TRANSFORMING SUPPLIER QUALITY MANAGEMENT

IN THE LIFE SCIENCES INDUSTRY



Introduction

Fewer than 1 out of every 5 businesses has an effective supplier quality management strategy, according to LNS Research. And additionally, those that do have an effective strategy, have a 16 percent lower cost of poor quality (COPQ).¹

In addition to increasing costs, poor supplier quality management has the potential to introduce substandard products into the supply chain. This can lead to post-market patient/customer injury, damage to the brand, and regulatory attention.

Given the complexities of organizations today, there are multiple points of interactions between them and their suppliers, from product development to manufacturing and distribution to their end customers. These interactions are critical to delivering on the key business imperatives as well as maintaining the health of an organization. Risks that emerge and evolve would need to be understood as well as controls put in place to manage / mitigate those risks. Anticipating disruptions to the supply chain is key to driving efficiency in the value chain.

In this eBook we discuss key imperatives to ensure effective supplier quality management. We also discuss why supplier data quality is critical to an effective and efficient procurement workflow. Additionally, we review the challenges Life Sciences organizations face to ensure supplier quality management is optimized. And finally, we review the key elements to moving supplier quality management to a digital transformation by incorporating innovative technologies, talent, and processes to improve operations of the business and ensure customer satisfaction.

- <u>5 Imperatives of Effective Supplier</u> <u>Quality Management</u>
- The Importance of Good Data in Supplier Quality Management and How to Improve It
- Key Challenges Impacting the Optimization of Supplier Quality Management
- Key Elements of a Digital Transformation of Supplier Quality Management





5 Imperatives of Effective Supplier Quality Management

Key Areas to Focus on to Improve Supplier Quality Management

1. Document Management

A critical task when it comes to managing supplier quality is document management. A breakdown in this area can lead to costly outcomes. A digital quality management system (QMS) is crucial to bringing all of the key documents together including certifications, specifications, supplier quality agreements, and supplier corrective action requests (SCAR).

Having all of a supplier's documentation in one system allows for a quick viewing of documents / information and enables faster decision making. This allows the organization to immediately establish whether suppliers meet company standards and other agreed upon specifications. Having them all in one place and enabling controlled access to the QMS can help prevent versioning inaccuracies and delays that are commonplace with documents shared via email.

Supplier quality agreements allow the organization to develop clear expectations and key performance indicators (KPIs) for the supplier. Having these agreements linked to the supplier record enables the tracking of supplier compliance and also allows the quality function to refer back to these documents when communicating with suppliers. Managing SCARs in the QMS allows for the tracking of communications so that the quality team doesn't have to sort through email threads that might be outdated. The entire team can effortlessly see tasks, status, and future steps.²

2. Conduct Supplier Audits

An effective and proactive way to ensure supplier quality control is through a Supplier Audit. Doing this periodically assists in verifying that supplier's practices align with the organizations purchasing requirements.

These audits can be used to ensure the suppliers have comprehensive quality, compliance and safety programs in place. This auditing process to quality check the supplier against nonconformances should cover manufacturing, quality, service provisioning, and compliance. These audits can detect areas for improvement and assist organizations to determine corrective actions, response and resolution processes.

A risk-based approach to auditing suppliers will ensure that the high risk suppliers are monitored closely. Monitoring the results of the supplier audits and using the data to proactively reduce risks across similar suppliers as well as improve the audit process itself is critical for organizations to manage their suppliers effectively. Using previous audit results to drive and define the scope of future audits is also beneficial to decrease the load on the audit group as well as focus on suppliers that present more risks.



3. Incorporate Supplier Scorecards

Incorporating standardized scorecards into the supplier management process will provide a way to rate suppliers on performance and also benchmark one supplier versus another. Suppliers' KPIs, nonconformance, and hazards can all be measured using scorecards. Analytics on these KPIs can help with tracking quality improvements or failures over time, identifying areas for improvement, and agreeing on corrective actions to reduce quality risks in the future.

Using the power of analytics to gain more insights into the findings as well as using the data effectively to make decisions on the health of suppliers is critical to effectively managing suppliers. Each of the metrics can be weighted based on risk factors and then combined to provide an overall score. Setting approval criteria allows the QMS to display the score as green (approved), yellow (warning), or red (not approved) for data-driven supplier selection.

