WHITE PAPER

Informatica Data Exchange Used to Handle EDI and Challenging Custom B2B Integration

Sponsored by: Informatica

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EXECUTIVE SUMMARY

Spending to improve integration capabilities with trading partners is growing at the fastest levels since the 1990s, when enterprises first began to exchange data with each other electronically using commercial software and services.

Informatica B2B Data Exchange is a fast-growing comprehensive business-to-business integration (B2Bi) platform that is particularly popular among customers of Informatica PowerCenter, a leading data integration platform. Informatica B2B Data Exchange sends and receives communications from trading partners, handles the transformations, and uses PowerCenter for orchestration to handle validations, data quality, and delivery. Data Exchange is offered as on-premise gateway software and as a cloud service.

Customers have used Informatica B2B Data Exchange for a broad range of initiatives that include consolidating and modernizing their B2Bi capabilities and operation, extending B2Bi to address nonstandard use cases, embedding multi-enterprise integration into software-as-a-service (SaaS) offerings, complying with regulations, improving levels of automation to provide better service to customers and to cut costs, and shifting to near-real-time integration.

We expect that enterprise investments in B2Bi technology will continue to increase because of expansion into new regions and markets, broader adoption of technology to handle the volume and complexity of data being exchanged with trading partners, and the growing need for more custom integration between an enterprise and its customers, suppliers, and business service providers. Broader trends in technology that will continue to drive growth include growth in cloud-based providers, adoption of cloud services, and the increase in real-time transactions, particularly for field customer support using mobile devices as part of a service value chain.

Enterprises are able to cost justify new investments in B2Bi for many different reasons. When building a business case for B2Bi investment, it is important to quantify the cost savings obtained by eliminating manual processes and consolidating onto a cohesive integration platform. In addition, the ability to support comprehensive B2Bi will better enable an enterprise to compete for business, which means growth from retention should factor into the business case. Finally, new offerings, such as customer services enabled by B2Bi, are likely to open up new growth opportunities.

SITUATION OVERVIEW

Spending to improve integration capabilities with trading partners is growing at the fastest levels since the 1990s, when enterprises first began to exchange data with each other electronically. Uncertain worldwide economic conditions continue to force businesses to streamline operations, reduce costs, and improve efficiencies. At the same time, a business' customers are undergoing their own efforts to streamline and economize, creating the need for change upstream for suppliers and business service providers. These forces are causing enterprises to reevaluate and modernize their B2B integration infrastructure. Other factors contributing to the growth spurt in B2Bi include:
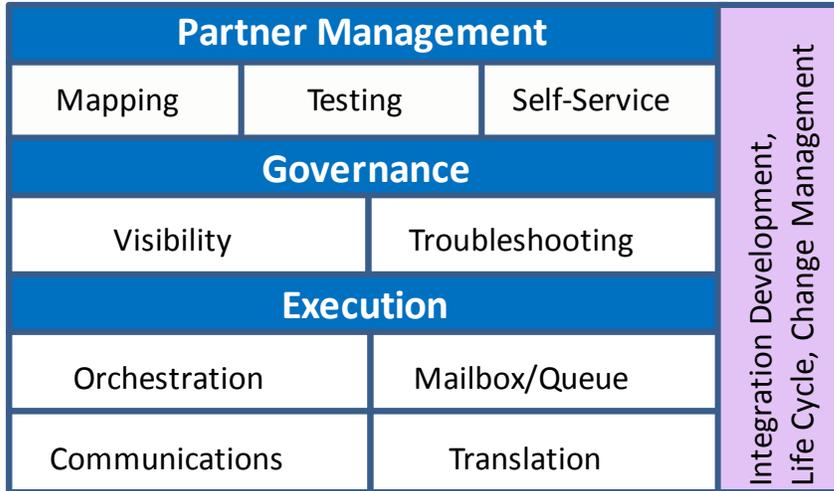
- ☒ While adoption of EDI is more pervasive, at the same time, supporting custom integration between trading partners is necessary. This includes adoption of integration techniques to automate the capture of data from PDF, Excel spreadsheets, and Word documents.

- ☒ As vendors offer software as a service and platform as a service (PaaS), integration can be a core component of the offering. We are seeing broader adoption of B2Bi through OEM relationships with B2Bi vendors.

- ☒ Cost-cutting tied to consolidation and standardization allows enterprises to identify best-of-breed B2Bi solutions and build a core competency around the solution. Costs are saved through the economies of scale and the leverage gained from a team skilled with using the same platform across an organization; the greater the skills are indicates the growing comfort level in supporting innovative uses of B2Bi tools.

