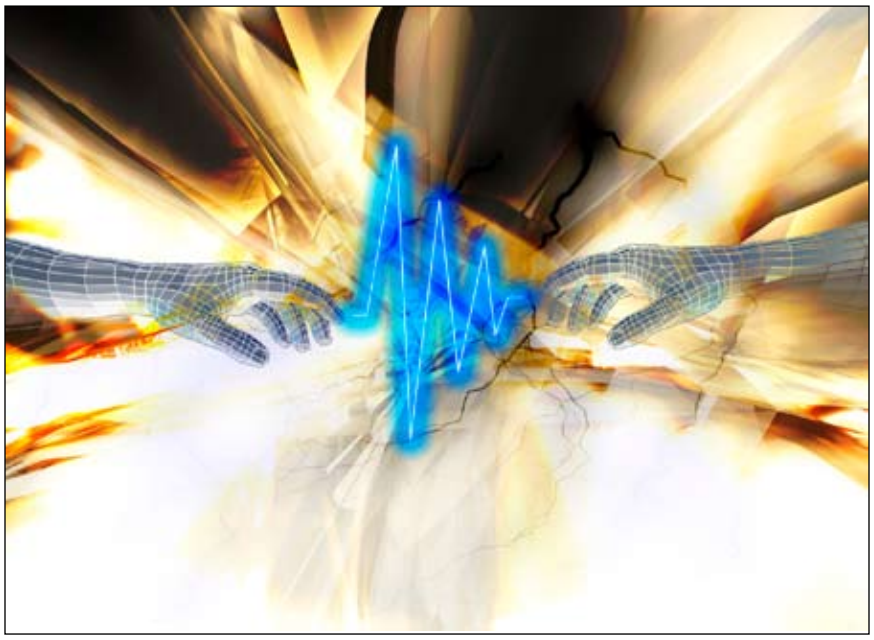
Engineering Collaboration for
Today's Changing Supply Chain
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IBM Information Management software

Engineering Collaboration for Today's Changing Supply Chain Configuration





According to the findings from Aberdeen Group's July 2011 Chief Supply Officer Study[1], the conversion of the traditional linear supply chain into multi-enterprise networks has caused the following challenges:

- Loss of control and visibility
- Increase in lead-times
- Planning collapsing into execution
- Sustainability embedded into decision-making
- Risks are proliferating

Supported by the survey Aberdeen recommends the following top five priorities of the Chief Supply Chain Officer based on survey responses:

- Aligning business goals with supply chain tactics (65%)
- Improving response management by bridging planning and execution (62%)
- Integrating Sales and Operations with Finance (52%)
- Making Risk Management part of the standard process playbook (68% planning to enhance in this area)
- Place increased focus on talent management (only 12% indicate that this is a current priority)

A clear path in addressing these objectives is enhancing information sharing throughout the supply chain with the latest in engineering collaboration strategies and tools. The shift that will allow greater supply chain alignment, risk management and responsiveness will occur through efficiently:

- Accessing existing engineering information
- Acting on information quickly
- Capturing ideas and driving them into products and processes
- Leveraging the knowledge throughout the supply chain
- Linking processes from disparate systems
- Facilitating global information exchange

At the same time, organizations will need to maintain their current infrastructure and adhere to new regulatory compliance mandates.

Let's take a closer look at each of these areas to help you assess your organization's agility and ability to operate in today's supply chain network of networks.

[1] Intelligent Response Management Strategies for Managing Demand-Supply Networks, the Aberdeen Group, July 2011, http://aberdeen.com/Aberdeen-Library/7316/RB-demand-supply-network.aspx



Accessing Existing Engineering Information

- How quickly can you find key engineering content?
- Are you sure the right engineering information is being used?
- Do you share engineering information internally in a controlled, secure way?
- Are you able to capture and connect lessons learned on the job to actual business processes?
- Can you demonstrate compliance?

Acting on Information Quickly

- Do you have insight into your engineering projects?
- How quickly can you issue a bid/RFP package?
- How quickly can you implement engineering changes?
- Are you able to capture and analyze key performance indicators at the plant or enterprise level?
- Can you meet customer commitments?

Capturing Ideas and Driving them into Products and Processes

- How do you capture customer and supplier feedback?
- How do you capture lessons learned from years of employee experience?
- Can you retrace process steps to identify "helps and hindrances"?
- How quickly can you implement new production techniques?
- Can you simulate plant changes and validate them?

