



Why Visibility Into Supplier Performance Improves Overall Quality

A White Paper by TIP Technologies

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Supplier quality is a key requirement needed for the delivery of superior products. Effective supplier management increases quality and enables more efficient production resulting in higher customer satisfaction. To get the most from your suppliers it's important to have a source for all supplier information to track and measure their performance using a wide range of metrics. However, this can be very difficult and time consuming to manage with a large supplier base and data located in disparate systems. At many companies, supplier data resides in several systems making it nearly impossible to gain a comprehensive, consistent view. You may have supplier profile data geared primarily toward procurement and financials in your ERP system or performance information such as on-time deliveries in yet another system.

Full visibility into supplier related activities can be achieved using an industry-leading quality management solution. TIP Supplier Quality Collaboration is an intuitive web portal to the TIPQA Quality Management Solution which allows manufacturers to manage the quality life cycle of their suppliers and sub-tier suppliers, measure supplier performance and support online collaboration. Supplier data from your ERP system can be imported into TIP Supplier Quality Collaboration giving you one central repository to manage supplier quality and performance.

The application is 100% web-based and only requires Internet connectivity and a browser for suppliers to access. In addition to performance metrics, suppliers will have the ability to view purchase order activity such as receipt and inspection history and associated details to collaborate on nonconformances, corrective actions and perform source inspections.

Map Your Supply Chain

Mapping the supply chain down through every tier is the only way to mitigate a growing burden of risk. TIP Supplier Quality Collaboration allows you to map your supply chain by indicating if a supplier is a primary supplier, sub-tier or both. This gives you the ability to build a map and take a standardized approach to managing supplier information. By having full visibility into your sub-tier suppliers, you can capture detailed information at each level such as supplier certifications, factories and locations, audit information and certified parts. Supplier mapping to N-tier levels is becoming even more critical with the need to perform additional inspection to root out or to prevent counterfeit parts from contaminating your production line.

Mitigate Risk of Failure from the Supply Chain

TIP Supplier Quality Collaboration helps mitigate risks by allowing you to easily maintain a balanced scorecard for your suppliers. The balanced scorecard combines delivery, quality and supplier response/action data into a blended performance rating for suppliers so you can quickly identify points of failure and take immediate action.

TIP Supplier Quality Collaboration lets you easily identify primary suppliers who use the same sub-tier supplier. You may think you are covered by sourcing parts from multiple suppliers, however if your suppliers are sole sourcing to the same sub-tier supplier you may be at risk. Supplier failure not only impacts the current program, but also has a lasting impact on the reputation on your organization that may preclude entrance into other competitive opportunities.

Supports Compliance

TIP Supplier Quality Collaboration eliminates the possibility of lost paperwork, improves accuracy by validating data entry against master records, and speeds the processing of non-conforming material and corrective actions. TIP Supplier Quality Collaboration displays audit history and supports supplier self-audits ensuring compliance with all ISO, MIL Standard and other regulatory requirements.

Build Standardized Metrics Unique to Your Organization

TIP Supplier Quality Collaboration combines delivery, quality and supplier response/action data into a blended performance rating for suppliers. There are sophisticated user set-up parameters enabling you to tailor metrics to your specific business requirements, giving you the flexibility needed to determine supplier performance from every aspect. Parameters include Receiving Delivery Rating, Purchase Order Rating, Nonconformance Rating, Corrective Action Rating, Qualitative Rating and a Blended Rating allowing you to combine and weight the Receiving Inspection Quality, Nonconformance, Corrective Action, QMI and Defects Per Million Opportunities (DPMO) ratings to determine the Quality Blend Rating. Report Cards or Rating Letters that are user-defined can include performance targets and trend data.

Quickly Analyze Data

The TIP Supplier Quality Collaboration executive dashboard provides your organization with the data you need to make critical supplier decisions fast. You can view supplier key performance indicators at a high-level by categories such as supplier rating, type, commodity code or process code and drill down to get detailed supplier information based on performance trends such as delivery, receiving, purchasing, nonconformance corrective action and DPMO.