- ☒ Modernization continues to shift enterprises from mainframes to distributed systems. B2Bi is no exception.

- ☒ Greater visibility and reporting are also creating demand for adoption of B2Bi.

B2Bi Platform Overview

B2Bi middleware consists of software and services used to exchange data with trading partners. Data is structured in either community-based EDI standards or privately agreed-upon as well as semistructured formats. B2Bi involves the communications, transformations, and orchestration required to prep data for delivery to a trading partner or receive data from a partner for delivery into an application. Figure 1 illustrates the layers of a B2B integration platform.

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B2B Integration Platform

Partner Management		
Mapping	Testing	Self-Service

Governance	
Visibility	Troubleshooting

Execution	
Orchestration	Mailbox/Queue
Communications	Translation

Integration Development, Life Cycle, Change Management

Source: IDC, 2012

Partner Management

Partner management includes the ability to onboard trading partners, with tools to map how data will be exchanged with partners. The ability to test is also a feature, as are some partner self-service functions, which may include the ability to download up-to-date security certificates as well as review documents that have errors that prevent the data from being processed.

Governance

Governance includes the ability to monitor and report on the status of all the files and transactions processed by the platform. It also includes error reporting to make troubleshooting less expensive as well as the ability to measure the adherence to service-level agreements (SLAs) by the enterprise and its trading partners. Other governance features like data access control as well as users, groups, and category management might also be relevant to governance.

Execution

In runtime, B2Bi platforms include:

☑ The ability to send or receive files, Web services, and messages from partners through a variety of secure communications protocols, including direct delivery or receipt of files from trading partners as well as the ability to communicate with and pick up files from B2B networks

☑ The ability to transform the file by breaking it down into individual transactions and map each transaction into the appropriate format, based on the map associated with each document type, which can be based on EDI standards as well as agreed-upon formats between two or more trading partners

☑ Orchestration passing the transaction through a variety of organized tasks or workflows to validate, perform any data quality measures, sort and organize related transactions, and accept or reject individual transactions (Accepted transactions are passed to a mailbox, queue, or internal bus or directly to an application.)

Development

Development environments include all the tools needed to create maps, describe processing workflows, call external services for things such as data quality, and make changes. Increasingly, development environments provide graphical user interfaces (GUIs) for describing the workflow, or processing steps, and mapping.

With the growth in the number of trading partners, document types, and custom integration types, there is a broader shift from point-to-point integration to orchestration built on as much reusability as possible. This is also supported and encouraged in many of the B2Bi platforms.

The development environment also includes connectivity to enterprise applications, such as SAP Financials and messaging middleware. In addition, some environments support industry integration and orchestration patterns. Industries such as healthcare have particular standard patterns, such as HIPAA 5010 validations, that are geared toward improving customers' implementation time.

Because B2B integration involves the automated processing of business transactions, the faster new customers are onboarded, the faster an enterprise is able to generate revenue. Also, the faster a new supplier or transaction type is onboarded, the more quickly an enterprise is able to reduce costs.

Informatica B2B Data Exchange

Informatica B2B Data Exchange is a fast-growing comprehensive B2Bi platform that is particularly popular among customers of Informatica PowerCenter. Informatica B2B Data Exchange sends and receives communications from trading partners, handles the transformations, and uses PowerCenter for orchestration to handle validations, data quality, and delivery. Informatica offers Data Exchange as both an on-premise gateway software and a cloud service.

With more than 800 customers, Data Exchange has seen rapid growth; IDC estimates a growth rate of 25%, with Data Exchange outperforming the overall B2Bi market, which grew an estimated 10.4%. The company launched its 9.5 release in September 2012, moving more directly into support of cloud and big data use cases. Key features include:

☑ **Big data exchange gateway:** Informatica supports the integration of big data processing into the B2Bi platform. This architecture supports both real-time

messages and extremely large file integration using Hadoop as storage. Informatica's phased approach to Hadoop provides the ability to store data at two levels: Data that has to be accessed regularly is at a tier 1 storage facility and infrequently used data is extremely compressed and stored in lower-cost offsite storage for long-term archival.

Informatica search tools can be used to access the data, supporting B2Bi adjacent activities such as repository and discovery associated with e-invoicing as well as parking the data for subsequent analytical use cases.

☑ **Data visibility and governance:** Data Exchange provides visibility into the data as it is integrated with error-reporting functionality and Web-based dashboard and analytics. In 9.5, business activity monitoring tools are integrated. Predefined key performance indicators and customizable dashboards are also provided out of the box.