The supplier scorecard also enables the organization to run trends and analysis on the supplier performance data to help identify issues that need to be resolved. Additionally, the data can be used in developing leading indicators that provide a warning of potential quality issues.

4. Integrate IT Process

Having an integrated enterprise solution can enable better communications, collaboration and quality control across the supply chain from procurement to delivery. Separate financial, quality, and operational systems that are not integrated cause disparities in information which in turn can lead to inaccurate data and decisions and quality issues.





5. Introduce a Cost Recovery System

A cost recovery procedure helps improve supply chain accountability. It may enable you to recoup the expense of poor quality from a supplier, as well as push them to investigate and resolve issues that cause poor quality as promptly as possible. Using analytics to capture trends as well as the costs associated with certain non-conformances or risks for suppliers will help organizations make informed and proactive decisions.



The Importance of Good Data in Supplier Quality Management and How to Improve It

How Does Unreliable Supplier Quality Data Impact the Organization

Data Integrity

Data Integrity is a fundamental requirement in the Life Sciences organization's quality system which needs to ensure that products manufactured are of the desired quality for patients. Regulatory authorities require data to be accurate across the supply chain. If suppliers are not providing accurate data or they are not following agreed upon policies and procedures as well as regulatory guidelines in collection of data, this causes compliance concerns regarding product safety and quality since both are compromised.

Integrity of IT Solutions is Compromised

Many of today's businesses have an IT environment that consists of disjointed data sources and systems. These organizations typically implemented point solutions to handle specific sets of problems without considering the broader long-term challenges that are created by not having their systems and data seamlessly integrated across the enterprise. Having this disconnected environment across the financial, engineering, quality, and operational systems generates significant challenges for supplier quality management.

Having bad or inaccurate data from suppliers impacts the accuracy of the organizations systems. Since the suppliers are an extension of the organization by providing everything from raw materials to the other products used, their data rolls up into the overall organizations totals. If the suppliers data is not in compliance with the organizations processes and regulatory guidelines, this causes a major impact to the integrity of the overall enterprise system.

ROI Relies on High Quality Supplier Data

Likewise, if the integrity of the systems are not accurate, the ROI is inaccurate. Bad data in equals bad data out. Metrics developed to assess and calculate the impact of certain processes and policies will be negatively impacted due to incorrect or faulty supplier data.



Speed to Market

Missing or inaccurate supplier data also impacts the speed to market of the organization. It slows the process since the required data is not in the hands of those who need it to make quick decisions. This impacts sales and customer satisfaction.

Evaluating Suppliers

Supplier data is also important in evaluating the performance of suppliers. Without good data in this area, an organization cannot effectively make decisions on suppliers performance or improvements throughout the value chain.



Ways to Improve Supplier Quality Data

Leverage Integrated Technology Across Supply Chain

One approach to fix the data issue is to invest in integrated solutions that enable communication and collaboration across the organization and the extended value chain. This provides a means for the various departments of the organization and the supplier(s) to accurately share consistent data. From procurement to design, manufacturing, and services, all groups should be working off of the same information.

This requires creating closed-loop quality management by integrating enterprise applications across the value chain. Organizations can leverage a Supplier Quality Management Software solution or extend their existing enterprise technology like EQMS, PLM, MOM, or ERP to suppliers with access to these already integrated IT systems. Companies who leverage one of these methods are able to pursue further automation of traditionally paper-based and manual processes with their suppliers through a single system rather than numerous disconnected ones. This integration of systems and data sources throughout the enterprise applications provides increased visibility and interaction across functional units and the supplier value chain. This facilitates clean and harmonized data across the organization.

Employ a Standardized Supplier Risk Scorecard Solution Across the Enterprise

The process of evaluating your suppliers so that you can recognize the risks they may pose to your organization and the supply chain itself is known as supplier risk management, or supply chain risk management (SCRM). By proactively incorporating programs that systematically identify, assess, and mitigate threats to the assets and data that might be caused by the supply chain, the organization ensures the supplier risk level is low.

Developing a standardized way to assess and rank suppliers that reaches across the organization is critical. This can be achieved by implementing an enterprise supplier quality solution or an enterprise system. The standardization and centralization of the supplier risk scorecards need to be established and precise in order to both improve the integrity of your organization's risk portfolio and enable accurate insight for decision-makers across the business units working with suppliers.





