**CONQUERING ISSUES WITH**

# SUPPLY CHAIN
# Work Management

## A Best Practices Guide for Supply Chain Leaders

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# Key Takeaways

TraceLink is driving digital transformation with Opus™, the Platform for the Internet of Supply Chains, which links systems, processes, people, and enterprises into a collective information network for intelligent business execution.

Companies that digitalize incident management processes with supply chain work management can resolve issues faster, reduce recurring issues, and dramatically improve supply chain performance.

By first digitalizing the issues and exceptions that impact supply chain execution, best-in-class companies are creating the foundation for full supply chain digitalization.

Using multienterprise software to digitalize the reporting, root cause analysis, and resolution processes for issues that occur across the end-to-end supply chain can drive a 65% reduction in time to resolve supply chain issues and a 35% reduction in the total number of supply chain issues.

Organizations that use supply chain work management data to support continuous improvement processes like Six Sigma have achieved a 50% reduction in repeat deviations and a 96% reduction in defects per million. Task management capabilities enable Six Sigma DMAIC projects to be managed across internal and external teams to achieve superior results.

By digitalizing incident management processes with supply chain work management and using the data collected to support continuous improvement methodologies such as Six Sigma DMAIC, organizations have achieved a 97% reduction in manufacturing disruptions and an 82% improvement in delivery performance.
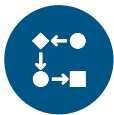
The right collaborative, multienterprise supply chain work management solution brings speed, structure, visibility, and greater operating efficiency to incident management processes. It also supports continuous improvement processes and helps supply chain teams reduce dependence on unstructured collaboration tools like phone calls, emails, and spreadsheets.

Additional benefits include simple and free partner onboarding, no software to install, no requirements for IT teams to manage the implementation, and organizations can quickly start logging, tracking, and resolving issues.

**Get a personal demo of TraceLink Supply Chain Work Management**

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# Driving End-to-End Supply Chain Digitalization with TraceLink

Digitalization initiatives are transforming global supply chains. At the forefront of this transformation is the adoption of a new class of multienterprise supply chain applications. Opus™, the Platform for the Internet of Supply Chains, links systems, processes, people, and enterprises into a collective information network for intelligent business execution. Opus multienterprise applications digitalize processes between supply network partners and enable data sharing and collaboration across the end-to-end supply chain to improve supply chain execution.

Within this new class of multienterprise supply chain applications, supply chain work management digitalizes multienterprise business processes that have not been digitalized in most organizations. Executing multienterprise business processes such as new product launches and supplier onboarding, or dealing with issues like late shipments, material shortages, and damaged goods is often a firefighting exercise managed and resolved using unstructured and decentralized manual processes such as phone calls, emails, video conferencing, and spreadsheets. As a result, much of the information required to identify challenges to supply chain execution and drive better supply chain performance is lost or never collected.

This handbook explains how digitalizing the incident management process with supply chain work management can reduce costs and improve cash flows while reducing supply chain risk. Readers will learn how to accelerate the incident resolution process, reduce recurring incidents, and realize dramatic improvements to supply chain execution.

# There are three phases in the digital transformation of the supply chain incident management process:

## PHASE I:

Utilize multienterprise incident management processes for the reporting, tracking, root cause analysis, and resolution of all problems and issues that occur across the end-to-end supply chain. All issues are captured in one multienterprise application, and companies and their supply chain partners have one source of shared truth as they work collaboratively to resolve incidents. Organizations that leverage a multienterprise software solution for supply chain incident management have achieved a 65% reduction in time to resolve supply chain issues and a 35% reduction in the total number of supply chain issues.

## PHASE II:

Utilize the data captured in the supply chain incident management process and apply process improvement methodologies like Six Sigma to define, measure, analyze, improve, and control. Applying a process improvement methodology to incident management data empowers supply chain teams to identify root causes and reduce or eliminate recurring business process and product quality defects. Organizations that use data collected in the incident management process to support continuous improvement projects through methodologies such as Six Sigma have achieved a 50% reduction in repeat deviations and a 96% reduction in defects per million. Task management capabilities enable Six Sigma DMAIC projects to be configured from predefined templates to include internal and external subject matter experts and achieve superior results.

