers and trading partners. It enables adequate cooperation through clear business management mechanisms, enabling any problem to be detected and creating a competitive advantage to satisfy customers. It provides a much more efficient, cost-effective, and innovative integration method that adapts to the needs of each company and allows for the automation of processes for a higher level of

supplier collaboration. With the ability to connect to any digital system in the supply chain, integration is generated without substantial time and money expenditures, maximizing its benefits for the industry.

## **Supplier risk management – Supplier scorecard**

The ability to integrate data from various internal and external systems and present them in one view gives both internal teams and suppliers the visibility and traceability they are looking for!



Combining this with the classical supplier scorecard, also known as a vendor scorecard, which measures the performance and effectiveness of a vendor over time and breaks

down supplier performance into categories and factors that can be quantified, is the end game of end-to-end PO visibility! It gives all parties in the supply chain the full visibility needed to make decisions in real time and in one view.

The scorecard will contain quality (PPM), delivery (OTD), Predictive (PPA), Geo-Political risks, financial score, contractual, and other data points from various systems to create a holistic view.

### **Key Takeaways**

- 72% is the expected rate of procurement digitalization by 2025.
- Modern technology solutions can give companies the comprehensive visibility and collaboration they require with their suppliers.
- Technology can assist in various end-to-end PO visibility areas like PO Life Cycle Visibility, On-Time Delivery Risk Management, Manufacturing Collaboration, and supplier risk management.

# Conclusion

You have now come to the end of this book. I am sure you now know the most critical component of real-time end-to-end PO visibility. Most supply chains have two blind spots: a lack of real-time data and visible latency and difficulty aligning metrics among multiple parties. Furthermore, companies that do not use real-time data and predictive data analytics struggle to maintain a competitive advantage, improve customer satisfaction, improve operational efficiency, detect errors, and deal with disruptions—all of these I have discussed in this book. I have also outlined ways that can be used to enhance and improve end-to-end PO visibility. You now know that implementing end-to-end PO visibility can bring about significant results, such as:

- Adjusting quickly to unanticipated change (companies are reacting to unexpected changes in the supply chain on a weekly (43%) and daily (36%) basis.)
- Shift suppliers quickly when needed and eliminate days of waiting for responses.
- Increase responsiveness and stop wasting time chasing down information on multiple emails and phone calls.
- Keeping the teams focused on higher-value activities

- Increasing efficiency and allowing all trading partners to have a single, accurate picture of the business, improving overall supply chain performance.
- Reduce risk. It is best to know the status of your suppliers in real-time, so you can react quickly when disruptions occur.
- Reduce some personnel costs. APQC finds that organizations with greater visibility use fewer full-time-equivalent employees (FTEs) for ordering materials and services than those with little or no visibility. (From a recent APQC (American Productivity & Quality Center) article, "EXTEND VISIBILITY BEYOND TIER 1 SUPPLIERS").
- Improve OTD rates and reduce assemble lines shutdowns with the costs associated with such problems

I've outlined how you can optimize your company's procurement services by utilizing the most [innovative collaborative suppliers' tools](#), which put the most cutting-edge AI and ML technology at your disposal to perfect your supply chain and logistics processes. I am fully confident that you are now well-equipped with the right information on how well to improve your organization's end-to-end visibility.

**Stop chasing your suppliers, POs, parts,  
and line stoppages – it is time to become  
proactive**

[Contact Proactive today for a live demo or a  
quote!](#)