



The SOA Powered B2B: Easier Consolidation. Greater Business Value. Tighter Integration.

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EXECUTIVE SUMMARY

If you are in IT, there is good chance that you are maintaining multiple B2B integration systems for data exchange and translation. Every IT leader has considered consolidating these products into a single B2B Suite to reduce costs and improve supply chain agility. Historically, each B2B system has acted like a 'black box,' providing little visibility and integration into the IT governance tools.

As more and more companies adopt SOA and realize the importance of governance, it is becoming critical to include the B2B Suites into the SOA fabric and govern them as any other IT system. A well thought out SOA based approach to B2B not only reduces the B2B expense but also provides SOA benefits such as improved governance, compliance, reuse and helps extend B2B processes to other IT applications.

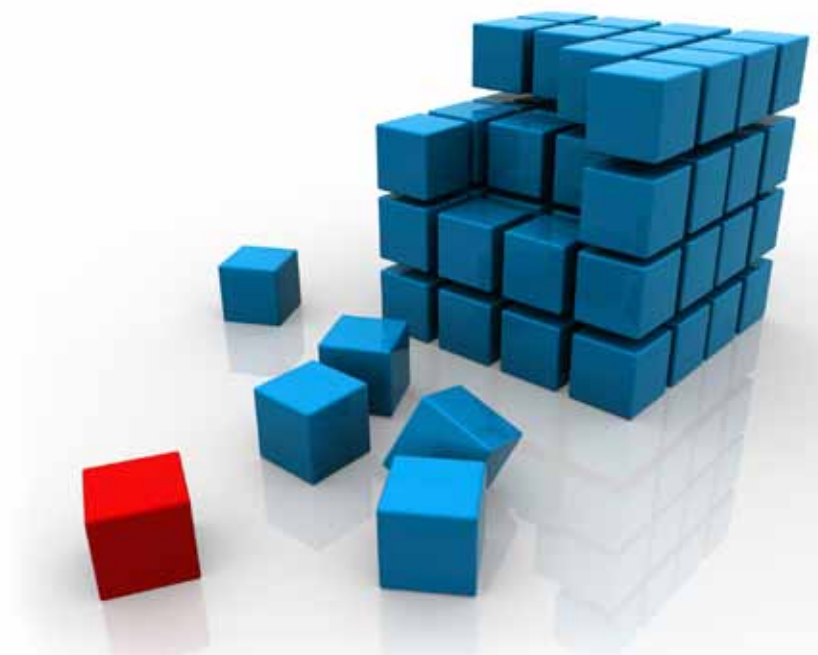
LONG TERM APPROACH TO B2B

As supply chains become more complex, the B2B complexity and volumes grow every year and meeting SLAs is becoming increasingly important. At the same time the security, audit and compliance needs from B2B systems have increased manifold. To meet all these challenges and minimize disruptions to their supply chain, companies typically plan on a B2B Gateway implementation with the aim of consolidating all of their B2B projects into one application.

The focus of consolidation into one B2B application typically revolves around enabling the protocols and EDI/XML standards in use, as well as the ability to process the data volumes. The other factors such as visibility, extensibility, architectural fit and the product in question's ability to fit in the IT governance model are largely ignored, resulting in the continuance of B2B systems being their own islands of functionality with little visibility from the outside world.

This white paper outlines the benefits of a SOA-enabled approach to B2B and why it is a better long term approach.

So, let's get started.



TODAY'S B2B CHALLENGE

For years B2B software has been delivering on its great promise: to help organizations reduce the cost of doing business. B2B solutions have been used to automate transactions between customers, suppliers, partners and marketplaces; to reduce costly overhead, improve transaction reliability and improve the efficiency of business-to-business processes.

But as IT complexities and the business demands made on IT have increased, a whole new set of expectations has emerged. Organizations increasingly realize that their B2B operations cannot be kept separate from their internal processes. They want to integrate B2B interaction with their business processes to enhance productivity and improve reliability both in IT and for the business users who own the B2B processes. They not only want the lower costs that this higher level of integration enables, but also to capture significant business value of increased operational and competitive agility.

