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## IBM WebSphere Business Connection Business Partner ValueNet and Customer Presentation

August 6, 2002

IBM Software Group

- ▶ Welcome to an overview of IBM WebSphere Business Connection, a family of offerings addressing business-to-business integration needs. This overview will identify the ValueNet that includes IBM Business Partners in support of Business Integration market expansion with new offerings. It will also summarize the environment companies are facing in extended enterprise collaboration, introduce the three editions in the Business Connection family, demonstrate the use of Business Connection in some active customer engagements, and conclude with the benefits derived from using Business Connection for B2B integration..

## Available BP General Partnering Steps

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- **Join PartnerWorld for Developers (typically ISVs, ASVs)**
  - <http://www.developer.ibm.com>
  - Register - <http://www.developer.ibm.com/member/registration.html>
  - Advancement is through Brand or Sales Nomination
- **Join PartnerWorld for Software (typically SIs, Consultants)**
  - Register - <http://www-100.ibm.com/partnerworld/software/pwswpub1.nsf>
  - Advancement is through Software Certification
- **Register in Global Software Directory (typically ISVs, ASVs)**
  - <http://www.software.ibm.com/solutions/isv>
- **Register in Partner Software Directory**
  - <http://www.software.ibm.com/cgi-bin/d2w/reseller/resell/input>
- **Education and Certification**
  - PartnerWorld Education, IBM Learning Services, Brand training (WebSphere, DB2, Tivoli, Lotus)
- **Utilize IBM Marketing Opportunities**
  - Part of PartnerWorld program and augmented by Brand-specific opportunities
- **Utilize IBM Sales and Marketing Tools and Support**
  - Including Solution Partnership Centers (for development), Industry SolutionCenters (supported industry verticals), WebSphere Innovation Centers (or become a Partner WIC where applicable)

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- ▶ In many instances, and especially for Global Systems Integrators, Partners may already be a member of one or both of the organizations mentioned. For B2B Integration opportunities, IBM will help Partners achieve advancement in the program or certification on BI technology and sales.
- ▶ GSIs typically have a marketing development fund tied to sales of IBM products that can be used to promote new service offerings wrapped around IBM BI offerings. RSIs and ASV/ISVs can achieve similar benefit as part of the PartnerWorld program and IBM can help facilitate their movement within/ thru the programs, including entry into IBM SPCs and WICS where applicable for development/ interoperability/ test.

## Business Partner Business Integration Offering ValueNet

### ■ Business Partner and IBM Together Grow Business Process Management/ Integration Value for their Customers above traditional EAI for Targetted Industries

WebSphere Business Integration for Industries (Announced 6/10/02)

BP Revenue potential in Private/ Public Enterprise Hub Buildout in a Business Process Automation / Trading Partner Network

- Business-Specific or Vertical Industry-Specific Business Logic (Collaborations and Mapping/ Adapters) Value Add
- Services to Install Hub
- Potential Software Reseller Incentives tied to particular PartnerWorld programs
- Integration Software Development Value Add (Java, J2EE, Web Services, Portals/ Dashboards, etc.)

WebSphere Business Connection (WBC) Offering (Announced 6/10/02)

BP Revenue Potential in Private/Public Spoke or Small-Medium Enterprise Hub Buildout in a Business Process Automation / Trading Partner Network

- Exposure of Scalable Private or Public Web Services, Profile Aggregation/ Federation, Secure/LargeFile Transfer at the edge form an effective E2E B2B Solution (Publish, Subscribe, Bind)
- Services to install Spoke or SME Hub (Including Collaborations and Mapping/ Adapters)
- Potential Software Reseller Incentives tied to particular Partnerworld programs
- Integration Software Development Value Add (Java, J2EE, Web Services, Portals/ Dashboards, etc.)

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- With the Business Partner, two recently announced, WebSphere-based Business Integration offerings form a complementary product solution for Business Process Integration. WebSphere Business Integration for Industries addresses Industry-specific Business Process Automation for Enterprise Hubs. Centered around WebSphere Application Server technology, WBII offers the B2B infrastructure and tooling for large Enterprise opportunities. Websphere Business, also based on WAS technology, adds Business Process Management/ Integration intelligence at the edge (spoke) and for lower or upper mid-range Medium Enterprises (or remote facilities of Large Enterprise), can also provide collaboration run-time and tooling in a scalable architecture that can also perform as a hub when tied to a WBI hub or legacy BI hub that conforms to the same industry standards.

## Available Business Process Management/ Integration Steps

- **Sign IBM bi-directional Confidential Disclosure Agreement with Technology/ Partner Solutions**
  - Permits detailed discussion of company content/ establishes baseline for relationship
- **Co-Develop IBM bi-directional Memorandum of Understanding**
  - Non-Binding, Permits deeper understanding of Give-Get and next steps
  - Permits entry into existing/ new Business Integration engagements or Proofs of Concept
- **Participate in IBM Technical Due Diligence Review**
  - Brief investigation of Partner solution content, mutual understanding
- **Co-Develop Statement of Work/ Document of Understanding**
  - Contract-intent, detailed Give-Get and potential business case/plan, tied to PartnerWorld and other programs - facilitated by Technology/ Partner Solutions for Industrial and Distribution Market Segments
- **Education and Certification**
  - Tied to PartnerWorld and other programs - facilitated by Technology/ Partner Solutions for Industrial and Distribution Market Segments
- **Joint Presentation/ Marketing**
  - Involvement in PR and Marcom activities, presentations to Customers - facilitated by Technology/ Partner Solutions for Industrial and Distribution Market Segments
- **Proof of Concept Proposal/ Direct Customer Engagement**
  - Enter existing or propose new Proof of Concept tied to joint Customer engagement

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- ▶ The Technology/ Partner Solutions organization withing SWG Solutions and strategy has been formed to assist Business Integration BPs as a single point of BI contact into other IBM programs.
- ▶ Engagements, Proof of Concepts, Certifications, initial market development assistance is facilitated by the Tech/Partner Solutions BI-specific steps.

