Adaptive Supplier Data Management (ASDM)

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IBM Enterprise Content Management

Uncovering Surprising Supplier Behaviors Creating Organizational Risk





What's going on that you don't know about within your supply chain? You might be very surprised. The possibilities include the following:

- A supplier delay, just communicated to one of your employees, will impact multiple customers.
- A number of highly rated suppliers are causing chaos with your deadlines.
- New international suppliers are being tapped to avoid single-sourcing risks, which might be causing quality risks.
- Recurring test failure for a supplier's part is not showing up on anyone's dashboard outside of engineering.
- Foreign nationals are handling sensitive information prohibited by export control laws.

With all the investment being made in supply chain systems and in putting controls in place, how could these situations occur?

Blame the Internet and Globalization

Over the last 10 years, the Internet—coupled with collaboration technology—has made it faster and easier to move information around the world, opening up opportunities for trade to the far corners of the earth. Whether it is outsourcing, offshoring, or even insourcing, the management needs of the supply chain world have been dramatically changed as a result of globalization. Yet many companies have not considered whether their systems and controls have kept up with the change in the sourcing landscape.

Most supply chain executives are focused on grappling with how to find cheaper suppliers overseas—or figuring out how to avoid single sourcing—while at the same time balancing cost pressures with quality risks and concerns. Five years ago, it was unheard of to find lead paint issues in toys. But with the far reach of today's world trade, we now find ourselves sourcing in different cultures and regulatory environments that require more vigilance and visibility into the supply chain operations.

Supplier relationship management software tools that only allow sharing of structured information (data captured in consistent linear formats for repetitive processing) such as inventory data, receiving documents and parts lists have been outmoded by the need to capture, extract, and analyze unstructured information (image\text-based data captured in a variety of formats).



Unstructured information, often estimated to represent as high as 80 percent of an organization's information, is often more subjective in nature, for example, plans, drawings, test results, and information documented in Microsoft Office Word or Excel. It is no longer a viable strategy to let this information hide out in isolated pockets of your company.

Public Persona Might Not Reflect Your Relationship

While rating your suppliers (based on published data such as credit reports, licenses, certifications, government reports and customer references) might provide you with a sense of knowing who you are dealing with, it might, in fact, give you a false sense of security.

What really matters is your own personal relationship with the supplier: how they meet your specific needs in terms of timely, reliable delivery of high-quality materials, parts, or goods. Although evaluating ongoing conformity to operational requirements can be more subjective in nature, this type of knowledge is essential to assessing the true business value of a supplier relationship.

In order to really get a handle on the quality of the relationship, an organization has to be able to collect and analyze data points from the multiple impact points throughout your supply chain, both internally and externally, not just the ones that are easily visible and retrievable.

Piecemeal Risk Analysis Isn't Enough

It is very risky to rely on bits and pieces of information when conducting risk analysis, especially when it comes to the complexity of sourcing parts and assemblies for discreet manufacturing.

When engineering rejects a particular part or assembly design due to noncompliance to the specification or the failure to pass quality testing, that is a critical piece of information that needs to be considered in understanding your overall risk with that supplier and the type of schedule delays that it might cause later on down the supply chain.



If that information is currently relegated to an engineer's own desktop files, risks and opportunities for improvement might not surface until there is a crisis with one or multiple customers. Or, it might never reach the light of day at all.

Effective risk analysis consistently captures both the structured and more subjective unstructured pieces of information in a manner that allows it to be consistently measured and shared with the appropriate parties and serves to form a holistic view of the supplier's capabilities and how they are serving the organization as a whole.

Addressing the Reality of a Global Trade Zone

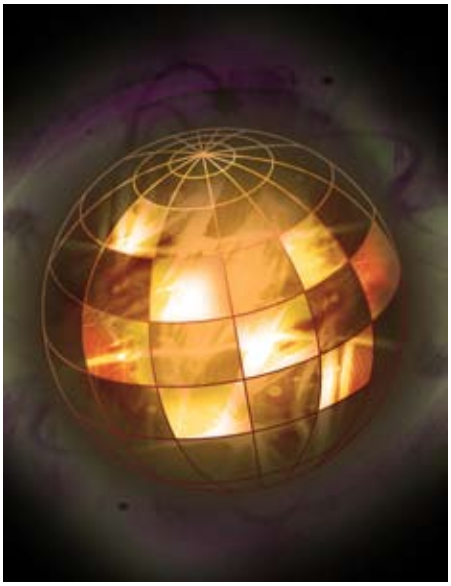
Today's global supply chain is continually faced with cost pressures and an ever-expanding volume of information that requires capabilities more advanced than those that were available a decade ago. Required capabilities include the following:

- Automation of inbound data classification to expedite throughput
- Inclusion of subjective knowledge worker metrics from both internal and external sources
- Consistent measurement and holistic visibility of supplier behaviors
- Holistic patterning to uncover untapped values and future dangers
- Information security managed at the user level

Let's look at each of these areas a little closer.