Leveraging the Knowledge throughout the Supply Chain

- How do you capture information exchanges throughout the supply chain?
- Is this information searchable?
- Can you easily share engineering information with external parties in a controlled, secure way?

Linking Processes with Disparate Systems

- Can you link engineering content to your work management system
- Do you have access to scheduling
- Can you see if the proper inventory is available
- Do you have access to the history of work performed?



Facilitating Global Information Exchange

- Do you act globally but think locally?
- Can you share information across teams in various geographies?
- Are you searching for ways to improve supplier quality and costs?

Maintaining Current Infrastructure

- How quickly can you perform preventative maintenance?
- Do you have the proper instructions to handle planned or unplanned outages?
- Are you looking at the most current specifications?

Adhering to New Regulatory Compliance Mandates

- Do you have the proper audit trails?
- Can you keep up with changing and/or new regulations?
- Can you achieve your regulatory requirement, sustain compliance, and then demonstrate your enforcement?

Supply Chain alignment must be efficient and reliable. Information must be readily available, accurate and trusted. Workers must be able to easily collaborate to better optimize operations, control costs and safely protect the environment for generations to come.

Based on your answers to the above questions, how is your organization positioned to address the challenges throughout your supply chain?

The Age of Enterprise Engineering Collaboration

Obviously, with such a tall order to fill, the ability to easily collaborate (both internally and externally) is a key to operating in a complex and dynamic engineering environment. This requires more than merely cobbling together various software applications within the enterprise. We have now entered an age where an organization needs to be positioned to act with an enterprise information management system that establishes and maintains meaningful relationships between critical bits of information and offers Web-based collaboration throughout the supply chain.



The collaboration platform should enable the engineering community to efficiently and effectively bridge planning and execution throughout the supply network.

The ideal Enterprise Complex Engineering Collaboration system will be a fused solution where:

- All components are designed to work in consort
- All relevant information, regardless of information format, is connected in a meaningful, actionable way including:
  - o architectural designs
  - o engineering drawings and specifications
  - o records and auditable reports
  - o operating procedures
  - o email and other project correspondence
  - o permits and licensing applications
  - o training and certifications
- All changes have the appropriate alerts and notifications set in place to assure compliance, reliability and safe operations
- All information is managed throughout the lifecycle of change

Enterprise Collaboration with Fusion for IBM FileNet P8

Sword CTSpace's Fusion for IBM FileNet P8 supports globally distributed project and owner teams and automates key project document control procedures using 100 percent Web-based software. Fusion for IBM FileNet P8 ensures that all project information is captured, processed and delivered rapidly. The solution's advanced transmittal and distribution management tools replace slow, repetitive clerical processing.

Fusion for IBM FileNet P8 reduces project liability and improves design and work schedules with electronic collaboration and auditing tools that manage participation from diverse locations and organizational participants.

Additionally, the solution helps ensure compliance with standard operating procedures for each project. Automated audit logging ensures that a full history of compliance to these procedures is maintained.



With Fusion for IBM FileNet P8, all project members work with an up-to-date and consistent set of project documents to support real-time collaboration in the review, approval and issuance of project documents.

Fusion for IBM FileNet P8 extends these benefits through the full project lifecycle – from initial cost and benefit analysis through engineering and build out – and on into ongoing daily operations.

Fusion for IBM FileNet P8 ensures complex projects are completed on time and within budget. The solution reduces the risk of project delays by accelerating the processing of project documentation. Dramatic improvements in project efficiency are gained by eliminating timely and error-prone manual processing steps during common document control operations.

Additionally, the solution ensures compliance with project standard operating procedures and external regulations. Project ramp-up times are reduced because new hires and sub-contractors can leverage expertise and best practices from previous projects and follow standard procedures from the onset. The collaborative Web-based aspect of the solution enables organizations to leverage domain experts on projects from around the world and across the extended enterprise.

Sample ROI for Customers Implementing Fusion for IBM FileNet P8

A typical complex engineering project manages as many as 100,000 documents and may result in more than 2.5 million transactions. In this scenario, saving just 1 minute per transaction using Fusion for IBM FileNet P8 may save approximately 40,000 hours in labor – for more than $500,000 in cost savings.

Other key ROI examples include:

- Average time to find a document reduced from 4 hours to seconds
- Typical results include the redeployment of 5 Document Administrators
- Change notification reduced from days to seconds

The following chart highlights how our Enterprise Content Management solution features address specific complex engineering collaboration pain points and what we offer beyond engineering point solutions and your in-house legacy systems.