## Benefits for All B2B Integration Partners

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- **IBM Provides a Robust Set of B2B Offerings:**
  - Web-services based B2B integration solution
  - Available pre-built business process collaborations and application-specific adapters
  - Development tools
  - Range of function and price points
- **IBM Offers One-Stop Shopping for Many Other Needs**
  - Complete set of software products and tools
    - Application Integration: WebSphere, MQ Series, CrossWorlds
    - Database: DB2
    - Collaboration and messaging: Lotus
    - Systems and network management: Tivoli
  - Full line of hardware and peripherals: eServer, Storage Solutions, and more
  - IT services from IBM Global Services, and links to many other service providers
- **IBM Products Adhere to Industry Standards**
  - Industry standards help reduce your development and maintenance costs
  - IBM leads many standards activities, helping to drive industry growth
  - IBM products comply with JAVA, J2EE, Web Services, and other key standards

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- ▶ B2B Integration Offerings are Cross-Brand and Standards-based

## Benefits for Application Software Vendors in B2B Integration

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### IBM Offers Specific Program Assistance for WBC Developers

- Technical and sales training
- Assistance with certifications roadmap
- Porting assistance by utilizing Solution Partnership Centers
- Opportunities for Proof of Concept, Reference Architecture, and joint development
- Resell IBM products, or joint-sell with IBM
- Lead passing where applicable
- Marketing opportunities, e.g. press releases, tradeshows, references, etc.
- Assistance in obtaining PartnerWorld for Developers Advanced or Premier partner status
- Assistance with other IBM programs as applicable

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- ▶ Usually providing vertical technology solutions around a Business Integration problem to be solved, ASVs and more horizontally focused ISVs can utilize the IBM Partner programs facilitated by Technology/ Partner Solutions so that mutually beneficial opportunities can be considered.

## Benefits for Exchanges / Trading Partner Networks

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### IBM Offers Specific Program Assistance

- Technical and sales training
- Assistance with certifications roadmap
- IBM can help you engage with other partners and customers
- Opportunities for Proof of Concept, Reference Architecture, and joint development
- Marketing opportunities, e.g. press releases, tradeshow, references, etc.
- Assistance in on-boarding customers and partners
- Resell IBM products, or joint-sell with IBM
- Lead passing where applicable
- Assistance with PartnerWorld and other IBM programs as applicable

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- ▶ Vertical Industries that form consortiums around Trading Partner Networks or Exchanges are an important targetted entity for BI Solutions from IBM, especially in the Industrial and Retail Market Sectors.

## Benefits for Service Providers (xSP's / ASP's)

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### IBM Offers Specific Program Assistance

All the benefits of IBM PartnerWorld for Software, Developers, or both  
Ability to quickly and easily provide additional value-added **integrated**

services to your existing customer base

- Connect & integrate existing customer legacy systems with your current offerings
- Grow customer base and increase revenue per customer at lower TCO and higher ROI by delivering new solutions via standards-based web

services

Technical and sales training

Assistance with certifications roadmap

Opportunities for Proof of Concept, Reference Architecture, and joint development

Assistance in on-boarding customers and partners

Marketing opportunities, e.g. press releases, tradeshow, references, etc.

Resell IBM products, or joint-sell with IBM

IBM can help you engage with other partners and customers

Lead passing where applicable

Assistance with IBM programs as applicable

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- ▶ Service Providers that wish to move beyond hosting or applications integration can utilize the programs identified to develop services around the BI offerings from IBM.



## Benefits for Global & Regional System Integrators (GSIs / RSIs)

### IBM Offers Specific Program Assistance

All the benefits of IBM PartnerWorld for Software, Developers, or both

Ability to leverage industry leading, standards-based, B2B integration

development suite to quickly and easily design, develop, and deploy external business process integration solutions for your SMB and enterprise-sized customers in the electronics, industrial, and distribution/retail industries

- Connect & integrate existing customer legacy systems with their suppliers, partner, vendors, and customers
- Grow your productivity by leveraging WBC's easy to use, flexible, and powerful tool suite
- Increase your customers' satisfaction and ROI while lowering their TCO by delivering new integrated solutions via standards-based web services quickly and easily

Technical and sales training

Assistance with certifications roadmap

Marketing opportunities, e.g. press releases, tradeshow, references, etc

Resell IBM products, or joint-sell with IBM

IBM can help you engage with other partners and customers


Lead passing where applicable

Assistance with IBM programs as applicable

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- ▶ If an existing or new exchange requires either of both of Hub and spoke installation and provisioning, most probably one single services organization has the bandwidth to effectively handle the on-boarding, integration and test, thereby suggesting a valuenet of Global and Regional SIs that have been trained on the BI offerings and can assist in POCs and deployment.



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## Customer Presentation

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- ▶ The payoff of integration is increased business efficiency. Savvy IT companies are beginning to take a fresh approach to managing their systems environment. No longer are they looking at their IT systems as discrete functions, but rather as parts of broader business processes. They are shifting their focus to a higher level and asking questions, such as "How do we reduce the time and effort it takes to step through an order transaction?" and "How can we more cost-effectively handle customer inquiries?" They find that the answer to these questions almost always involves interactions between multiple systems and multiple companies.
- ▶ Websphere Business Connection was built with leading edge customers to address the specific needs of extended enterprise collaboration. It took into account that for a business to achieve their ROI goals, businesses of all sizes must be able to connect to them thus we have a range of participant on-boarding offerings.
- ▶ WBC is an integrated part of IBM's investment in Websphere and its extensions into Websphere Business Integration. It leverages these investments and extends them into new uses enabling the connectivity of a business with its partners.
- ▶ If anything has proven true, it is that e-business must translate into real value: better service for customers, better communication between employees and partners, and most of all, better return on investment. To experience these benefits, companies must integrate their various business processes -- from manufacturing to delivery, along with every supporting process in between.
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# IBM WebSphere Business Connection

IBM Software Group

August 6, 2002

# WebSphere Business Connection Agenda

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- The Marketplace
- WebSphere Business Connection:
  - ▶ Drivers and Benefits
  - ▶ Solutions
- Customer Examples
- Summary

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- ▶ Welcome to an overview of IBM WebSphere Business Connection, a family of offerings addressing business-to-business -- or "B2B" -- integration needs. This overview will summarize the environment companies are facing in extended enterprise collaboration, introduce the three editions in the Business Connection family, demonstrate the use of Business Connection in some active customer engagements, and conclude with the benefits derived from using Business Connection for B2B integration..

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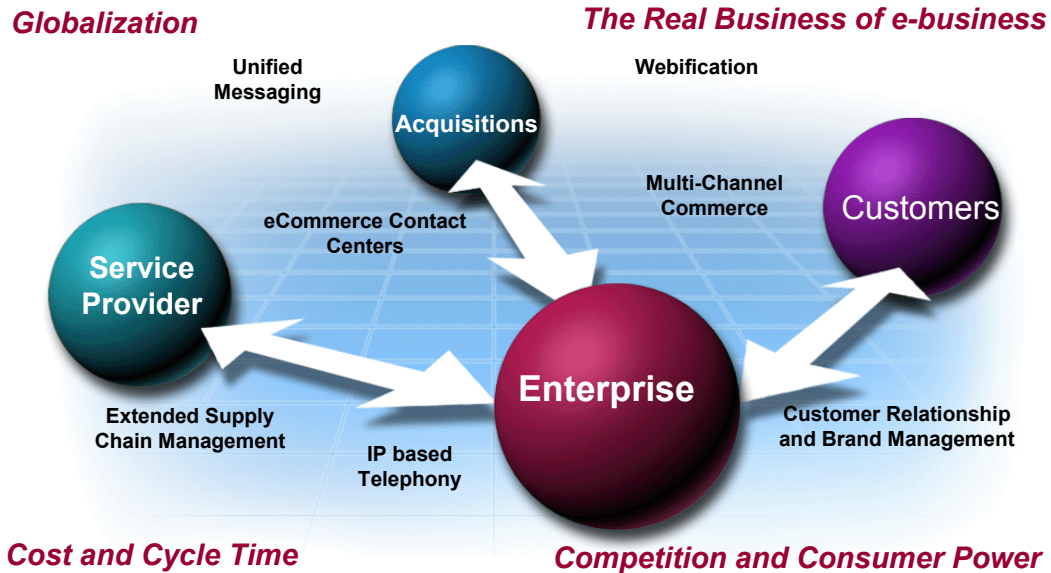


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# The Marketplace for Business Process Integration

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## Integration of Value Nets...the Potential of e-business.