Unfortunately, B2B solutions have not all evolved quickly enough to meet these higher expectations. Common problems include the following for many organizations:

- The solution does not allow reuse of existing IT intelligence and assets, severely limiting its business value. Further, this inflexibility forces a point-to-point solution in an increasingly heterogeneous IT environment.
- The current B2B solution lacks flexibility, leading to higher costs and inability to respond to business demands. For example, a legacy translation/mapping product might not integrate well with other B2B or IT initiatives, leading to higher costs in mapping and translation and greatly hampering business agility.
- The current solution cannot provide visibility into B2B transactions. In essence, the solution is a black box, keeping IT operations and the business from accessing and leveraging B2B data. The result: increased operations costs, lower customer/partner satisfaction and higher barriers to supporting business initiatives.
- The current solution is a point-to-point solution that fits poorly into the overall architectural vision and requires a dedicated set of skills and expertise to manage. The organization then faces the ongoing challenge of maintaining these proprietary, inefficient point-to-point systems.
- The current solution might be going out of support soon, forcing the organization to make an upgrade decision.

As a result, many CIOs, Directors and VPs of Supply Chain, and B2B Architects now find themselves at a crossroads. What's the best path forward? How should they address obstacles that their current B2B solutions put in the way of attaining the ultimate promise of B2B: comprehensive end-to-end integration of internal operations with customers, partners, and suppliers? Increasingly, they are finding that the answer lies in B2B Gateway software built on a foundation of service-oriented architecture (SOA).



THE POWER OF SERVICE-BASED INTEGRATION

SOA delivers what organizations need to support the integration of the heterogeneous B2B environment with its many internal applications, trading partner applications and databases and to enable fast, accurate information exchange with those trading partners. Unlike traditional point-to-point integration approaches, SOA lets you service-enable disparate applications and orchestrate the services across the enterprise and the trading network. By surfacing functionality from existing systems and applications as services, you can avoid a dangerous 'rip and replace' approach. You can also build new services as needed and manage them across stakeholders and for their entire lifecycle.

With this comprehensive approach to SOA-enabled B2B, you can:

- Leverage SOA to align overall IT processes with the needs of today's increasingly partner-centric business world
- Quickly and efficiently develop new solutions while extending existing IT investments by reusing or replacing as many or as few parts of legacy B2B services as you choose – for example, building a new visibility service on top of an existing translation service
- Govern your B2B system using your SOA infrastructure and obtain a single view of business across all system and information silos both inside and outside the enterprise
- Take advantage of the various options for connecting B2B services to different parts of your organization, including service-oriented, event-driven or enterprise application integration

Achieve better interoperability by using SOA to make B2B services available to other applications, greatly extending the benefits of a typical B2B Gateway

In addition to addressing those relatively rare cases in which an organization is creating a new B2B environment from the ground up, SOA-enabled B2B solutions can help organizations convert the IT challenges of their existing B2B technologies into significant business benefits. For example, such solutions are ideal for organizations that want to:

- Modernize legacy B2B systems, including mainframe EDI systems, EDI translators, point-to-point integration solutions, and dependencies on Value Added Networks (VANs), which can be expensive because they charge by message volume.
- Replace legacy EDI systems such as mainframe EDI connectors and older standalone implementations that now require a complex and costly upgrade.
- Consolidate and standardize multiple B2B projects (often resulting from silo organizations or M&A) across the enterprise into a single B2B platform, enabling re-use and reducing cost.
- Incorporate SOA architectural approaches into existing B2B infrastructures.

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SOFTWARE AG'S APPROACH TO SOA-ENABLED B2B

The foundation of the service-based integration of applications, customers and suppliers lies in the Enterprise Service Bus (ESB), which provides the SOA-based platform and run-time environment for Software AG's B2B Gateway.