What Gets Measured Gets Improved

Your suppliers will have the ability to view their performance ratings from an interactive dashboard which will provide a graphical user interface in addition to detailed components that are used to calculate the key performance indicators used to measure their performance.

What Gets Built Gets Audited

Every organization that provides material, whether it be components, sub-assemblies, or complete systems is subject to audit. The most difficult part of an audit is delivering the genealogy of the associated components and providing specific manufacturer vs distribution supplier information. Organizations must now report the original manufacturer or service provider that either manufactured, added components or serviced a part or component that was delivered to your organization through a distributor. Having all of the data from all of your suppliers with accurate information readily available through simple queries, creates peace of mind not only for the auditor, but for your organization. This also holds true for material, ISO, or process reviews performed by organizations like DCMA or NRO.

Easily Control the Level of Access with User Roles and Authority

You can also select the actions that suppliers can perform within the application down to the user level for greater control. Role-based access control provides your system administrators the tools they need

to define and maintain supplier and individual user access based on their need to function within those areas.

Quick Time to Benefit

TIP Supplier Quality Collaboration is easy to use and will require little to no training for suppliers, allowing them to get up to speed and be productive in no time. Security and ITAR requirements are easily managed and full control of the application resides within your organization.

Security

TIP Supplier Quality Collaboration is a web-based application allowing your users easy access from any computer connected to the Intranet/Internet using a standard browser. The application is deployed on premise behind your firewall taking full advantage of your current security infrastructure for a quick and secure deployment.

Data Access Control

TIP Supplier Quality Collaboration provides a flexible administrator-defined, role-based access allowing for better control.

Secured Access Using HTTPS

It is essential that a high-level of security of data exchange between the user and the application servers is ensured. TIP Supplier Quality Collaboration enforces encrypted access via HTTPS (TLS). All end user traffic is via HTTPS (TLS).

Authentication

The TIP Supplier Quality Collaboration authentication architecture has been designed to support a variety of methods.

- **Username/Password** - Username and Password authentication with a wide variety of password complexity rules such as minimum length, password not being same as username, cannot be a previously used password, must have at least 3 of the 4 criteria in the password, the criteria being: Uppercase character, Lowercase character, Numeric character and Special characters (E.g., ! @ # \$ % ^ & *).
- **SAML 2.0** - TIP Supplier Quality Collaboration supports authentication via Security Assertion Markup Language version 2.0.
- **3rd party options** – authentication via 3rd party options are supported. You can use any authentication mechanism to authenticate your users and add code to call our stateless server at the end of successful authentication. The request after successful authentication must be sent from the client. We provide the API for you to code.

Content Disarm and Reconstruction Technology

Companies are at more risk now than ever from cyber-attack and zero-day threats. One of the biggest risks is unknowingly spread through file attachments such as documents, images and presentations. To help mitigate your risk, TIP Supplier Quality Collaboration provides a pre-defined API for OPSWAT Metadefender™ CDR, the leader in Content Disarm and Reconstruction technology. OPSWAT

Metadefender™ checks all file attachments, removes embedded scripts and macros and rebuilds files retaining usability and formatting.

Supplier Master Information

One crucial part to managing your supplier base and having visibility into your supply chain is to track and monitor key information for each supplier. The TIP Supplier Quality Collaboration supplier master supports this by providing information in several categories at your fingertips allowing you to manage, monitor and share information with your suppliers making it easier for them to collaborate with you and improve overall quality and performance. With the inherent access control and security parameters you can choose what information you want to share with suppliers and what actions they can perform. This gives you the flexibility to meet business requirements for today and into the future.