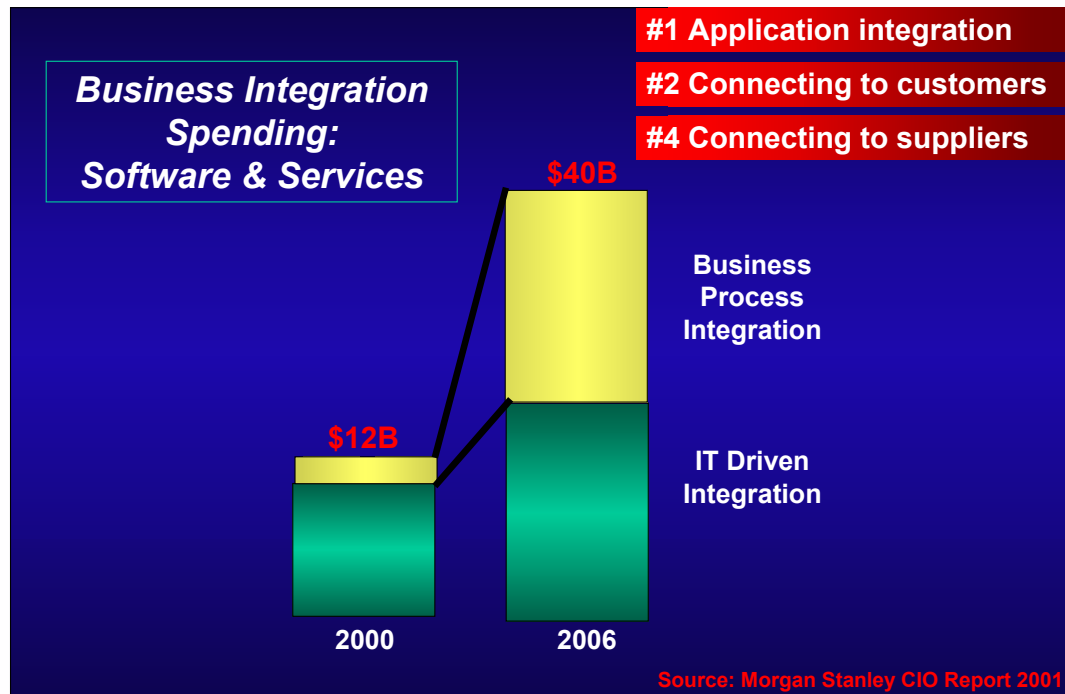


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- ▶ In today's challenging economic climate, savvy companies are investing in the Web to drive costs out of their business as they improve employee productivity and integrate more closely with their customers, suppliers and partners.
- ▶ In fact, according to a worldwide eBusiness Adoption Survey, 80 percent of the 33,000 companies surveyed are moving from building front-end Web sites to integrating the Web across their enterprises and connecting with everyone they do business with. More than 50 percent of manufacturers already use the Web to collaborate with suppliers.
- ▶ Instead of hibernating in difficult times, market leaders are driving the Web deeper into their businesses while they are demanding quicker returns on every information-technology dollar spent
- ▶ Today's economic environment is driving business users to demand greater efficiency, more automation and higher levels of performance from their business processes and the IT systems that support them. As a result, e-business is moving beyond systems that merely enable Web-based transactions, to encompass complete steps in the process that until now required human intervention.

## Integration is the #1 Strategic IT Project in 2002



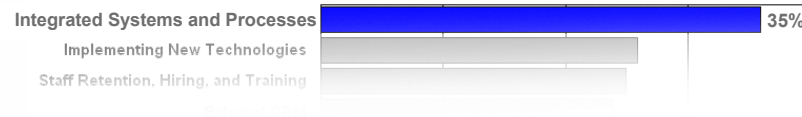
► **Integration is the #1 Strategic project in 2002**

- a) While the economy slows spending in many areas, business integration investment continue as it enables companies to survive and thrive in a globally competitive world
- b) Morgan Stanley' CIO report conclude that business integration is the #1 Strategic IT project in 2002
- i) #1 Application integration
- ii) #2 Connecting to customers
- iii) #4 Connecting to suppliers
- c) Every customer contact is a moment of truth for a business. Businesses need to serve their customers quickly and effectively with the right information at that point in time. They must drive the customer's request through their internal processes and back end. That typically involves inventory, manufacturing, replenishment, and supply chain activities, which have their logical correlations in the finance and insurance industries as well. If businesses can line those things up effectively, they're going to be more efficient. Therefore, you improve your financial ratios, your bottom line looks better, and your shareholder value increases. You're just using technology as a means to an end to get there.
- d) Key to improved supply chains, unified messaging, improved customer sat by integrating multiple customer contact touch points into a single view of the customers - is the integration of the application and services.
- e) Key to enabling new services quick is an open-standards based platform which enables others to extend new capabilities enabling you to differentiate your service to your customer

# Integration Spending Priorities

## Integration is Spending Priority for CIOs

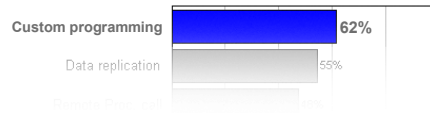
Source: CIO Magazine, March 1, 2002



## Custom Integration Programming Costs are Growing

Source: IBM Customer Surveys, 2001, 2002

Q. What technologies are you currently using to achieve integration?



Q. Which of the following integration approaches does your company use to link your e-business applications?



***It is generally estimated that for each \$1 spent for a packaged application, customers spend on average \$5 to \$9 on the labor for integration***

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- ▶ In a utopian IT world, each software application would seamlessly communicate with any other, with no worries about linking, say, enterprise resource planning (ERP) software with supply-chain management tools. The reality, however, is that exchanging data within a company and with business partners and customers is not easy.
- ▶ Integration is a multidimensional issue because of the vast range of different business objects involved, the different platforms across the network, and the different standards used to interchange data. Frequently, infrastructure investments have been made independently in different units of a business, resulting in a variety of disparate applications and legacy infrastructure considerations. These issues are compounded further when e-businesses link systems and integrate processes with external trading partners who have differing technical and business requirements for their integration efforts.
- ▶ As a result, B2B integration is often accomplished today through costly custom programming by internal IT departments, and integration is the top strategic project preoccupying enterprise customers in 2002.
- ▶ Our new Websphere Business Connection offering addresses this issue through standards-based integration.