These features join other Data Exchange capabilities, including:

☑ **Universal data transformation:** Any-to-any data transformation that supports a broad range of file and message formats including binary documents (PDF and Excel), printing formats (AFP and PostScript), and standard batch file and messaging formats (e.g., XML, HIPAA, HL7, NCPDP, ACORD, DTCC, MVR, EDI, EDI-Fact, SWIFT, FIX, NACHA, and Telekurs)

☑ **GUI-based mapping tool:** A visual environment in which to process complex transformations

☑ **Managed file transfer:** Comprehensive MFT capabilities with a consistent definition of all endpoints inside and outside the firewall

Customers Adopt Informatica Data Exchange for a Broad Variety of Initiatives

Most midsize to large companies operating in a structured value chain have had to build some level of B2Bi capabilities to support their business goals. Informatica customers are using Data Exchange to:

☑ Consolidate and modernize their B2Bi capabilities and operations

☑ Extend B2Bi to address nonstandard use cases

☑ Embed multi-enterprise integration into software-as-a-service offerings

☑ Comply with regulations

☑ Improve their levels of automation to provide better service to customers and to cut costs

☑ Shift to near-real-time integration

Extended, Heterogeneous Value Chains Lead to Nonstandard Data

Businesses have had to extend their supply chains to include many more participants. The increasing size and heterogeneity of trading partner networks have created a need for B2B integration tools that allow the exchange of many types of data.

Even businesses with mature EDI solutions have found that exchanging data with trading partners that do not have EDI capabilities can be time consuming and error prone. To achieve greater efficiency in these any-to-any scenarios, enterprises are adopting B2Bi tools that can receive semistructured data and data for automated capture and delivery into applications.

Electronics Distributor Adopts Informatica B2Bi to Handle Non-EDI Transactions

Four years ago, a global distributor of electronics components realized that it needed to purchase a new B2Bi tool to handle data exchanges from trading partners that did not have EDI capabilities. Doing business with smaller suppliers and customers — many of which wanted to handle transactions via PDFs, Word documents, or Excel spreadsheets — introduced inefficiencies and errors due to manual data entry. However, to continue growing its business, the distributor needed to continue to trade with these customers.

The company made a decision to identify a tool to translate its semistructured documents to cut costs and reduce errors. It chose Informatica because:

☑ Informatica had demonstrated its capabilities with its ability to handle "any to any" translations.

☑ The buyer was familiar with and regularly used PowerCenter, which meant it would be able to extend and leverage its software investment and internal skills for this new project.

The company's initial deployment of B2Bi took approximately three months. The focus of the project was mapping semistructured documents to standardized data structures and automating processes around these documents. Data Exchange maintains a profile of each trading partner along with information about the customer's preferred file formats and delivery mechanism (e.g., Excel spreadsheets and email attachments).

When the company receives a file from one of these trading partners, Informatica's Data Transformation tool parses the file and maps it into the internally standardized format, which is then consumed by other systems for processing and fulfillment. A similar process is used for outbound transactions.

Today, the distributor uses Informatica B2Bi to connect and exchange data with all trading partners that do not use EDI, and it has seen significant reductions in cycle times and error rates. In addition, this company extended its use of Informatica in ways that improved its business in related areas including:

☑ Sending out large documents such as price books, point-of-sale data, and inventory reports on a daily basis

- Flagging translation failures and making them available to users (If a transaction fails, the fields that caused the failure are flagged, which decreases the time and effort it takes to detect errors.)

- Exchanging data with internal applications via Web services (e.g., delivering purchase orders to other applications for updates prior to sending them to the ERP system)

The distributor began using Data Exchange in the United States, and its road map includes rolling out the software across all regions.

Embedding B2Bi in Cloud Offerings

Most enterprise applications require integration, and this holds true whether the application is deployed on-premise or in the cloud. For supply and demand chain cloud offerings, B2Bi is a core element of the overall offering. Demand chain SaaS providers are increasingly partnering with B2Bi platform providers to embed trading partner integration into the SaaS offering.

Embedding B2Bi to Speed Up Customer Onboarding

Zyme Solutions, a leading provider of cloud-based channel data solutions to high-tech industry OEMs, needed a platform to help it maintain its competitive advantage by delivering timely and accurate data to its customers. Zyme processes millions of POS and inventory transactions per week from thousands of distribution and retail partners, originating from more than 180 countries on behalf of its customers.