Automation of inbound data classification to expedite throughput
The inbound data classification function is often associated with legal and intellectual property departments. This function serves as the gatekeeper of all inbound and outbound unstructured information required to move the operation forward. Examples include the following:

- cost performance reports
- design specification documents
- engineering drawings
- inventory records
- materials and process specifications
- materials conformance reports
- quality assurance reports
- requirements traceability matrix



- safety compliance audit reports
- standards compliance
- tests plans and procedures

This function determines the proprietary nature of information and to what extent it can be disclosed internally and externally.

This department also determines whether documents are deemed critical to current operations and need to be considered in prioritizing workflow, possibly advising the Component Lead or Program Technology Lead of its nature, as well as notifying other department members on an FYI basis such as procurement, materials control, or production control.

The speed at which this function operates determines the speed of your entire operation. An organization automating this function has been able to redeploy up to 40 percent of staff while increasing processing throughput as much as threefold.

Inclusion of subjective knowledge worker metrics from both internal and external sources

Almost all of the data and documents received from suppliers needs to be subjected to reviews by knowledge workers. Depending upon the type and complexity of information, the process involves reviews by departments like Engineering, Product Management, Change Management and Quality Assurance. For complex discreet manufacturers, like Aerospace and Defense contractors, the documents might also need to be reviewed by governmental bodies like the Federal Aviation Administration or customers.

The review process can also have passive participants. These participants are other knowledge workers who do not directly participate in the workflow, but review the provided information for unintended impacts. Within complex product development departments, such passive participation is a critical part of ensuring nothing falls through the cracks that affects product quality, safety, or delivery.

This review process must be flexible and not so rigid that it hinders collaboration. It must effectively balance the need to keep the channels of communications between all the parties open without breaking intellectual property and export control laws.



In addition to efficiency gains, such review processes result in providing critical insight into supplier quality and agility. However, tracking such a complex review process without an automated system designed to handle the task is tedious and open to mistakes and delays.

Consistent measurement and holistic visibility of supplier behaviors
Feedback from the reviewers must be consistently captured in the context of quality, conformity and scheduling requirements.

This feedback provides a holistic view of how a supplier is performing with regard to both delivering a quality product that conforms to applicable requirements and delivering to the contractual delivery schedules.

Holistic patterning to uncover untapped values and future dangers
With data available in the context of quality and scheduling conformity, supply chain risks can be better analyzed. Using business intelligence and analytical tools, various risk models can be developed to identify patterns that portray a supplier's ability to consistently provide quality products and services.

Information security managed at the user level
It is not uncommon for foreign nationals to be employed or foreign companies to be contracted—both domestically and internationally—throughout the supply chain, but without the proper controls in place, a company can easily find itself in violation of export control regulations.

All it takes is a simple email that has an attachment that includes intellectual property prohibited for international distribution.

To safeguard against legal missteps, organizations need to have security in place at the user level so that proprietary information access can be controlled before a problem occurs.

Finding a Flexible Fix Without Disrupting Operations

Based on the requirements needed to support the Aerospace and Defense industries, Atlantic Software Technologies (AST) created the Adaptive Supplier Data Management



(ASDM) solution built on the IBM Enterprise Content Management (ECM) suite of products to address these requirements.

With ASDM, organizations can consistently capture, extract and analyze information from all decision points in the supply chain to provide a holistic view of supplier delivery, quality, and responsiveness in meeting the needs of organizations today, as well as predict trends for the future. The solution includes the following features:

- All information, both structured and unstructured, can be extracted from existing tools and systems.
- All information can be shared across multiple departments both internally and externally.
- Rules-based data classification and distribution, which can be easily modified to serve the needs of products, programs and contracts, allows automation, which expedites front-end information flow.
- Data sharing is both secure and traceable down to the user level supporting change management for audit, regulatory compliance, and records management.

By using flexible templates, ASDM is built to be highly customizable without requiring custom coding. It can accommodate the complex needs of both small and large supply chains that might have deeply entrenched internal processes that have grown over time as the organization changed with the marketplace. As a result, you can incorporate additional processes without the need to rip out and replace existing processes.

To learn more on how to find a flexible fix to address the reality of today's global trade zone, contact:

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IBM's Enterprise Content Management software enables the world's top companies to make better decisions, faster. As a market leader in content, process and compliance software, IBM ECM delivers a broad set of mission-critical solutions that help solve today's most difficult business challenges: managing unstructured content, optimising business processes and helping satisfy complex compliance requirements through an integrated information infrastructure. More than 13,000 global companies, organisations and governments rely on IBM ECM to improve performance and remain competitive through innovation.

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