# Today's Business Integration Challenges

- **Unconnected infrastructure investments**
  - ▶ Provide seamless integration with new business units
  - ▶ Link packaged applications with legacy systems
- **Accelerated costs of managing disparate systems**
  - ▶ Integrate across heterogeneous islands of automation
  - ▶ Mitigate people and skill shortages
- **Increased industry and government regulations**
  - ▶ Industry standards
  - ▶ Government regulations
- **Reaching new markets with critical speed**
  - ▶ Support new standards like SCADA for process automation
  - ▶ Maintain system and asset security

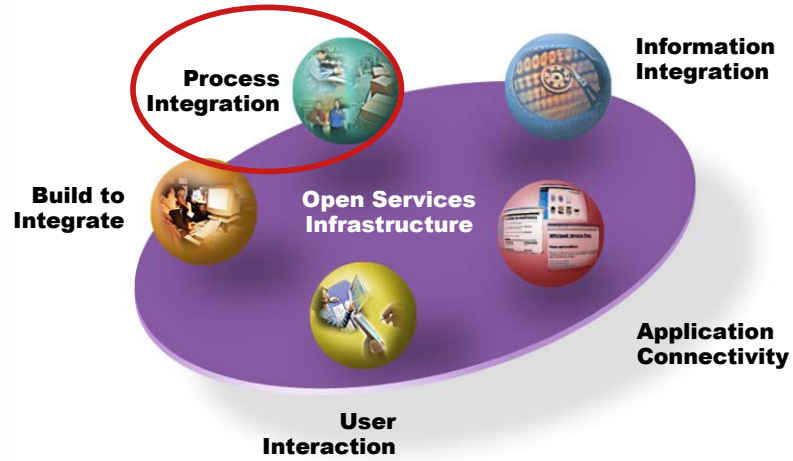
*Integration projects take too long and cost too much  
Achieving 'Time to Value' is critical to business success*

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- ▶ Unconnected infrastructure investments: Lets look at the root cause of why customers say this is their major IT issue, but are choosing today to use a fairly labour intensive approach to solve it. As mentioned earlier, the Web has exposed what had previously been a set of hidden internal systems. As economic forces have challenged all of us, companies have started to look for ways of improving the efficiency of their internal processes, which has forced them to start thinking about their processes from the perspective of their customers, employees and suppliers. From that perspective, you start to realize that most IT investments up to this point have not been well integrated, a problem that is made worse as new business units are formed within your organization (through mergers or acquisitions; new partnerships, etc. But even if that doesn't happen, the only way to improve business processes is to view them holistically, and tying them together into a common infrastructure.
- ▶ Accelerated costs of managing disparate systems: Companies are increasingly coming to realize the very real people cost of managing in a highly heterogeneous environment, and are looking to technology to reduce the cost of managing the many different systems that are found in any enterprise, and reduce the need for scarce technical skills by hiding the complexities of the infrastructure from the business logic. And by hiding complexity, it becomes possible to develop new solutions much more quickly for new market conditions, while maintaining system and asset security.
- ▶ Increased industry and government regulations: Regulations are a necessary evil, we all have to deal with them. For example, Walmart has a need to drive consistency across their supply chain with UCCNeT. On the government side there are requirements for the US Federal ADA and the HIPPA for the US healthcare industry.
- ▶ Reaching new markets with critical speed: Time to value becomes a fundamental goal. As you do so, supporting new standards like SCADA for process automation and maintaining system and asset security is crucial.

# WebSphere Solutions for Business Integration



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- As you've seen, there are multiple types of integration that are needed to solve your integration challenges. The WebSphere portfolio is the only one of its kind that has the breadth and depth to address all of your integration needs.
- User interaction is creating a single interactive user experience across applications and devices. Presenting a single, tailored user interaction, making it available through any device, enabling full transactional support and integrating back into multiple business systems yields higher customer loyalty, more effective collaboration, and new business opportunities.
- Application connectivity is connecting applications to share and leverage information. Business assets are efficiently connected to allow information across disparate systems to be available across the enterprise.
- Process integration is changing how businesses run through business process integration. It takes application connectivity to the next level by allowing the business to change how they operate through the modeling, automation, and monitoring of processes across people and heterogeneous systems inside and outside the enterprise.
- Build to integrate is building and deploying new integrated applications that leverage Web services and existing software assets. Instead of traditional silos, new solutions need to be implemented in a manner that enable them to be integrated immediately with existing assets.
- Information integration is integrating all forms of business information across and beyond the enterprise. Instead of simply accessing individual information sources, information integration enables coherent search, access, replication, transformation, and analysis over a unified view of information assets to meet business needs.
- IBM is uniquely positioned in the marketplace to help customers deal with all of these integration types, which organizations are going to face as they look to implement their high priority projects in the upcoming year. The new WebSphere Business Integration, for example, was created to allow customers a packaged, industry-specific offering for virtually any integration requirements. Coupled with our award-winning ISV partner business applications, IBM allows customers to successfully address their business integration needs with the breadth and depth of the IBM portfolio -- as the only provider of comprehensive business integration

# What's New - Process Integration



## Combining Capabilities

- ▶ New offering combines InterChange Server, MQ Workflow and WebSphere MQ Integrator Broker
- ▶ Priced same as InterChange Server
- ▶ Pre-built industry specific solutions

### WebSphere Business Integration v4.1

Complete solution for business integration, human workflow, long running transactions and data transformation and routing

## Integrating with Business Partners

- ▶ New offering combines process integration and partner management to enable public processes
- ▶ Web services and industry standard connectivity supports any size partner

### WebSphere Business Connection v1.1

Business-to-business process integration with partners

## Expanding Integration

- ▶ CrossWorlds adapters support WebSphere MQ Integrator
- ▶ Support for WebSphere Application Server by year-end 2002