Customer onboarding time, a critical business metric for Zyme, was close to four weeks because of Zyme's use of an in-house program to receive data feeds and cleanse and validate the data. Zyme decided to adopt a commercial solution to improve onboarding time because the four-week window was impacting its solution setup and "time to value" for customers. The major requirements for a new B2Bi platform included:

- **Any-to-any transformation:** The new system had to accept a variety of formats. The company's customers provide data feeds in a variety of different formats including EDI, spreadsheets, PDF files, and text files sent over AS2, SFTP, and email. These data feeds are typically received in batch format on a daily or weekly basis.

- **Cloud-enabled architecture:** Multitenancy and an open architecture were critical for this SaaS provider.

- **Ease of use:** The platform had to have a graphical user interface that would reduce the technical skills and time required to onboard new customers.

Zyme was a SaaS provider and was already an Informatica customer, having used PowerCenter for several years. Because PowerCenter would remain the core platform for the B2B solution, Zyme evaluated and selected Informatica's B2B Data Exchange, B2B Data Transformation, and Data Quality.

Since the company was familiar with Informatica PowerCenter, its Bangalore, India-based engineering development team was able to do the bulk of the implementation using in-house resources, working with Informatica professional services as needed.

Since the implementation, Zyme has more than quadrupled its transaction volumes and has fewer staff members dedicated to onboarding. On average, onboarding time was reduced by three weeks, which this SaaS provider believes helps it maintain a strong competitive advantage and scale its solutions.

Modernizing B2Bi

To cut costs and to improve processes around B2Bi, many enterprises are modernizing by moving off mainframes to distributed systems.

Life Insurer Purchases Informatica B2Bi to Improve Automation Around Customer File Processing

Two years ago, a large global life insurance company decided to modernize its B2B integration infrastructure by moving off its EDI-based mainframe software. One reason for the modernization was the difficulty users had onboarding new customers. The insurer had an administrative system that was tightly coupled with its mainframe-based B2Bi software. End users had to key through multiple green screens to onboard new customers. In addition, they had no flexibility in routing incoming files to other applications.

The insurer invited proposals from a variety of vendors including Informatica. Products by three shortlisted vendors were evaluated and scored based on capabilities, user experience, and alignment, with the larger goal of modernizing all of the company's administrative systems. Ultimately, the company selected and purchased Informatica Data Exchange because it best fit the company's needs.

The initial deployment of Informatica Data Exchange and Data Transformation took approximately 18 months. An initial project was aimed at improving the automation around exchanging data with small local market customers.

The IT side of the project created high-level rules and points of consistency for data transformations as well as workflows that manage the transformation process. The line of business was responsible for creating definitions and rules around each document format. A majority of the implementation time was spent building business rules for the administrative destination systems to pull data from the Informatica Data Transformation tool.

This implementation of Data Exchange is very unique because the company's business users are able to onboard new customers, create the data maps, and set up the transformation. To make it possible to shift B2Bi to the business unit, Informatica professional services built a macro-based Excel template that businesses use to map all the fields in a customer file, at which point they are linked to the required internal format.

Once the new customer file is set up, incoming files are processed automatically and delivered to applications without any manual steps. As a result of the implementation,

the business unit has seen a significant reduction in error rates, faster cycle times, and improvements in business processes associated with onboarding and exchanging customer data.

Today, the business unit's migration to Data Exchange is still small but growing as new customers are onboarded. Older customers are maintained on the mainframe system since no additional support is required for them. In the future, the local market business unit plans to migrate all of its customers onto the Informatica platform. Because of the successful pilot, the insurer plans to extend the use of Data Exchange to other business units such as benefits administration.

Bringing Near Real Time to B2Bi

Enterprises have shown a strong drive to invest in greater system-to-system automation in order to reduce costs and speed up cycle times. As a result, we have seen a more pervasive use of EDI in the supply chain, in financial transactions, and in U.S. healthcare (related to HIPAA regulations).

In addition, with cycle times speeding up in many areas of business, B2Bi is matching those cycles with near-real-time B2Bi. We are seeing this type of adoption in logistics, some types of manufacturing, and customer service.

Health Insurer Uses B2Bi Solution to Comply with 5010 Regulations

A major update to HIPAA regulations (5010) around EDI took effect in early 2012. Several years earlier, a national health insurer launched a multimillion-dollar project to revamp its existing B2Bi systems since its legacy applications were not compliant.