Metrics and KPIs to Monitor Supplier Performance

Supplier performance metrics or key performance indicators (KPIs) can assist in grading suppliers' performance. It is advisable to jointly agree on these metrics with the suppliers so that both organizations have a mutual understanding of how the health of the relationship will be measured.

Monitoring performance through the supplier scorecard permits both parties to understand the current state of the relationship. Although the performance metrics will vary from company to company, the most common gradable metrics include quality, on-time delivery, acknowledgment rate, and responsiveness. Standardizing the metrics and how they are calculated and reported, assists in enabling the identification of areas for improvement and determining which areas require more resources or some type of change. By setting up standards the organization enriches its ability to ensure quality across the supply chain.

Metrics to consider include:

- Success of new product introductions
- Defective parts per million
- Percentage of defective products received
- Percentage of returned products
- Chargebacks for non-conformances
- Complete and on-time delivery
- Percentage of products out of compliance or quality standards



Collaborate with Supplier and Manage Compliance

Compliance requirements can be internal or external specifications, or officially meeting government regulations or industry standards. In the Pharmaceutical and Medical Device industries, that are highly regulated, leveraging supplier portals to communicate requirements and verify that they're being met are being used.

An organization's supplier audits can support meeting compliance requirements. It's important to establish a collaborative relationship in conjunction with a formal audit management plan, which outlines the frequency of on-site visits, reporting conditions for suppliers, and the extent into the supply chain to which you'll go for auditing suppliers.

Transform to Quality 4.0

Quality 4.0 is a term that references the future of quality and organizational excellence within the framework of Industry 4.0. With Quality Management 4.0, organizations aim to deliver quality at a much faster pace based on what the business and the customers want and need. The shift to Quality 4.0 incorporates the nuances of traditional quality coupled with analytics and data governance through the adoption of new technologies.

Quality 4.0 is the digitalization of quality management. The new technologies include sensor data and advanced analytics including artificial Intelligence (AI) and machine learning (ML). These technologies are incorporated into traditional quality methods, teams, and data strategies. Quality 4.0 generates new insights that facilitate organizations to achieve enhanced quality, operational, and financial performance. For digitalization to be effective, organizations need to be able to define the business benefits. The quality leaders need to sit down with the business stakeholders and have a focused conversation on ensuring that everyone is clear on the desired outcome. Once the quality organization is confident that they understand the business needs, they can setup the right processes for them to get those benefits.

How to Improve Supplier Data Quality

We've discussed how bad data from suppliers can impact the organization, however, how can we identify what "good" data quality looks like? The quality of data is impacted by the following factors:

Integrity

If all systems and data from the supplier are integrated into the organization's systems and data and they provide only one version of the truth, then you have good data quality.

Real-Time Availability

If the supplier's data is available in real-time to the organization or as close to real-time as possible then the business can leverage that data to make decisions.

Access and Transparency

If the supplier's data is accessible and transparent to those in the organization who need to access it, then it empowers the business by getting the data in the hands of those who need it.

Ability to Make Proactive Decisions

If the supplier data is available and real-time, this will be reflected in the organization's ability to make proactive decisions that impact the business both in the short-term and in the future. Data is power and accurate and real-time data provides better control to the organization.





Key Challenges Impacting the Optimization of Supplier Quality Management

Supplier Scorecard Challenges

There are three key challenges organizations face with respect to scorecards that impact the optimization of Supplier Quality Management. They involve the metrics used, the data integrity, and the communication effectiveness.

Metrics Associated with Scorecards

With respect to the scorecard metrics, they should be aligned with the company's business goals. However, many times less effective metrics are incorporated because they are easier to integrate or are more readily available. This weakens the effectiveness of the scorecards since they don't reflect what is really important. There should also not be too many metrics to measure. This makes the process burdensome and less effective. The quality of the metrics should be a much higher priority than the quantity of them. The number one main concern should be that the metrics align with the business objectives of the organization. Misaligned metrics lead to insights that provide no actionable information and reduce confidence in the scorecard results over time.

Data Integrity and Manipulation of Scorecard Data

Storing and accessing data on the same platform simplifies the tracking of data inputs. Email chains and Excel spreadsheets make the process of gathering and displaying data more difficult. While email/ excel tracking might work for a smaller supplier population, at scale integrated tooling becomes the only viable option to conduct a scorecard program, short of hiring more people.

Appropriate tools should be leveraged to collect, track, and manage workflows while maintaining the data integrity and ensuring a "single source of truth".