### WebSphere Business Integration Adapters

Connecting applications for multiple styles of integration

## Accelerating CRM Benefits

- ▶ Support for Siebel's Universal Application Network

### CrossWorlds Extender for Siebel

Pre-built integration of Siebel to PeopleSoft, Oracle or SAP

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- ▶ While there are multiple types of integration needed to solve a company's integration challenges, the Websphere Business Connection offerings focus specifically on extended enterprise collaboration . It is the B2B component of our Websphere Business Integration family of offerings, which enable the management of processes that extend beyond the four walls of the enterprise connecting suppliers, customers, and business partners.
- ▶ Think of it as "border control". When you cross between the US and Canada, you go through immigration. You have security which monitors what is going out of the country, what is coming in, and what is expected. Websphere Business Connection serves a similar function as enterprises extend processes like buy/supply, inventory management, and collaborative design to their business partners.
- ▶ While WBC leverages emerging web services based standards, it also takes into account that customers must start from where they are and evolve thus offers an array of connectivity transport options. We believe standards-based integration will have similar economic benefits for process integration that the standards surrounding the internet have done to bring down the cost of the communications infrastructure. Web Services provide a similar capability at a business process level that standards such as TCP/IP, HTTP, SSL have achieved at the communications infrastructure level. Today because of the internet, everyone can access information. Tomorrow, processes such as those enabled by EDI, which only 2% of enterprises adopted due to the high VAN costs, can now be made available for businesses of all sizes to participate.
- ▶
- ▶

# Marketplace Requirements

## Customer requirements

- ✓ **Focus on a specific project**
  - ▶ Onboard new partners
  - ▶ Collaborate with suppliers
  - ▶ Simplify order process
  - ▶ Execute daily transactions
  - ▶ Speed design of new products



## Technology requirements

- ✓ **Deliver the best technology**
  - ▶ Support a range of connectivity
  - ▶ Provide business processes by industry
  - ▶ Administer and provision new participants
  - ▶ Supply adapters to existing applications and systems
  - ▶ Deliver tools to customize and develop new processes

- ✓ **Deliver ROI**
  - ▶ Reduce cost of implementation
  - ▶ Speed deployment



- ✓ **Scale with the enterprise**
  - ▶ Deliver scalable components
  - ▶ Architect with a common integration platform
  - ▶ Provide world-class services

- ✓ **Ensure Future Value**
  - ▶ Long term availability
  - ▶ Continued viability



- ✓ **Build on Leadership Foundation**
  - ▶ Implement open standards
  - ▶ Support industry standards
  - ▶ Provide a roadmap for the future

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- ▶ Return on investment is vital for any business today - automating manual processes is an opportunity to achieve ROI. For example, a seller's financial database may need to send pricing and inventory data to related applications in the buyer's enterprise systems. Only by sending data through the company's security firewall to the specific application can the two companies complete the transaction online. If applications are not sharing data automatically, some form of manual intervention is needed to complete the transaction. When an interruption like this occurs, automation halts, time-to-market slows and customer service breaks down.
- ▶ Dual data entry is one of many types of inefficiency that can hinder a company's success. Inflexible and redundant manual processes can stifle daily operations, not to mention new business strategies. This is true whether a company is focused on reducing costs, expanding into e-business or targeting new markets. A top retailer has told us that 40% of their custom orders are incorrect due to manual entry multiple times between their supplier and their systems. They believe through server-to-server linkages, they can achieve greater than 98% accuracy...and at the end of the day that means a satisfied customer who receives the right product they ordered, on time.
- ▶ A total e-business environment, in which all transactions can be completed online, provides both buyers and sellers with a virtual trading floor where transactions are handled efficiently and bring the greatest profitability. Doing so requires a top-down view of business processes, as well as the right software tools to integrate them.
- ▶ The offering enables long-term investment protection given its modularity to start small and scale as new options are required. New processes each with their unique ROI can easily be added and deployed on top of the initial edge platform investment
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# IBM WebSphere Business Connection Offerings

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# WebSphere Business Connection v1.1

for Business-to-Business process integration...available 3Q 2002



## Requirements

- Obtain cost & productivity improvements from integration with external partners:
  - *automate supply/demand chain*
  - *streamline procurement*
  - *improve quote turnaround*
  - *collaborate on product design*
- Integrate with public or private exchange using:
  - Industry connectivity standards
  - Open standards (web services)
- Decrease EDI VAN costs by moving EDI to the Internet
- Leverage and integrate with existing applications and systems



## Solution Offering

- Web services, industry standard, and EDI connectivity for B2B processes
- Execution of public processes with partners
- Document exchange between partners
- Available library of pre-built business processes and adapters
- Solution architecture for scalable hub, including portal for browser-based partners

## Benefits

### Time to Value

- ▶ Web services pre-built integration
- ▶ Legacy protocol support
- ▶ Flexible deployment and pricing options
- ▶ Tailored for specific connectivity needs

### Lasting Value

- ▶ Consistent Business Integration runtime and tooling
- ▶ Utilizes J2EE and Web Services standards
- ▶ Investment protected

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• Companies are realizing cost & productivity improvements from integration with external partners in many different ways:

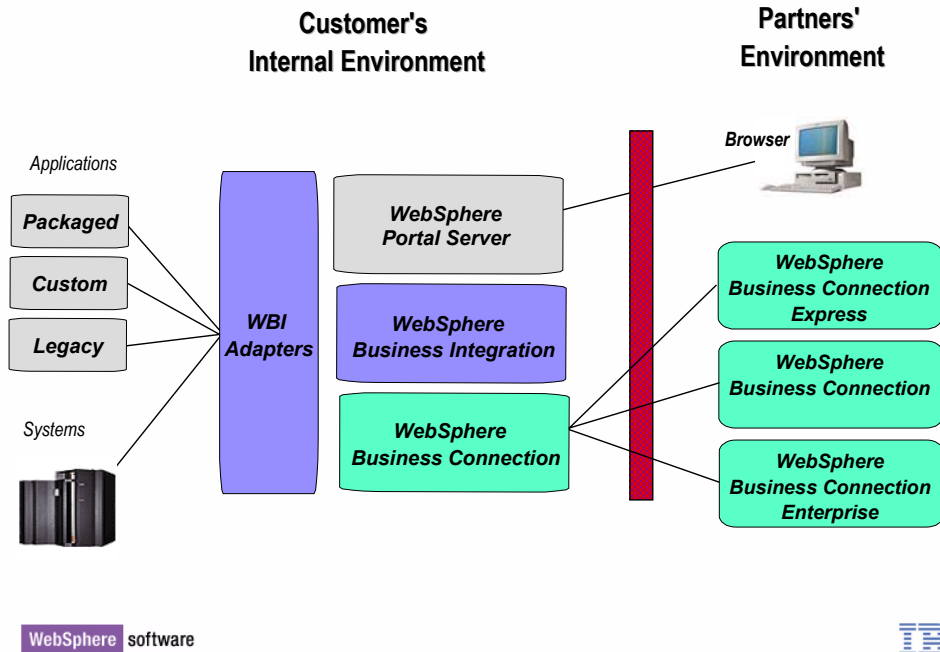
- ▶ by automating their supply/demand chain
- ▶ by streamlining procurement
- ▶ by reducing time to turnaround quotes
- ▶ and, in more sophisticated B2B interactions, by collaborating on product design
- They may need to integrate with public or private exchanges using:
  - ▶ established industry connectivity standards, as well as
  - ▶ open standards, such as Web services
- They want to decrease EDI VAN costs by moving EDI to the Internet,
- and they want to leverage and integrate with their existing applications and systems, not reinvent from scratch

• WebSphere Business Connection was designed to meet these requirements, by including:

- ▶ Web services, industry standard, and EDI connectivity for B2B processes
- ▶ Execution of public processes with partners
- ▶ Document exchange between partners
- ▶ An available library of pre-built business processes and adapters
- ▶ and a solution architecture for a scalable hub, including portal for browser-based partners

• WebSphere Business Connection allows businesses to focus on implementation of B2B projects whether simple or complex. Trading partners can deploy software to solve today's integration needs and add partners and implement more business processes as needed, with a range of flexible deployment and pricing options. With these secure, scalable offerings, customers can be ensured of future value through long-term availability, open standards and IBM's unique ability to offer the full range of business integration needs.