The company evaluated products from its existing pool of vendors and ultimately chose Informatica B2Bi because of the native support for HIPAA through its partnership with Edifecs. This partnership ensured that Informatica was committed to complying with any new regulations issued by the federal government. In addition, the company had already implemented Informatica PowerCenter in its data warehouse, and selecting Informatica as the new B2B platform would leverage existing infrastructure investments.

The implementation of this product took approximately 10 months, and the longest part of the implementation was working with the business to rebuild all the mappings from ACS X12 into the organization's application formats. The team decided to build a single translator canonical format that all its applications would have to use — that is, the team only had to build one translator map per document rather than one translator map per document per application.

Today, all incoming and outgoing medical claim status and eligibility request transactions run through Data Exchange in near real time. The organization receives and processes roughly 50,000 eligibility requests and 10,000 claim status requests per day. Claims validation processes run in batch mode, and they have a single gateway to support both real-time and batch EDI processing.

As a result of this implementation, the insurer was able to reduce cycle times drastically — for example, the round-trip for a request for information about patient eligibility sent from a hospital waiting room through a clearinghouse into the insurer's systems and back takes just six seconds to complete. In addition, the company was able to comply with the HIPAA update by the government-mandated deadline and avoid hefty non-compliance fines.

This company's future road map with Informatica involves migrating all of the company's supply chain transactions onto the new B2Bi system.

Future Outlook

Most of the macro-business trends and technology trends favor continued growth in B2Bi. Business trends include:

☑ Growth will continue through expansion into new regions and new markets.

☑ Uncertain economic conditions continue to drive cost-cutting initiatives, which also involve the outsourcing of non-strategic activities. We expect to see a continued expansion of supply and value chains as outsourcing grows. We also expect to see an ongoing shift to business service providers capable of offloading elements of business processes. Any type of outsourcing requires an automated exchange of data between parties.

☑ Investments in customer-facing innovation will be retained and grow through differentiation, which includes improving reliability and automation. B2Bi is a major technology enabler supporting both efforts.

Technology trends include:

☑ The continued adoption of cloud increases the need for highly reliable integration focused on the exchange of data outside the firewall.

☑ The move to real-time and near-real-time infrastructures involves connections between suppliers, the enterprise, and customers. Because so much of B2Bi is batch oriented, shifting to Web services and near-real-time responses will force a shift in B2Bi infrastructure.

☑ More types of automation outside the bounds of EDI will see support. For enterprises with EDI-only gateways, it is highly probable that there will be a need to support custom multi-enterprise integration.

We also believe enterprises will increasingly prefer suppliers and business service providers with strong B2Bi competencies. We have spoken with many enterprises that believe they have won deals because they could handle a special type of integration or were able to meet SLAs because they have invested strategically in B2Bi. Multi-enterprise integration will need to be a core competency for many enterprises that today view B2Bi as a necessary but non-differentiating infrastructure.

ESSENTIAL GUIDANCE

The use of technology to improve multi-enterprise processes offers enterprises strategic capabilities for identifying and capitalizing on new business opportunities, hence increasing the reliability of their business-to-business interactions. In addition, there is the opportunity to improve efficiency and gain leverage by standardizing on a common platform for handling internal application-to-application and external business-to-business integration.

Building a business case for a B2B refresh using on-premise software involves:

☑ Reviewing new customer demands that will increase costs unless changes are made to the existing approach to integration

☑ Identifying the different approaches to both B2B and A2A integration inside the organization and calculating the cost benefit by standardizing and consolidating

☑ Determining when your organization first identifies problems (Is it when customers call in to complain? Tracing the cost of problem identification and resolution and comparing it with the cost of improving integration processes will help build the business case to justify changes. Additionally, identifying the relationship between complaints involving integration and the change in revenue from those customers is an important way to classify the urgency of undergoing B2B reengineering.)

Aside from cost savings from improving B2B operations, a range of business benefits should be considered when making a business case for adopting new B2Bi software:

☑ Shifting from paper and documents that need to be manually processed to the electronic exchange of data can save money and justify an investment in integration.

☑ Enhancing customer experience can improve an enterprise's reputation and result in new business.

☑ Maintaining up-to-date, synchronized data between different systems within an enterprise and between partners allows the organization to make better business decisions based on current data.

There are several reasons why a B2Bi update may be required in your company. You could be seeking better efficiencies or worrying about meeting the needs of increasingly demanding customers. In addition, you could be facing requests from business for changes to your B2B processes or changes could be mandated by new regulations. Whatever the triggers, the need for new technology could be overwhelming. The successful adoption of B2Bi by the innovative enterprises mentioned in this white paper will hopefully provide inspiration and concrete ideas to help you successfully respond to new demands.