## PHASE III:

By both digitalizing incident management process with a supply chain work management solution, and infusing the data collected into continuous process improvement methodologies like Six Sigma, organizations are able to significantly improve supply chain performance. This has resulted in a 97% reduction in manufacturing disruptions and an 82% improvement in delivery performance.

> *"Adopting a multienterprise work management platform has dramatically improved the overall performance of our value chain. Everyone is on the same page and working from the same digital source of truth to provide transparency. We don't need to search through emails and spreadsheets to see what is going on, what needs to happen next, and why something happened. We've cut our incident resolution times by 5x, and the visibility has helped us prevent issues from recurring."*

**- STEVE HYDZIK, Vice President, Global Head of Manufacturing & Supply Chain, EA and New Technologies, The Merck Group KGaA**

## EXAMPLES OF COMMON BUSINESS PROCESS DEFECTS

| | | |
|---|---|---|
| Supplier delivery delays | Production slowdowns | Schedule changes |
| Capacity problems at suppliers | Poor planning & forecast changes | Lower-than-expected yield · Supplier material shortages |
| Inventory shortages | Shipping delays | Short shipments |

## EXAMPLES OF COMMON PRODUCT QUALITY DEFECTS

| | | |
|---|---|---|
| Material defects | Out of spec products | Damaged products |
| Packaging errors | Compliance issues | Contamination |
| Missed change controls | Non-compliant GxP processes | Missing documentation |

# THE OLD WAY: A Lack of Visibility and Collaboration Creates Disruptions and Risk

Working with internal teams and supply chain partners to resolve an issue can take five to six weeks or longer. Late shipments, material shortages, out-of-spec products, and other business processes and product quality defects often escalate into supply chain disruptions that result in late deliveries to customers. The main reasons why it is difficult to resolve supply chain issues quickly include:

## Poor visibility

Most supply chain management teams lack a comprehensive view of all incidents across the organization, the status of their resolution processes, and their potential impact. Leadership teams rely on ad hoc reports from various sources that are managed and escalated via email with no real visibility into past trends or individual steps being taken to resolve issues. As a result, there is no visibility to potential disruptions or risks created as these issues go unresolved.

## Unclear incident resolution processes

Due to a lack of organization, prioritization, and centralized management of incidents across functions and enterprises, managers often spend 50% to 80% of their day in issue-related meetings and video conference calls simply trying to understand the scope of supply chain partner issues.

## No institutional memory to support continuous improvement

Manufacturing companies often lack a recorded institutional memory of learnings from past incidents and resolution patterns that can support root cause analysis and continuous process improvement. Supply chain teams instead send and receive incident reports via email and spreadsheets that do not keep a historical record of resolutions to similar problems.
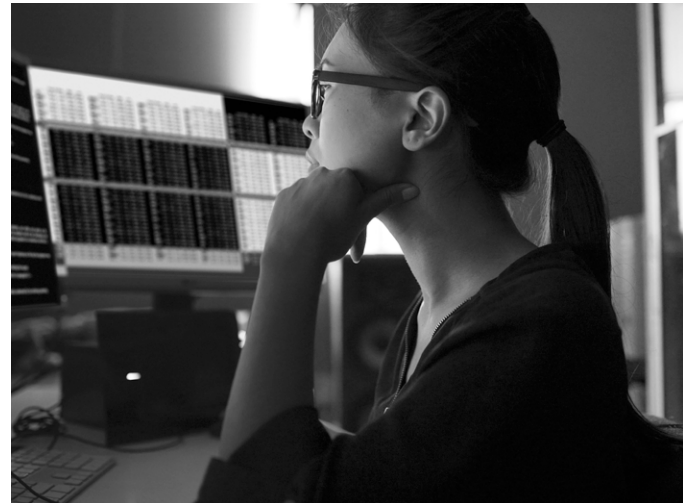
## Failure to get the right people involved

It's not always clear which stakeholders should be part of cross-functional and cross-enterprise teams formed to resolve an issue. This lack of clear accountability leads to confusion over roles, responsibilities, and how teams should respond. It also results in reporting delays because team members may not know who needs to be informed when issues are identified.