# Process Integration with WebSphere



• Websphere Business Connection is a hub and spoke architecture, which helps customers scale in two key ways.

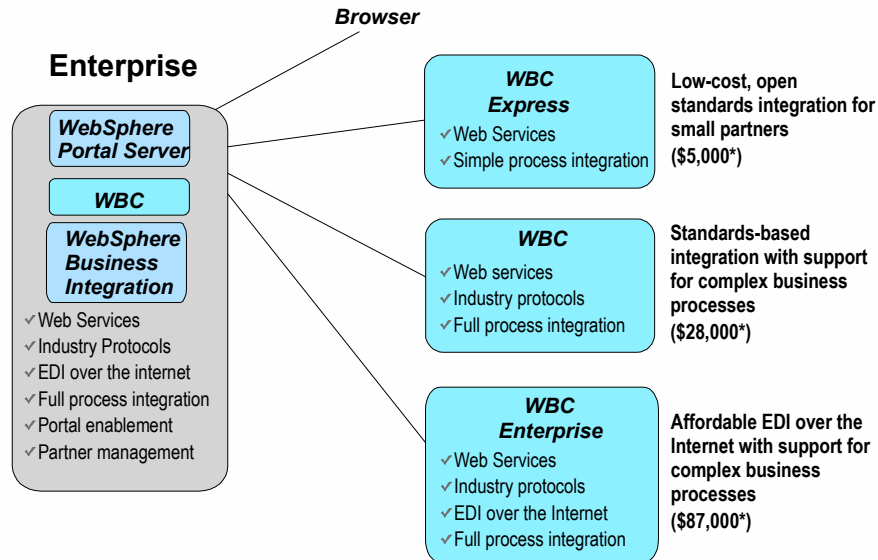
• First, by connecting business partners of all sizes. The very smallest of partners may not have backend systems to connect to thus browser entry through a portal is adequate. As businesses scale, so does their complexity thus there are three defined "spokes" to deal with server to server based connectivity. This gives businesses the ability to connect to their backend systems and applications which can not be achieved through browser based connectivity alone.

• Thus the second form of scalability is giving the enterprise the capability to continue to add and extend new processes with their business partners just by building or purchasing additional process collaborations that leverage the Websphere Business Connection platform.

• What is unique with the WBC platform vs competition is that it leverage our Websphere application server as the base of all hub and spoke offerings. As such, web forms can be easily created and deployed and new forms of services level agreement and process monitoring are easy extensions. Since we have also designed the modularity of the product such that Websphere Portal is part of the participant enablement strategy, businesses of all sizes can participate in these extended processes. They can start small and scale as their business needs warrant.

• In the diagram we show and have tested WBC integrating with our Websphere Business Integration family, which extend to process integration within the enterprise environment. Given WBC terminates with standards-based interfaces, it can be deployed in situations where other EAI products have already been selected. In this case, we use WBC as the edge component only to extend and monitor processes as they go external.

# WebSphere Business Connection (WBC): A Family of Offerings



\* Prices are current as of August 6, 2002, exclude applicable taxes, and are subject to change by IBM without notice. Prices are subject to certain licensing restrictions.

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• The IBM WebSphere Business Connection offerings enable business-to-business process integration and data sharing among trading partners of all types and sizes.

• The IBM WebSphere Business Connection family provides a scalable set of offerings that link businesses and trading partners using industry-standard and Web services protocols. Offerings include:

- IBM WebSphere Business Connection, Express Edition
- IBM WebSphere Business Connection
- IBM WebSphere Business Connection, Enterprise Edition

• Companies can start with a simple, low-cost Web services connection with WebSphere Business Connection, Express Edition. Then as they grow, they can scale upward to support additional connectivity requirements and more complex business processes using WebSphere Business Connection and WebSphere Business Connection, Enterprise Edition. This flexibility results in the ability to start simply and scale as needed.

• As a scalable set of offerings, companies can start with a simple, low-cost Web services on-ramp and scale to support additional partners and more complex business processes, including EDI.

• Combining Business Connection, WebSphere Business Integration and WebSphere Portal Server, enterprises and service providers will have a reference architecture for a complete B2B hub.

• The B2B integration that WebSphere Business Connection provides can mean cost and productivity improvements, including faster deployment of new processes and services.

• At the same time, building on open standards, including Web services, and proven WebSphere technology means flexibility, an open growth path, scalability and reliability.

• Additional advantages of the offering include public process integration & execution, document exchange, and an available (and growing) library of business processes, including cross-industry and industry-specific templates, to speed time-to-value.

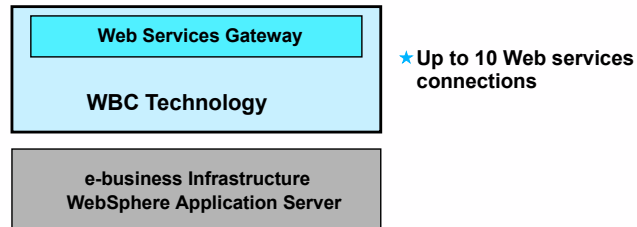
• **EXAMPLE 1:** An electronics manufacturer (CEM ("Supplier")) needs to integrate with its major Buyer which is using the an exchange to integrate with its supply chain partners (to drive down inventory management costs and reduce cycle times). The Supplier could use WebSphere Business Connection software to quickly build a Web services on ramp for basic connectivity via the exchange; Or, the Supplier could scale up to engage in collaboration at the business process level by integrating back-end systems with the Buyer – thus effectively working as one. Using WBC for partner connectivity and integration, this arrangement could take place within an enterprise hub or an exchange, or both – providing integration options with quick time-to-value for the Supplier and the Buyer.