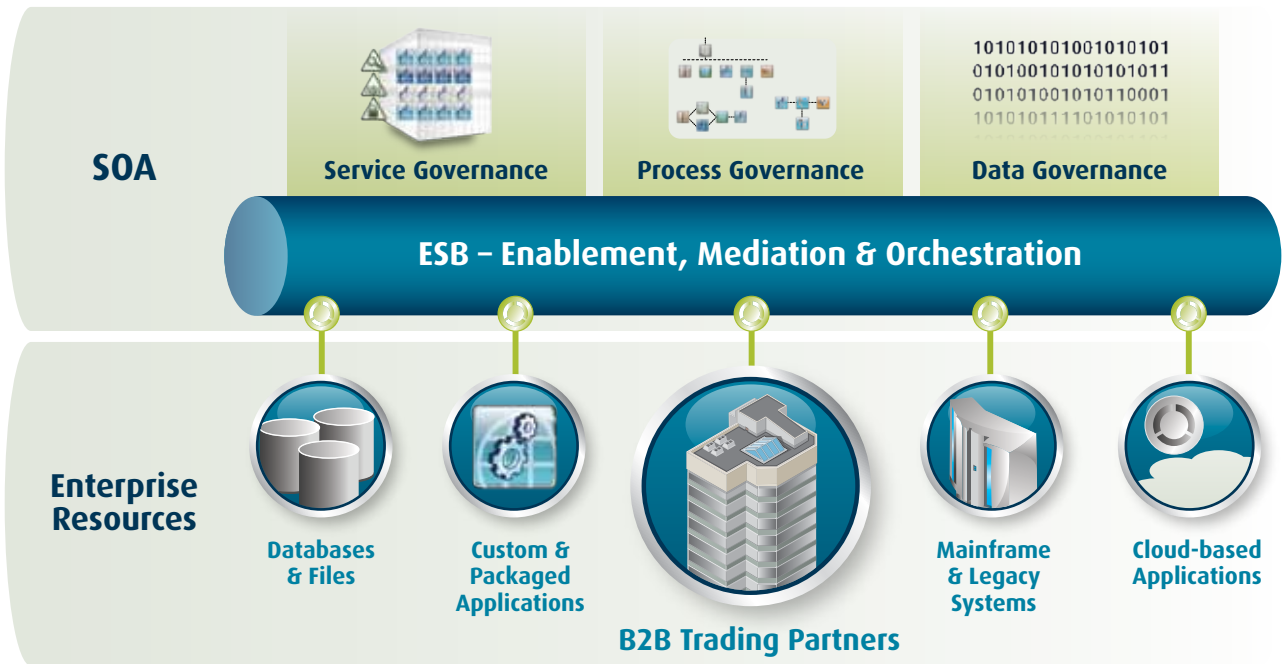


Figure 1 - ESB providing a single services oriented platform for the B2B and other IT services

ESB provides core features of Software AG's webMethods B2B Gateway, including SOA-based integration, transformation, mapping, orchestration and enrichment. Because the ESB "speaks any technology" it allows all of your Web services, JMS messaging, packaged and custom apps as well as legacy systems to communicate efficiently in the SOA world. You can service-enable any of your investments and resources, including packaged applications, databases, mainframes and technology from any vendor, extending existing IT assets and innovating quickly and cost-effectively to meet new business needs. The applications you've spent years developing can be used in new ways and their business data and logic can be re-used in new business processes and services.

Through mapping, transformation and enrichment features, the solution makes sure that information from one system can be used by another. Graphical mapping tools allow developers to point and click to show how information in one system relates to another. Transformation tools, which include an extensive library of built-in tools and the ability to create custom transformers, enable data to be manipulated from one system to another. Enrichment tools allow information to be added as data travels across your SOA-enabled enterprise. And the solution extends those features to enable integration with partners, thus connecting B2B operations with internal processes.

To provide a complete integration infrastructure, the ESB combines application integration capabilities, high-speed messaging, B2B exchanges, legacy applications, and event-driven technologies. Because the ESB is platform-neutral, code-neutral, messaging-neutral and application-server-neutral, it enables any application to use any data and it can perform intelligent brokering and routing of information to wherever it is needed. Thus the organization can control the end-to-end process between internal applications, Web services, partners and suppliers.

In addition to providing the core SOA-based integration features and providing protocol support for the different wire formats (HTTP, FTP, SMTP), the ESB hosts components that can be composed as a set of services, providing an “assembly first” metaphor, allowing users to view the solution in terms of callable services. Using SOA you can create standards-based, reusable B2B projects to meet ever-changing requirements.

As SOA converges with B2B, services will become the main interaction points between business partners, and policies will externalize contextual as well as contractual conditions such as security, availability, guaranteed response times, quality of service and more. These policies will be defined and enforced by governance technologies, at both design-time and run-time. These technologies include:

- Registry and Repository for publishing and consuming services, providing a central, platform-independent store for defining and describing assets, eliminating re-work, and enabling faster collaboration
- Policy Design and Enforcement to ensure adherence and consistent quality and to enable real-time visibility into the system and prevent disruptions
- Roles and Responsibilities to govern decision-making authority and access
- Lifecycle Management to govern the creation of services and make sure that the updating of services does not cause disruptions in other services

Within the world of B2B, powered by SOA, a SOA governance strategy can bring structure, scale and speed to SOA adoption by guiding re-use, automating SOA processes, simplifying complexities and interdependencies and managing the entire SOA lifecycle.