## Unstructured collaboration and decentralized information

Cross-functional and cross-company teams typically depend heavily on decentralized and unstructured communication tools like email, phone calls, and virtual meetings to resolve issues and determine the correct course of action when issues arise. As a result, important information is often missing or difficult to find and deadlines are missed.



While supply chain teams make their best efforts to resolve issues as quickly as possible, they have not had a digital system designed specifically to facilitate structured collaboration and workflow management between internal teams and supply chain partners—until now.

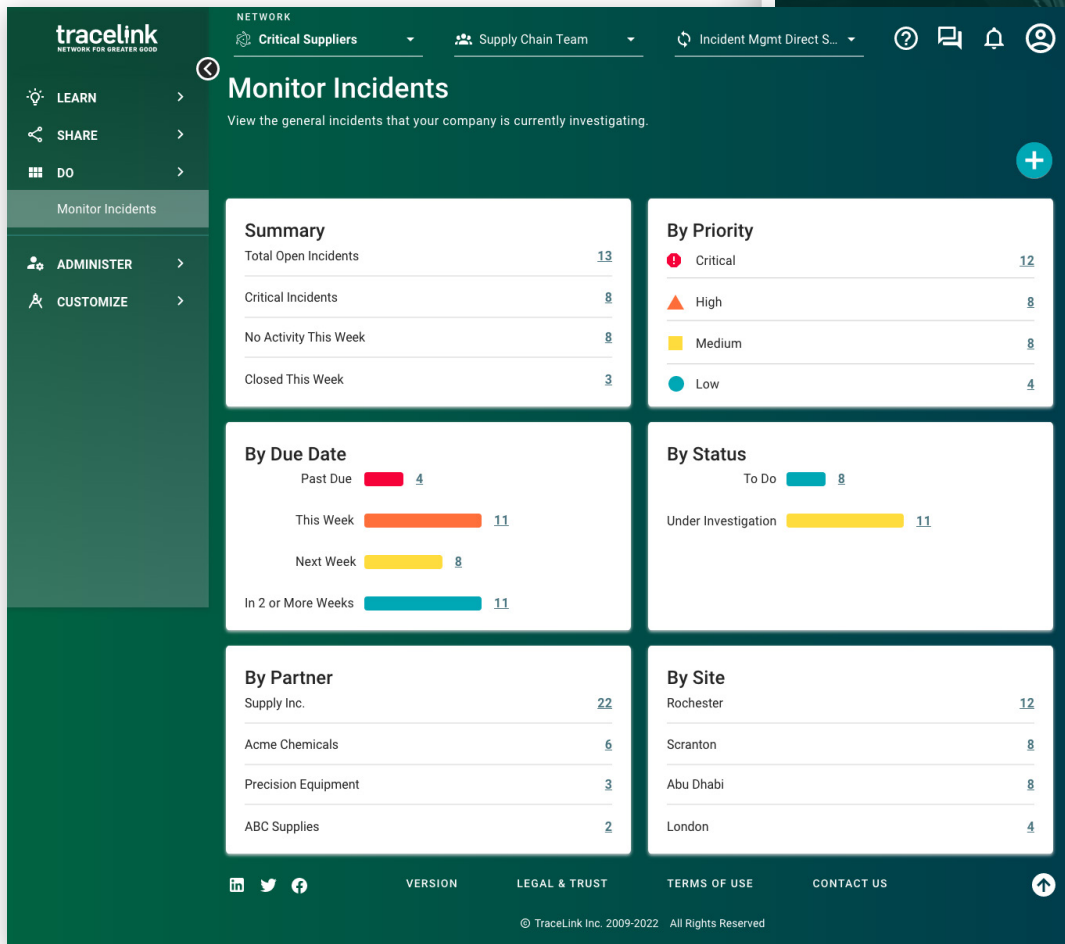# A Better Way with Multienterprise Supply Chain Work Management Software
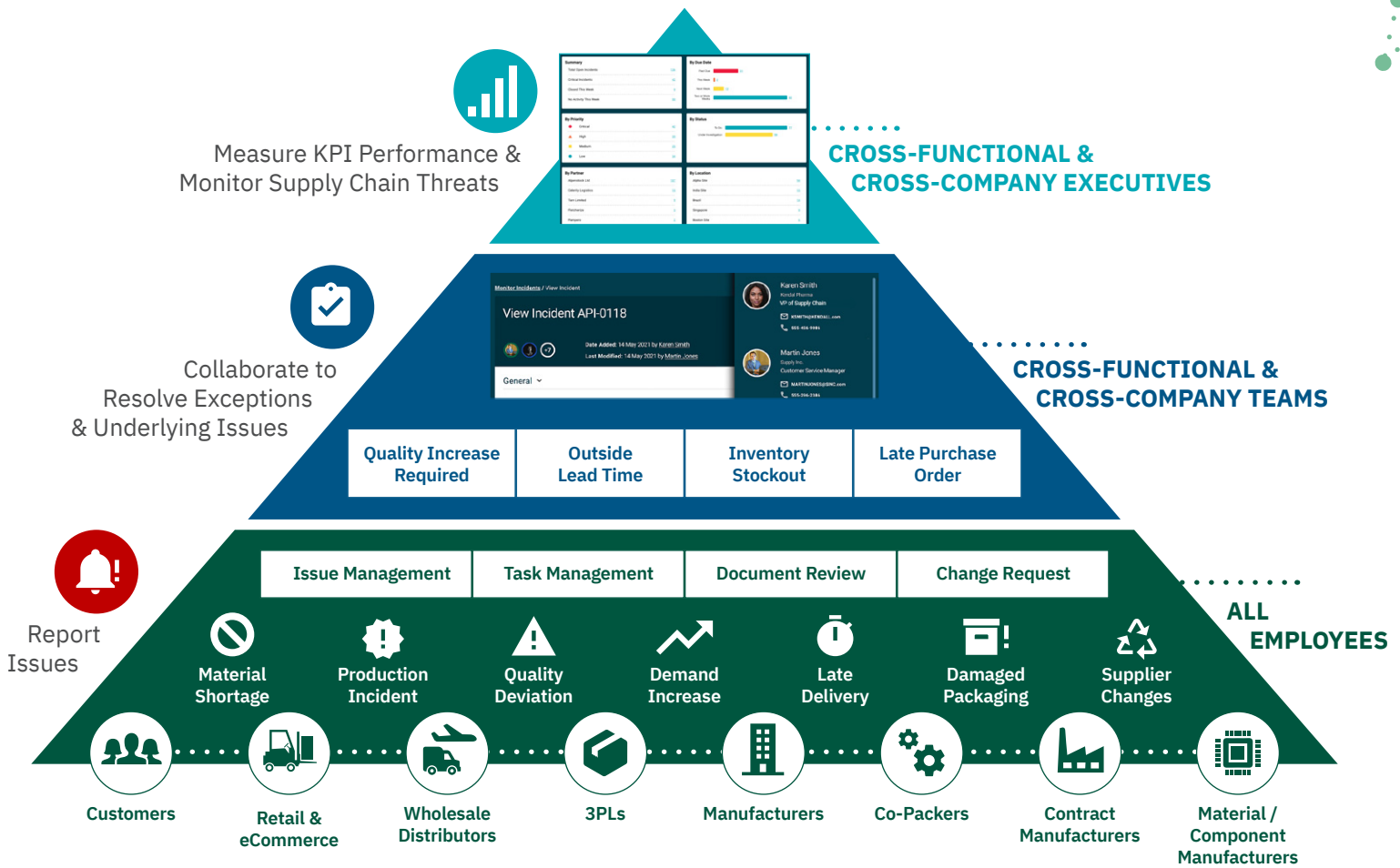