Ineffective Communication with Suppliers **Regarding Scorecards**

A regular feedback mechanism improves the success of the scorecard program implementation. To effectively use scorecards, suppliers must first understand the buyer's business objectives and how their performance influences these objectives.

The value of this process is diminished if the scorecard findings and insights are not shared with suppliers in a timely manner. While internal vendor rationalization is usually the top priority, a scorecard program is less effective when used alone. On the other hand, regular communication may be the missing link in the performance enhancement process.

Suppliers will likely become confused by the purpose of the scorecard program if there is no action or follow up to the scorecard results. Connecting recognition, rewards, and corrective guidance to further build on this exercise is very important.

POOR GOOD EXCELLENT

Supplier Data is Fragmented and Poorly Managed

An organization's inability to monitor input from suppliers points to an apparent lack of control on the process. In a regulated environment, supplier control is crucial. The FDA's Quality System Regulation, for example, requires medical device organizations to "maintain data that clearly describe or reference the specified requirements, necessary in maintaining such data.



Supplier data is therefore one of the most important assets of any company. The supplier's data ensures the overall integrity of data across the enterprise as well as that the ROI of the organization is accurate. It also provides a way to ensure the organization can precisely evaluate the supplier's performance. Many organizations do not have an actual strategy when it comes to managing supplier data. The data from suppliers can reside in multiple places or silos. It can be in the ERP system, in AP solutions and in a number of different procurement systems. There is often a misunderstanding in the procurement/finance area of the business as to what the supplier master data management (MDM) means and why it is essential. The IT department may also misinterpret this information and view it simply as a technical data integration issue rather than a significant business problem.

The absence of a centralized platform and structure for managing multiple suppliers causes significant challenges for Life Sciences organizations. Without this platform and structure for gathering or receiving data, the organization will need to look for information from each supplier in multiple locations. Information stored on specific servers may have to be printed and routed manually, which causes making any document-based process to be inefficient.

What is needed is a strong MDM system. The system needs to not only maintain a supplier profile but have the capability to translate the supplier data into the formats of all other systems that need it. The Supplier data can be considered to be master data based on the system it is used by and hence, there is a need to implement and maintain appropriate controls (security, access, storage etc.)

There are procurement vendors who can do this well, however. in most cases, a real MDM solution is required. This adds complexity yet it is needed. Procurement solutions, however, collect supplier data very effectively and ensure it is up to date. Suppliers typically do this as a selfservice function and are accountable for keeping their data in whatever solution the buyer organization provides them with to use. The Supplier, however, is overwhelmed by hundreds of different networks, portals, and applications where they are supposed to maintain their data. This causes in many cases the actual data sharing to be limited as suppliers are often required to upload the same information many times across multiple buyer's systems.



Lack of or Improper Risk-based Analysis for Supplier Quality

Another potential challenge is measuring the risk of suppliers inappropriately. For years, FDAregulated manufacturers have tried to apply a "one-size-fits-all" quality management approach to their entire roster of suppliers.

There is a better approach. A good risk-based method to manage supplier quality is one that allows organizations to create a flexible quality management system which can be designed to fit each supplier or a group of "like suppliers". This enables the organization to spend the greatest effort toward controlling and/or mitigating the risks that pose the most damage.

Poor Communication with Supplier

The success of any business relationship requires successful communication between the parties involved. It is extremely important that suppliers and the contracting organization are on the same page relative to the who, what, when, why and how. This is especially critical in the regulated Life Sciences industry. It is crucial that all the key information is documented. Additionally, FDAregulated companies are required to spell out the quality-related duties in their Quality Agreements with suppliers. These agreements should include events that will trigger an on-site audit and a change to control expectations. They should also include periodic reviews of validation efforts as well as reviews of documentation. These types of controls in the agreement will reduce risk, eliminate vagueness, and help to ensure optimal effectiveness.

Inability to Report Problems and Changes Involving Suppliers Quickly And Effectively

Each activity that involves suppliers must follow well-defined methods and standards. All activities including delivery of parts or ingredients require documentation and assessment. This becomes particularly critical when problems arise. The emphasis on suppliers and the control and risk management will continue to increase. Therefore, the ability to report problems and changes that effect products safety and quality is critical. Unfortunately, organizations are not always equipped with the proper tools to identify these issues and deviations leveraging their current methods and technology.