Together, the ESB and Service-Oriented Architecture enable the flexibility to adapt to IT and B2B initiatives now and in the future. The ability to integrate existing business intelligence and IT assets ensures that they are exploited to their fullest to create business value. By enabling IT and the business to achieve full visibility into B2B activities, SOA-enabled integration lowers operations costs, increases partner satisfaction by enabling more efficient and accurate interactions and creates opportunities for new business initiatives. Just as importantly, full integration frees the organization from cumbersome point-to-point solutions that are costly to maintain and that would otherwise continue to proliferate as business needs change.

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FROM A COST CENTER TO A PROFIT CENTER

Too often, IT has been seen as a cost center rather than as a powerful engine of efficiency and a source of significant business advantage. B2B operations that do not provide full integration of internal business processes and data with external interactions only perpetuate that view of IT. SOA-enabled integration helps IT shake off that undeserved reputation and further evolve from a cost center to a profit center by:



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- On-boarding trading partners more efficiently and connecting them with relevant internal processes
- Improving the accuracy and efficiency of interactions with suppliers, distributors, trading partners and customers, eliminating costly errors and delays
- Reducing the cost of ownership by reducing the need for point to point integrations
- Leveraging existing IT investments by service-enabling them and re-using services
- Providing real-time information exchange, increasing the speed at which the organization can do business

Further, trading partners now expect “frictionless” interactions that don’t require manual intervention or cumbersome rework every time changes are made in transaction documents or the like. SOA-enabled B2B gives IT and the business the ability to stay ahead of those ever-rising expectations, which brings CIOs, Directors of IT, Directors and VPs of Supply Chain, and B2B Architects who have recognized the need for SOA-enabled integration to another crossroads: which product to choose.

THE SOLUTION: SOFTWARE AG’S WEBMETHODS TRADING NETWORKS

Software AG’s webMethods Trading Networks is built on an integrated SOA suite, seamlessly providing access to our enterprise service bus capabilities, as well as our business process management, monitoring, analytics, governance, composite applications, legacy applications, and databases.

This foundation provides:

- A single, centralized gateway for all B2B integration, spanning EDI, XML and Flat File document formats, enabling the organization to integrate 100% of its trading partners with a single solution.
- Support for all major B2B standards and protocols such as AS2, ebXML, X12, EDIFACT etc. and vertical industry standards such as Rosettanet, SWIFT, CIDX, PIDX, HIPAA etc.
- A proven platform for even the largest, most complex B2B integrations, supporting transaction levels in the billions and connections to tens of thousands of partners and suppliers.
- Integration with CentraSite, our governance platform, which combines a standards-based registry and repository with policy management, simplifying the reuse of services and the automation of SOA processes, as well as helping with the complexities and interdependencies of the organization’s SOA and B2B networks.
- Best-of-breed back-end integration, business process management, SOA governance, monitoring and business activity monitoring.

Whether an organization is modernizing legacy systems, seeking to replace a previous standalone solution, or consolidating and standardizing multiple B2B projects across the enterprise, Software AG's webMethods Trading Networks software solution can help IT deliver the business benefits of next-generation integration now.

THE SOLUTION IN ACTION

Software AG's webMethods Trading Networks is a leading B2B Gateway which is built on a SOA foundation used by more than 1600 customers and partners across all major industries, from small to very large implementations. Some examples of customers benefitting from the SOA driven approach to B2B:

Landsbond der Christelijke Mutualiteiten (LCM), the largest health insurance organization in Belgium with over 4.5 million members, needed the ability to quickly process an ever-growing volume of information they receive from the many stakeholders involved in health care provision process. Because managing and monitoring these transactions from start to finish was becoming increasingly complex and started to pose issues for LCM's development capacities, the company chose Software AG's SOA-enabled B2B solution because it was a single platform for B2B and SOA Governance which allowed them to manage all their data flows in a single centralized repository. They can now automate, inspect, validate and index messages from their many applications and efficiently exchange information with their external partners, reaping the many benefits of an SOA-enabled solution, including:

- Increased flexibility with automatic processing of all message formats
- Improved quality with automated message integrity and relevance validations
- Optimized processing chain increased overall efficiency and reliability
- Improved security with integrated access and permission checks
- Accelerated creation of new services, including generic
- Faster development with reuse of more and varied services
- Ongoing real-time insight into service health and performance
- Easier ad-hoc traceability and reporting using message histories

Most importantly, they can implement new services more quickly and focus more of their resources on their core business.