The Incident Management solution of TraceLink Supply Chain Work Management is a workflow-driven, multienterprise collaboration solution for capturing, analyzing, resolving, correcting, and preventing supply chain issues. Dashboards provide actionable visibility at all levels of the organization and across the end-to-end supply chain. Issues can easily be captured, monitored, and grouped by priority, due dates, issue-resolution status, sites, and partners. And supply chain partners can collaborate more effectively on supply chain issues using a single source of data. This leads to faster issue resolution times and a significant reduction in the total number of incidents.

# Here are the main reasons why TraceLink Supply Chain Work Management provides a better way to resolve supply chain issues:

## Gain centralized visibility

Dashboards provide real-time visibility into all supply chain issues across an organization. Quickly identify high-priority issues and gain the visibility needed to make better business decisions and process improvements. Supply chain management teams can easily track resolution processes that are falling behind and monitor underperforming internal processes and partners. Supply chain leaders have the visibility needed to apply additional resources when the situation demands it.



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Incident Mgmt Direct S...

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### Monitor Incidents
View the general incidents that your company is currently investigating.

**Summary**

| | |
|---|---|
| Total Open Incidents | 13 |
| Critical Incidents | 8 |
| No Activity This Week | 8 |
| Closed This Week | 3 |

**By Priority**

| | |
|---|---|
| Critical | 12 |
| High | 8 |
| Medium | 8 |
| Low | 4 |

**By Due Date**

| | |
|---|---|
| Past Due | 4 |
| This Week | 11 |
| Next Week | 8 |
| In 2 or More Weeks | 11 |

**By Status**

| | |
|---|---|
| To Do | 8 |
| Under Investigation | 11 |

**By Partner**

| | |
|---|---|
| Supply Inc. | 22 |
| Acme Chemicals | 6 |
| Precision Equipment | 3 |
| ABC Supplies | 2 |

**By Site**

| | |
|---|---|
| Rochester | 12 |
| Scranton | 8 |
| Abu Dhabi | 8 |
| London | 4 |

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# Escalate critical incidents and exceptions

Assign critical incidents and planning exceptions to the right level of management to ensure decisive action is taken quickly to minimize the impact on business key performance indicators.
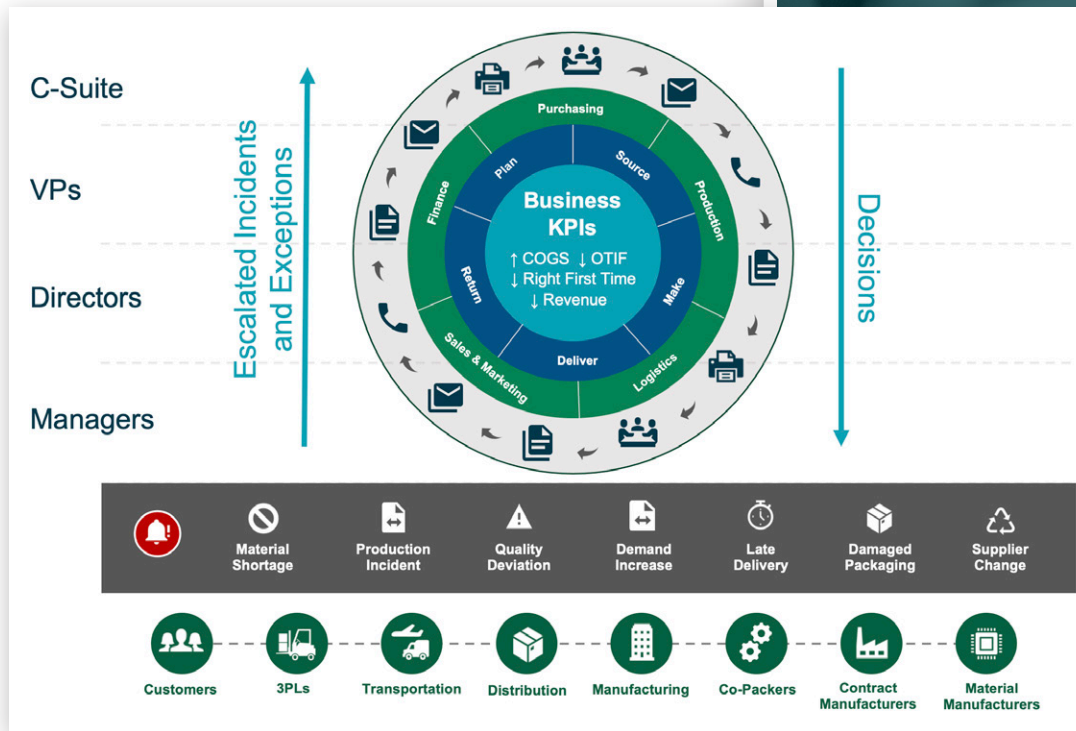