Best Practices to Improve Quality in Supplier Quality Management

Broaden Supplier Assessments

Most organizations limit the supplier performance measurement and monitoring to less than 2.5 of the total supply base. The focus of supplier measurement and monitoring is typically on suppliers that:

- Comprise the largest portion of spend
- Have a strategic relationship with regard to a key product
- Have a strategic relationship with the client company

By limiting the number of suppliers monitored to a very small number, there is a lack of visibility on the level of quality in the entire supply chain. This causes companies to be exposed to potentially significant quality incidents and cost increases that can negatively impact profit and brand. In order to avoid this situation, organizations should invest in infrastructure and technology solutions that enable broader visibility into the supplier base as well as allow for better risk management across the supplier population.³

Establish Clear Measurement Program

The key to success is to have clear and consistent measurement criteria and processes across all suppliers. The measurement of suppliers should include specific areas that are important to the business including quality, on-time delivery, service, price, total cost, contract compliance, and responsiveness. Establishing agreed upon goals and metrics while leveraging tools and data analytics will allow for accurate data representation as well as decision making.

Invest in Infrastructure that Supports Visibility into the Supply Chain

Communication with suppliers is a major challenge in assuring supply chain quality. To be responsive to the needs of the organization's vendors, many businesses maintain decentralized supplier quality functions. While this method ensures issue response, it is frequently characterized by limited information exchange and best practice sharing, both of which could give better economies of scale. The tools and methodologies for monitoring quality in the supply chain have not kept up with the supply chain's evolution.

In order to fix these issues, businesses are investing in infrastructure that integrates their supplier ecosystem more tightly and automates operations that were previously manual or disjointed. This provides for improved visibility and control through enabling process-based communications such as escalations and approvals, as well as automating quality workflows such as Supplier Corrective Actions. This correlates to a cheaper quality cost due to lower detection costs and fewer remediations.



Leverage Technology to Optimize

To enable organizations to control their supplier quality management operations more effectively, cloud-based technologies are available to facilitate the communication and collection of information from suppliers in a timely and efficient way. Some of these technologies include:

Robust Reporting

Organizations require the ability to identify issues with suppliers that could jeopardize product safety or compliance.



To effectively control this aspect, powerful reporting capabilities are available in many systems that allow organizations to trend and track a supplier's quality events such as deviations and CAPAs.

Tools for Better Communication with Suppliers

In a regulated industry, communication involves more than making a call, sending an e-mail, or faxing information to your suppliers. Organizations need to have a system for communicating and receiving information from suppliers that is welldocumented and can be tracked, to be in compliance. Leveraging technology, organizations should be communicating essential information with suppliers and documenting the important aspects of the parts, materials, and services that they provide for the organization.

Automatic Tracking of Audit Results

Monitoring supplier audit results and supplier nonconformances is an ongoing process. Using a manual process causes the organization to rely on paper documents and disparate electronic files to monitor supplier information. Using this method, it is difficult to repeat the process on a regular basis.

Organizations need to incorporate the latest in technology to make tracking supplier information an automated and continuous process with all critical information residing in a centralized location. This information can be collected easily for supplier quality ratings. Additionally, workflows should be leveraged for approving suppliers. These workflows track new parts or services from suppliers by linking them. Embedded AI for Prioritization, Automatic Issue Categorization, and Risk Assessment You can now leverage advanced AI capabilities to provide predictive analytics and intelligence to automatically categorize suppliers into risk classifications, as well as prioritize issues to solve. These capabilities save valuable time for quality and supply chain functional leaders.

Supplier Risk Management

Defining the success criteria and identifying risks, is the first step of the supplier qualification process. To do this, the organization needs to leverage a proactive approach to mitigating risk through existing technology. This is the core of building a quality culture that spreads across the supply chain.



Key Elements of a Digital Transformation of Supplier Quality Management

Data Visibility

There needs to be a detailed mapping of data across the entire supply chain. In order to achieve this, the supplier management system needs to be integrated. The enterprise Quality Management System (EQMS) should seamlessly integrate with the organizations ERP and CRM systems. This will ensure enterprise-wide data visibility. The integration will also achieve a "single source of truth" for the data that is used in decision making across the organization.