Elemica, a global provider of sourcing and supply chain integration and optimization services to the world's top chemical, energy, tire and rubber and related manufacturing companies, with more than 1800 members, chose the webMethods Trading Networks B2B gateway as the strategic platform upon which to build their interoperable data exchange because strong SOA foundation was critical to meeting the B2B objectives. Built on a SOA that provides business process automation, monitoring and analysis, the network leverages the web-Methods Enterprise Service Bus (ESB) platform to provide seamless real-time integration across Elemica's trading partners. In addition, the solution has simplified development and maintenance. Elemica can develop services once and then maintain them centrally to save time and effort even though they may be deployed across different partners, processes, standards and document types. Using SOA, Elemica has been able to bring new clients onboard to production systems as quickly as possible.



"Being able to rely on a single central solution is of crucial importance to us when it comes to data and process governance. It guarantees standardized management for all of our data flows."

Alain Conrath | Head of IT |
Landsbond der Christelijke
Mutualiteiten (LCM), Belgium



"This SOA-based approach of re-usable services is a key differentiator in our ability to rapidly deploy new standards and services,"

CTO Alok Saxena



The platform must do it all: seamlessly interconnect applications, improve workflow, support B2B transactions and enable a Service-Oriented Architecture (SOA) – all at a low cost of ownership.

3Com | CIO Jerry Kelly

This unique business process network:

- Enables total automation of processes across trading partners
- Provides a single point of access to the entire supply chain
- Supports different modes for different levels of IT sophistication
- Assures high reliability across supply chain
- Scales easily as partners, processes, applications and transactions continue to grow

3Com - To improve overall IT processes and streamline both application integration and B2B integration using the SOA platform chose Software AG's webMethods suite to establish a real-time business infrastructure to connect all of its global operations, consolidating the company's customer support operations to further improve service levels.

By embracing a Service-Oriented Architecture to drive its business integration strategy, the technology leader has:

- Secured better real-time visibility into enterprise operations
- Improved customer service
- Gained the ability to reuse newly created interfaces and services across subsequent implementations
- Replaced much of the cost and burden associated with maintaining brittle point-to-point integrations
- Positioned themselves to reuse newly created interfaces and services across subsequent implementations
- Established IT as a change agent within the company

Further, by re-architecting their existing core business systems within a SOA, 3Com can also improve the flexibility and responsiveness of those systems to change.

All of these companies are ideally positioned to capture the full benefits of SOA-enabled B2B business integration no matter how their business, customers, partners, and markets may change. The power of our solution has also been recognized by objective observers like Gartner and Forrester, who have consistently named Software AG as a leader in B2B integration and SOA-enabled technology.

ADDING VALUE IN TOUGH TIMES – AND BEYOND

Like all decision-makers today, IT leaders face an additional dilemma: how to respond to some of the most difficult economic conditions in memory. Many organizations are trying to cut costs but also know that they need to grow incremental revenue to get through the current difficulty. SOA-enabled B2B integration addresses both sides of that complex equation. On the one hand, our solution addresses costs through reuse of services, the retirement of inefficient and unwieldy patchwork systems, and the ability to do more with less. On the other hand, our solution addresses the revenue side with its unrivalled ability to rapidly support critical business initiatives. And as the recovery gains momentum those companies that are already equipped with state-of-the-art SOA-enabled B2B integration capabilities will quickly outdistance their less agile competitors.

Accuracy, efficiency, and speed in interacting with trading partners have never been more important. The key to achieving those goals lies in SOA-enablement with its ability to make possible the integration of B2B processes with internal processes and help improve visibility of partner transactions across the entire supply chain. And the acknowledged leader in SOA technology is Software AG. While others hesitate at the crossroads, those IT decision-makers who choose Software AG will multiply the value of their IT investments and the value of IT to the business – and get there faster.

For information about how Software AG's B2B Gateway can bring the benefits of SOA-enabled integration to your organization, please visit

<http://www.softwareag.com/corporate/products/wm/b2b/default.asp>.

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TO FIND THE SOFTWARE AG OFFICE NEAREST YOU,
PLEASE VISIT WWW.SOFTWAREAG.COM

Take the next step to get there – faster.

ABOUT SOFTWARE AG

Software AG is the global leader in Business Process Excellence. Our 40 years of innovation include the invention of the first high-performance transactional database, Adabas; the first business process analysis platform, ARIS; and the first B2B server and SOA-based integration platform, webMethods.

We offer our customers end-to-end Business Process Management (BPM) solutions delivering low Total-Cost-of-Ownership and high ease of use. Our industry-leading brands, ARIS, webMethods, Adabas, Natural, CentraSite and IDS Scheer Consulting, represent a unique portfolio encompassing: process strategy, design, integration and control; SOA-based integration and data management; process-driven SAP implementation; and strategic process consulting and services.

Software AG – Get There Faster

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