# Perform root cause analysis

Early access to the history of prior incidents supports continuous process improvement methodologies like Six Sigma and speeds up root cause identification so organizations can prevent recurring incidents.

## Apply an efficient process

Ensure accountability with workflow-driven multienterprise business processes, clear due dates, and automated notifications. With Supply Chain Work Management, everyone knows who is responsible for the next action. Easily customize workflows and business processes by adding data fields and changing user experiences based on responsibilities.

## Use the right team

Create "process teams" digitally and dynamically within the solution to make sure issues are routed to the right team members and subject matter experts from inside and outside of the organization. Rapidly engaging with the right subject matter experts leads to faster issue resolution times. The increased clarity on user roles also helps organizations avoid reporting delays and ensure that issues are reported right away.

# Add structure to traditionally unstructured processes

Purpose-built incident management processes bring structure to issue management to ensure that more complete definitions of issues are captured, including data related to quantitative and qualitative impact, analysis of the issue, and collaborative identification of the root cause of the problem by cross-functional internal and external teams. Automated notifications keep the collaboration process moving to ensure follow-up and prompt resolution. TraceLink Supply Chain Work Management includes five purpose-built incident management processes, a process for managing change requests, and a task management capability to create unique multienterprise processes:

- Direct Material Supplier Incidents
- Indirect Material Supplier Incidents
- External Manufacturing Incidents
- Internal Manufacturing Incidents
- Incidents (General)
- Change Requests
- Task Management

Task Management enables incident management to be supplemented with more structured projects to address more complex resolutions including those input from more than two companies. TraceLink customers that digitalize Supply Chain Work Management processes have delivered significant business performance improvements including a 65% reduction in the average time it takes to resolve issues and a 35% reduction in the total number of supply chain issues.

Opus™, the Platform for the Internet of Supply Chains, links systems, processes, people, and enterprises into a collective information network for intelligent business execution. Opus supports the creation of unique networks of supply chain partners and supports custom-configured multienterprise solutions that can be tailored to meet the needs of specific cross-functional and cross-company business processes. For example, a network can be created to connect contract manufacturing organizations (CMOs) and supported by an External Manufacturing Incidents solution with additional fields for collecting data on production yields. Another network can be created for packaging material suppliers and supported by a Direct Material Supplier Incidents solution that has been simplified by removing fields that are not relevant to packaging material incidents. Opus Solution Designer provides a user-friendly environment that enables business users to make these changes and associate a tailored solution with a specific network.

# TraceLink Supply Chain Work Management is the Digital Foundation for Continuous Process Improvements

TraceLink Supply Chain Work Management provides a digital foundation for continuous process improvement by creating a systematic approach to issue management and task-driven projects to better support methodologies like Six Sigma DMAIC. The task management capability enables predefined templates to be created to manage DMAIC projects across multi-functional teams and supply chain partners with assigned tasks, due dates, and dashboard visibility for managers. The ability to collaborate with supply chain partners during resolution processes and DMAIC projects further enriches the information collected and enables more permanent resolutions.