Anytime and Anywhere access to Data

By leveraging a cloud-based, mobile-ready platform, the data will be accessible to all those who require access. This includes visibility to reports, approvals, record views, reviews, alerts, and other key information from suppliers. "Realtime" access to data helps with faster and more efficient decision making and prevents escalation of issues due to non-activity. It also ensures business continuity and improves efficiency and flexibility for the organization across the value chain.

Scalability

Given the rapid technological changes that are occurring, having scalability across the digital tool landscape will be an added advantage for an organization. This will allow for the flexibility that is required with a dynamic supplier network that is prevalent across the industry today. The business may, for example, expand globally and open new manufacturing locations or change the way suppliers' risk is determined. Additionally, there will be a need to easily add new suppliers, users, and locations, as the organization grows. Scalability creates a future-proof state that protects the organization's investment while at the same time providing for the ease of doing business with suppliers across multiple areas.

Custom and Automated Workflows

Legacy software typically forces organizations to modify their workflow to suit their pre-defined system parameters. In order to be effective, a radical approach is needed, where key metrics are agreed upon and the software application is then configured to provide the supporting data to manage, report and modify, if required, those metrics and KPIs. The supplier management and EQMS systems need to be accommodating to the required workflows of the organization.

Additionally, there needs to be an ability to have automated workflows that assist in facilitating corrective and preventive actions – using available tools / technologies such as machine learning (ML) and artificial intelligence (AI). This is a key to optimizing a digital transformation.



Integrated Risk Management

The supplier qualification process is the first step in defining the success criteria and identifying risks. Therefore a supply management system should be integrated with a risk management solution to make it easy for the quality function to implement a proactive approach to reducing risk. An additional benefit is that it helps in building a quality culture that extends across the supply chain.

Predictive Analytics and Insights

Predictive analytics helps in streamlining decisions. Decision-making is faster and there are insights presented utilizing data from across the enterprise to provide suggestions or recommendations.

Predictive analytics can also be used to balance supply and demand, across the value chain. It helps the organization to communicate with the supplier well ahead of a potential issue or nonconformance. Predictive analytics could be leveraged to gain intelligence on demand forecasts, thus helping the supplier with inventory management and capacity planning. It therefore can drive supply chain communication prioritization and problem resolution.

Collaboration and Teamwork

Beyond the technology aspect of a digital transformation, there needs to be collaboration between suppliers and the organization. There needs to be a culture of partnership between suppliers and the organization. Ideally with a winwin business model for both. To ensure this, the organization needs to incorporate a solution that will enable easy collaboration and communication among both internal stakeholders and at the supplier's end. Collaboration is the core to bringing transparency and visibility and leads to increasing productivity, accuracy, and quality.





Summary

Supplier Quality Management is one of the most important areas to consider when looking at controlling the overall cost of quality in an organization. Leveraging experienced people both internal and external along with the right processes and technology is critical. It is imperative that the organization focus on the key areas to ensure proper supplier quality management.

One key aspect related to suppliers is the quality of the data. This is essential to any Life Sciences organization. Good supplier data is critical for demonstrating compliance to both corporate policies as well as regulations. It is also imperative for the business to ensure that the internal systems have data integrity for decision making and proper KPIs and metrics to use for ROI calculations. Inaccurate supplier data leads to missing and inaccurate products / recalls/ system failures which can lead to low satisfaction and customers going to competitors. Additionally, the speed by which the organization can get products to market is also impacted significantly as is the ability for the organization to evaluate suppliers.

Focusing on effective Supplier Quality Management is important if the organization intends to improve overall efficiency, reduce risk, and ensure that products are safe and have the highest quality. There are, however, challenges that impact the optimization of supplier management. These challenges can be resolved by first understanding what causes them to occur and then focusing on implementing the proper management controls to prevent or reduce the severity of their occurrence. Supplier Quality Management is also a critical area to target relative to a digital transformation. This is due to the fact that suppliers have a significant effect on various aspects of the organization.

The focus needs to be on data visibility across the organization as well as ensuring the information is available anytime and anywhere to those who need it. Additionally, scalability of the system to handle supplier management is needed to ensure that as the organization grows, the system growths with it. Along with these specific areas, the supplier management system should have custom and automated workflows, handle risk management, and provide predictive analytics. Collaboration is also an important aspect of digital transformation of supplier quality management. Suppliers and the organization need to have a means of easily and effectively communicating on different aspects associated with product quality and delivery.

TOTAL QUALITY MANAGEMENT

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About Astrix

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