• **EXAMPLE 2:** A manufacturer wants to connect multiple suppliers to collaborate on parts availability for a new product. Some suppliers want a zero-cost implementation through a browser; others want to quickly send files; still others want to collaborate in the business process to provide supply information and quote prices. Using Business Connection, the manufacturer can: Implement a hub to interact with its partners, including WebSphere Portal Enable to support browser-based partners. Provide WebSphere Business Connection Express to provide a simple web services connection with large file transfer. Provide WebSphere Business Connection to allow process integration, and if partners require EDI, the manufacturer can implement WebSphere Business Connection Enterprise to supply EDI connectivity over the Internet.



# WebSphere Business Connection Express

*Web Services, J2EE -based process integration  
Low Cost Open-Standards Partner Enablement*



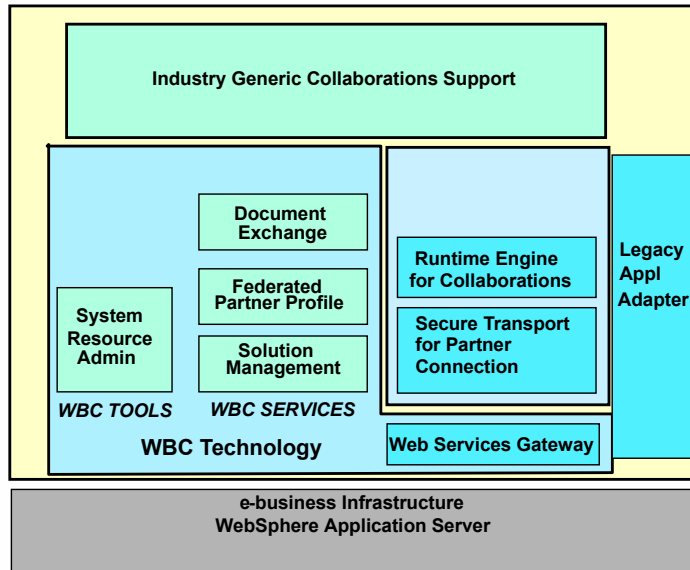
WebSphere software



- ▶ WebSphere Business Connection, Express Edition is the entry-level edition in the Business Connection family of offerings. All Business Connection editions are based on and include the WebSphere Application Server.
- ▶ Business Connection Express includes the Web Services Gateway that offers support for emerging Web Services standards, instead of being locked into a vendor's proprietary protocols. With up to ten Web-services-based connections, Business Connection Express also offers support for transfer of large files with guaranteed delivery.
- ▶ Business Connection Express is suitable for businesses of all sizes to support access to external Web services as well as to deliver internal processes as Web services.

# WebSphere Business Connection

*Web Services, Industry Protocols, & Process Integration*  
*Low Cost Industry-Standard Partner Enablement*



- Up to 50 Web services connections
- 1 AS1, AS2, RNIF, or ebXML connection

WebSphere software



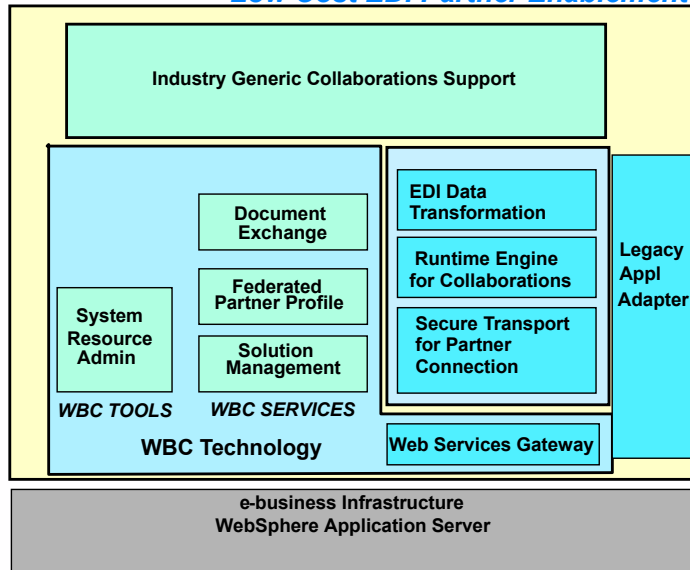
• The next edition in the Business Connection family is WebSphere Business Connection.

• With Business Connection, customers can execute complex business process flows, and connect to trading partners using a wide variety of protocols. The process runtime environment provides a multi-threaded execution framework for executing collaborations, which are packaged business process modules. Support is provided for multiple data types, protocols, and Internet security. The federated partner profile automates the otherwise time-consuming job of tracking which data standard, security precautions, and transfer protocols are being used by other trading partners. Trading-partner management services simplify the process of registering trading partners. And system management tools control system operations and help monitor business processes.

- Business Connection includes:
  - Web services runtime for executing J2EE/Web services-based business processes
  - Web Services Gateway
    - Up to 50 Web-services-based connections
    - Support for transfer of large files with guaranteed delivery
  - One AS1, AS2, RNIF, or ebXML connection
  - Routing/processing engine with operational tools
  - XML transformation runtime environment
  - Solutions management
  - Federated partner profile
  - Document exchange services
  - Database connectivity

# WebSphere Business Connection Enterprise

*Web Services, EDI – Internet & Process Integration  
Low Cost EDI Partner Enablement*



- Up to 100 Web services connections
- 1 AS1, AS2, RNIF, or ebXML connection

WebSphere software



• WebSphere Business Connection, Enterprise Edition allows for even greater flexibility and levels of connectivity, including:

- Web services runtime for executing J2EE/Web services-based business processes
- Web Services Gateway
  - Up to 100 Web-services-based connections
  - Support for transfer of large files with guaranteed delivery
- One AS1, AS2, RNIF, or ebXML connection
- Routing/processing engine with operational tools?
- XML transformation runtime environment
- Solutions management
  - Federated partner profile
  - Document exchange services
  - Database connectivity
  - Messaging middleware connectivity
- WebSphere Data Interchange to support both Web services and EDIINT messages

• With WebSphere Business Connection, Enterprise Edition, customers can execute complex business process flows AND implement a cost-effective EDI connection as well as Web services for connectivity to additional partners.