The Incident Management solution guides users through a progression of easy-to-use, configurable drop-down lists to capture a very complete definition of the issue. A financial impact field enables managers to assign a financial value to the issue to measure the consequences of not resolving the issue. With this rigorous definition and quantification of the issue, TraceLink Supply Chain Work Management supports the first two steps in the Six Sigma methodology—define and measure. The system also keeps a history of issues, resolutions, root causes, and recurring problems, which enables more measurement and analysis to support the third step of Six Sigma: analyze.

The recurring problems and issues with high financial impact discovered during the analyze step are good targets for process improvement projects. The ability to collaborate with supply chain partners during the resolution processes further enriches the information collected. This information supports corrective and preventive actions (CAPA) developed to improve processes and supports the "improve" step of Six Sigma.

Once processes are improved, TraceLink Supply Chain Work Management provides dashboards to monitor the improved processes to ensure that same issues do not recur. For process improvements that impact multiple supply chain partners, the solution's process network capability enables precise monitoring of a group of supply chain partners. This supports the final step of Six Sigma DMAIC: control.

Organizations using information collected with TraceLink Supply Chain Work Management to support Six Sigma projects have achieved a 50% reduction in repeat deviations and a 96% reduction in defects per million.

# TraceLink Supply Chain Work Management supports a structured approach to product and process quality improvements

**DEFINE**

**SIX SIGMA**

**MEASURE**

**CONTROL**

**IMPROVE**

**ANALYZE**

**DEFINE -** TraceLink Supply Chain Work Management guides users through a progression of easy-to-use drop-down lists to capture a complete definition of the issue. Easily add custom values to ensure a more complete definition of business process defects.

**MEASURE -** TraceLink Supply Chain Work Management collects quantitative and qualitative values and leverages dashboards to better understand troublesome internal processes, recurring issues, problematic partners, and the severity of issues.

**ANALYZE -** Use issue resolution history and root cause assessments collected throughout the incident management process to identify recurring and high impact problems.

**IMPROVE -** TraceLink Supply Chain Work Management creates comprehensive incident definitions and provides complete visibility into resolution processes, and its collaborative root cause determination capability supports process improvement projects.

**CONTROL -** Use configurable dashboards to track partner performance and the effectiveness of business processes that have been modified.

# TraceLink Supply Chain Work Management with Task Management Powers More Effective Six Sigma Projects to Deliver Superior Business Performance Improvements

**Any incident, no matter how small & regardless of whether it's a product defect or business process defect, can paralyze a supply chain.**

The increased visibility, shared information, and collaboration provided by TraceLink Supply Chain Work Management ensures that subject matter experts from both sides of the customer/ partner relationship have a focus on potential disruptions. Empowering and encouraging suppliers to enter seemingly small issues when they occur increases the chances that one of these subject matter experts will spot and avert a supply chain disruption.

Combining a Six Sigma DMAIC process improvement methodology with the Supply Chain Work Management solution's systematic approach to incident management not only improves the immediate resolution of issues, but also greatly reduces the number of issues and the disruptions that they cause. With this powerful combination, organizations have reduced supply chain disruptions by as much as 97%. The result is a more agile and resilient supply chain that suppliers and other trade partners are enthusiastic about participating in. Most importantly, with a more agile supply chain and fewer disruptions, TraceLink Supply Chain Work Management users were able to improve customer delivery performance by 82%.

## Precise Control for Multienterprise Processes

The Task Management process of Supply Chain Work Management enables the digitalization, management, and tracking of multienterprise processes that require collaboration across multiple supply chain partners. Multienterprise task management dashboards provide a single view into current and past tasks by status, priority, due date, and risk level with notifications to keep cross-functional and multienterprise teams aware of task activities. Task Management capabilities streamline internal business processes and the unique, digitalized task structure enables multiple external partners to be assigned different sub-tasks as part of a single task. Users create tasks from a library of digital process templates, customize tasks using the templates as a starting point, or build work management processes from scratch. And with structured data capture, Task Management extends process analysis and continuous process improvement initiatives such as Six Sigma DMAIC to cross-functional and cross-company teams.