Supplier Recovery – Based on industry averages, less than 50% of companies pursue supplier recovery with their suppliers. Having the capability to identify, calculate and charge-back suppliers for providing poor quality parts and components are an important way to introduce business discipline and accountability into the supply chain and recapture costs. TIP Supplier Quality Collaboration provides you with the capability to aggregate these costs and apply them in the form of supplier charge-backs. This will allow your organization to recover the costs of poor quality from your suppliers and institute a discipline that forces suppliers to quickly improve the quality of products shipped.

Associated Sub-tier Suppliers – Knowing your suppliers' suppliers is critical. In many instances supply chain risks are hidden in sub-tier suppliers. TIP Supplier Quality Collaboration provides a single online repository to manage the complete quality lifecycle of both a manufacturer's suppliers and sub-tier suppliers. The Sub-tiers feature provides the ability for you to associate one or more level one sub-tier supplier numbers to a supplier. The grid will also show level two through level 5 sub-tier relations.

Part Status – Visibility of all part related data ensures you're knowledgeable about every aspect of your suppliers and the parts they provide. This allows you to better serve customers by improving quality and performance. Part Status displays supplier status, part status effective dates and revision information. This provides users with insight of what parts are approved for each site and advanced notice of when that needs to be reviewed eliminating another element of risk.

Part Number Certification – Part Number Certification provides the ability to easily see which parts have been certified for a supplier in addition to other key information such as revision code, date revised and any related comments.

Rating History – it's important for your suppliers to know what metrics you use to rate their performance. Giving suppliers the ability to view their ratings at any time lets them act to improve performance. TIP Supplier Quality Collaboration allows suppliers to see rating history across multiple months allows them to see how their performance is trending over time. This is important because it allows them to be proactive rather than reactive.

Qualitative Analysis – Qualitative Analysis provides the ability for your organization to easily create and maintain a library of user-defined metrics. These are used to establish the qualitative attributes of a supplier as part of the blended quality rating used for overall supplier performance.

Associated Documents – Having the ability to share documents, drawings and images real time with suppliers eliminates the need of paper documents and the use of email. This not only saves time but creates a better audit trail ensuring as much information as possible remains in the application.

Collaborate and Build Stronger Relationships

In addition to measuring, TIP Supplier Quality Collaboration supports online collaboration between you and your suppliers. Based on access control settings, your suppliers will be able to create and respond to nonconformances and corrective actions online. They will have the ability to attach documents and images and share documents, eliminating the need for transmitting paper documents and the use of email while creating a better audit trail and building stronger relationships.

A supplier is an entity who sells goods and services to your organization. A supplier can be:

- The manufacturer of goods / services and provides them to the buyer.
- Source these goods / services directly from the manufacturer and provide them to the buyer.
- Source these goods / services directly from one of their own entities and provide them to the buyer.
- Source these goods / services directly from another supplier and provide them to the buyer.

A sub-tier supplier could be directly related to the primary supplier as part of the same organization or could be a completely different entity providing goods or a service to the primary supplier.

Benefits to Your Organization

- Proactively monitor suppliers based on performance trends such as delivery, receiving, purchasing, nonconformance corrective action and DPMO. Drill down to find the root cause
- Improved process flow by eliminating paperwork
- Better visibility into supplier activities
- Associate first tier suppliers to their sub-tier suppliers for improved traceability. Configurable metrics and analysis
- Quick time to benefit

Supplier Benefits

- Supplier dashboard to review performance based on parameters setup by the buyer
- Supplier can interact/collaborate with supporting data and documentation
- The supplier can initiate and collaborate on non-conformances
- Submit Documents

A Reliable Supply Chain

Trust is a critical factor in building strong relationships with your suppliers. The best way to build trust is to establish transparency. Lack of visibility and transparency is one of the biggest obstacles a company will face when it comes to building a strong supply chain. A Supplier Quality Management Solution allows organizations to develop greater transparency and visibility by establishing a single shared view for quality engineers and suppliers. A shared view of quality information eliminates confusion and supports collaboration, while creating a reliable supply chain for the organization.