Fusion for IBM FileNet P8

Engineering Collaboration Pain Points	Process Enhancement with Fusion for IBM FileNet P8	Results
Lack of control and ability to audit engineering processes	- Automatic routing and monitoring of review and approval process - Approval workflows that enforce approval hierarchies - Integrated view and audit trail of approval comments, markups and revisions - Secure access for authorized users	Reduce commercial penalties and contract disputes. Reduce rework and repeated errors.
Delayed first revenue	- Storage and management of all engineering related documents as permanent contents in the engineering folder - Enterprise-level search capabilities	Greater visibility and speed of correct actions taken resulting in quicker turnover to client.
Costly non-compliance	- Version audit trail - Integrated view and audit trail of approval comments, markups and revisions - Records management integration - Secure access for authorized users	Reduce downtime and financial penalties.
Lost information between lifecycle phases of projects	- Centralized version control, engineering document numbering and lifecycle status reporting - Automatic reporting and email alert system for changes - Integrated engineering view embedded in the system	On the job experience and lessons learned incorporated into engineering documentation and processes.
Increasing subcontractor costs	- Integrated engineering view embedded in the system - Secure access for authorized users - Complete integration with back-end systems including CAD and SharePoint external collaboration tools - Web-based solution enabling collaboration throughout the supply chain	Improved and timely communication flow reduces need for changes, ultimately reducing costs.
High IT costs due to multiple and custom systems	- Web-based solution enabling collaboration throughout the supply chain - Enterprise-level search capabilities - Centralized repository based on pre-built engineering document categories	Lower total cost of ownership.

Engineering Collaboration Feature	Fusion for IBM FileNet P8	Typical Engineering Project Management Point Solutions	Legacy Systems / Manual Processes
Secure access for authorized users	YES	YES	NO
Version audit trail	YES	YES	NO
Web-based solution enabling collaboration throughout the supply chain	YES	NO	NO
Automatic routing and monitoring of review and approval process	YES	NO	NO
Approval workflows that enforce approval hierarchies	YES	NO	NO
Integrated view and audit trail of approval comments, markups and revisions	YES	NO	NO
Integrated engineering view embedded in the system	YES	NO	NO
Centralized version control, engineering document numbering and lifecycle status reporting	YES	NO	NO
Automatic reporting and email alert system for changes	YES	NO	NO
Centralized repository based on pre-built engineering document categories	YES	NO	NO
Complete integration with back-end systems including CAD and SharePoint external collaboration tools	YES	NO	NO
Storage and management of all engineering related documents as permanent contents in the engineering folder	YES	NO	NO
Enterprise-level search capabilities	YES	NO	NO
Records management integration	YES	NO	NO



The Right Team

Sword CTSpace has teamed up with Miria Systems to bring together the right mix of people who have the business knowledge and technical experience necessary to assist your organization in addressing these complex issues.

To learn more on how you can gain greater alignment, risk management and responsiveness through enterprise engineering collaboration, please contact:

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About Sword CTSpace

Sword CTSpace delivers high value business applications to the world's largest companies globally. With operations in 37 countries, Sword today employs around 2000 people and generates more than $250m in consolidated revenue. An international leader in the delivery of Business Process Improvement solutions, Sword's skills, infrastructure and experience help our customers across regulated industries optimise performance, increase efficiencies and maximise return on investment. With flexible delivery options, including On Demand and On Premises, combined with our extensive industry expertise, Sword provides comprehensive support to customers across insurance & healthcare, energy, banking & finance, telecoms, utilities, engineering & construction and the public sector.

About Miria Systems

Miria Systems has proven capabilities to streamline business processes helping organizations to drive productivity, enhance financial visibility, reduce operational expenses and achieve regulatory compliance.

Our offerings are focused on asset management solutions for the Nuclear/Energy market including engineering document management, work order management, inventory management, and environmental compliance. Other back office solutions include Managed$Pay® for accounts payable, supplier management, travel & expense, contracts management and HR processing.

Recognized as an experienced IBM Software Value Plus Solution Partner and Support Provider Miria utilizes a consultative approach, with the right mix of domain and technical experience, concentrating on IBM ECM platform and Asset Management solutions including: Sword Fusion, Ventyx Asset Suite, IBM Maximo and SAP PM.

About IBM ECM

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, optimizing business processes and helping satisfy complex compliance requirements through an integrated information infrastructure. More than 13,000 global companies, organizations and governments rely on IBM ECM to improve performance and remain competitive through innovation.

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