# TraceLink Supply Chain Work Management Provides Supply Chain Partners with Greater Visibility and Operating Efficiency



### Simple start up:

- No cost to partners to participate in the shared multienterprise application.

- Customer and partner users are onboarded and supported by TraceLink.

- Simply accept an email invite to get started.

- No system integrations are required.

- Add as many subject matter experts as needed at no cost.

### Path to productivity happens quickly:

- Get immediate notifications and avoid endless emails.

- Gain instant management visibility into customer priorities, due dates, and resolution progress.

- Resolve issues faster and with fewer repeat issues.

- Connect directly to customers' subject matter experts to analyze problems and drive continuous improvements.

- Work together with customers to improve performance and strategic relationships.

**TraceLink Supply Chain Work Management is a critical tool for manufacturing companies and supply chain partners that want to boost performance and quality to build a more resilient supply chain.**

# The Business Case for a Better Work Management Process

In addition to faster issue resolution and business process improvements, TraceLink Supply Chain Work Management provides quantifiable benefits that directly impact the company's financial performance. These include:

### Lower cost of goods sold (COGS)

TraceLink Supply Chain Work Management process improvements enable reduced expediting and express shipping fees, overtime, scrap, rework, and material costs. More time to collaborate with partners on innovative new ideas versus issue resolution can lead to step-change reductions in materials costs.

### Maximize revenues

Reducing manufacturing and supply chain disruptions means fewer late deliveries and missed shipments which improves customer satisfaction and ultimately maximizes revenue.

### Improved on-time, in-full (OTIF) delivery performance

Reducing incidents, resolution time, and disruptions decreases order fulfillment cycle times. This improves supply chain agility, reduces the need for buffer stocks, and can help organizations improve OTIF delivery performance by as much as 82%.

# Organizations can begin achieving the business benefits of TraceLink Supply Chain Work Management in less than 30 days. Here is how:

- No software to install.

- No requirements for IT teams to manage the implementation.

- Customer users and partner users are onboarded by TraceLink.

- Begin managing internal processes on day one.

- Start logging, tracking, and resolving supply chain issues and incidents within days.

- Leverage Opus Solution Designer to configure pre-built process and solution templates.

- Simple, user-based pricing lets organizations get started quickly and cost-effectively.

Opus Solution Designer is a no-code/low-code UI-driven customization and configuration environment that enables TraceLink customers and solution partners to customize solutions to meet unique business needs while tapping into the rich data, services, and networking capability of the TraceLink Opus Digital Network Platform. Solution Designer capabilities include:

- **Manage Solutions and Packages:** Install solution package. Modify and save solutions, distribute, and deploy solutions.

- **Data Studio:** Add new fields and control field properties to capture the right data in the right format.

- **Workflow Studio:** Extend digital workflows to make it more precise, trigger custom actions such as notifications for real-time communication.

- **Design Studio:** Customize UI components, screens, and navigation to uniquely cater to the needs and habits of a specific set of users.

- **Role & Policy Maker:** Control access to screens, functions, and data in the web UI and APIs to easily scale to thousands of third-party users.

# TraceLink Supply Chain Work Management is Easy to Adopt and Use

TraceLink Supply Chain Work Management gives organizations the power to collaborate internally and with supply chain partners in real time—with a single source of shared truth—supporting continuous improvement processes and helping organizations achieve consistent performance outcomes, the highest levels of quality, and faster issue resolution times.

## Easy to start. Easy to network. Easy to use.

Hosted in the cloud on Opus™, the Platform for the Internet of Supply Chains

No Integration Required

Pre-Built Solutions

Low / No-Code Configuration

Invite Users

Partner Onboarding by TraceLink

No Cost to Partners

Single Network Login

Intuitive User Experience

Mobile Responsive

Automated Notifications

Structured Process Workflows

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