WebSphere software



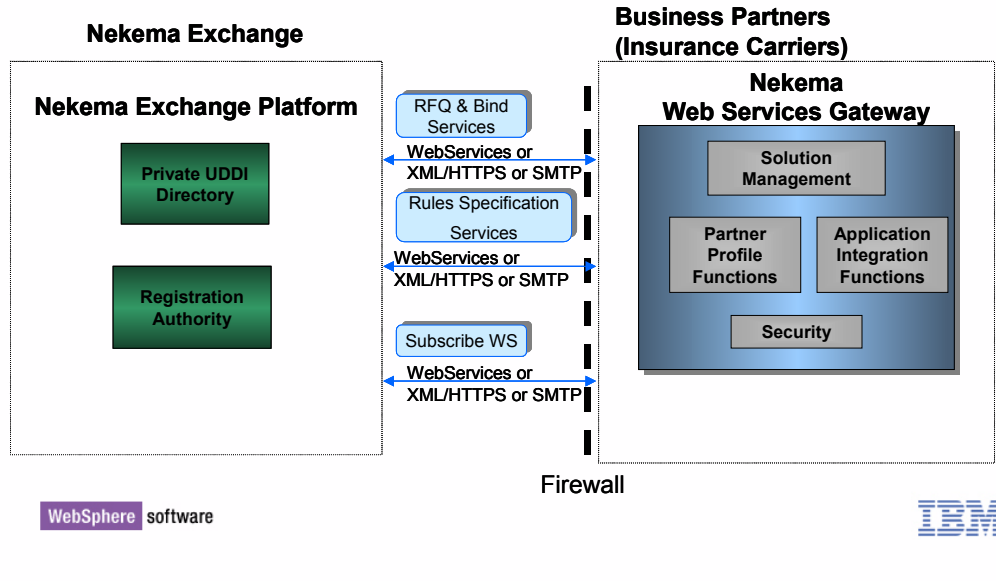
# IBM WebSphere Business Connection Customers

IBM Software Group



We expand markets for insurance carriers, giving them a way to qualify customers in target market segments. Agencies can submit RFQ requests to multiple carriers, entering data once. We worked with IBM to build a rules-based, scalable interview and messaging process, built on IBM software infrastructure. Web Services allow us to bind with many carriers using a scalable, standardized B2B interface.

John Rhodes, Nekema CEO



► To illustrate with a few real B2B examples using Business Connection:

- a) Nekema is a service provider within the Insurance Industry. It enables independent insurance agents to quote and bind agreements for small and medium business customers from bid responses from multiple insurance carriers. Today, this customer set is very costly for carriers to address directly -- thus through Nekema allows carriers to have a new channel to these customers.
- b) Nekema
  - i) Automates rules management and collaboration processing
  - ii) Synchronizes info such as pricing policy information across systems, carriers, and agents
  - iii) Deploys promotions locally or through the value chain network
  - iv) Decreases cost by increasing RFQ throughput
- c) Nekema, working with IBM, developed a rules based system where the agent input its customer's requirements in terms of premiums, policy needs, then the carriers can real time respond and bid, and bind policies using Websphere and MQ.
- d) This standards based platform leverages ACORD, which is the insurance industry endorsed XML standards and web services to implement the RFQ system between the carriers and agents through Nekema and also for rules collaboration between Nekema and its carriers for design new policies.

# Nekema



## Vision

- Provide insurance carriers and financial services affiliates secure, affordable, and scalable access to a robust rules management platform such that they can accelerate their e-business initiatives.

## Challenge

- Make participant enablement easier without the need to rewrite or replace any existing systems
- Ensure data security
- Use open standards to lower integration costs

## Solution

- B2B collaboration and on-ramp enablement solution allows carriers to quickly and easily build and access applications and services
- Enablement of end-to-end process collaboration by leveraging IBM's insurance industry domain expertise, integration solutions and services on a global basis.
- Security features to authenticate users and help determine the authority to use software functions and data access privileges
- IBM Software Services to support development of private industry UDDI directory and web services gateway.

## Business Value

- Scalable and secure platform that reduce cost, complexity and time-to-benefit of business partner integration
  - 4 times less expensive than building internal infrastructure
  - 70% cost savings in business partner enablement costs
  - 50% less time than traditional point-to-point deployments
- Reduce design cycle time through collaboration with business partners
- Reduce inventory management costs through improved visibility across value chain

## Competitive Value

- *"It is increasingly important that companies in the B2B space strive to adopt standards-based solutions that allow customers to connect with multiple solutions"*

Rik Drummond, The Drummond Group

WebSphere software



- ▶ For Nekema, business value was provided by a scalable and secure platform that reduces cost, complexity, and time-to-benefit of business partner integration:
- ▶ 4 times less expensive than building an internal infrastructure
- ▶ 70% savings in business partner enablement cost, and
- ▶ 50% less time than traditional point-to-point deployments

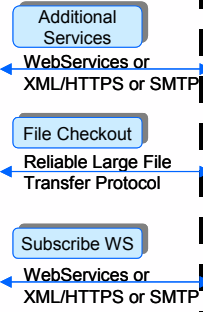
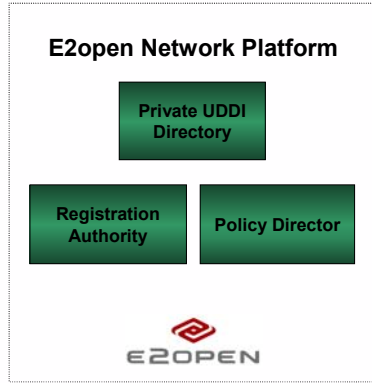
# Leading the way with B2B Web Services



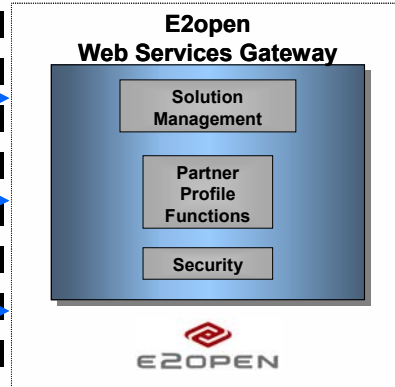
E2open's unique solution for enterprise-to-enterprise integration would be nearly impossible to implement without web services. By leveraging IBM's WebSphere functionality and IBM's service capability we have been able to bring to market in a very short time a very reliable and globally scalable offering.

Greg Clark, CEO, E2open

## E2open Global Integration Network



## Business Partner



Firewall

WebSphere software



- a) E2Open is a service provider to the Electronics industry.
- b) The challenge - to provide provide a next generation solution for business partner integration across manufacturers, distributors, and suppliers in the high tech electronics industry -- an industry, in which like many others, a multitude of applications, protocols, and processes are used to do business among the constituents.
- c) In this environment, E2open faces the challenges of:
  - i) Executing rapid business partner enablement, without rewriting or replacing existing systems
  - ii) Ensuring Data security, and
  - iii) Leveraging open standards to lower integration costs
- d) E2Open has worked with IBM to deliver a comprehensive SW platform that leverages advanced web services integration technology
  - i) Web services-enabled software platform accessible via internet to support B2B process integration
  - ii) Security infrastructure to ensure high reliability collaboration over the internet
  - iii) Private UDDI-based directory to enable rapid and cost effective registration of business partner integration capabilities
  - iv) Web services-based gateway that can be easily downloaded, installed behind the firewall, and automatically configured to E2Opens network platform
  - v) Enablement of end-to-end integration leveraging IBM's worldwide presence, business integration solutions, services, and skills.

# E2open



## Vision

- Provide an innovative software platform to allow business process integration between manufacturers, distributors, and suppliers in the high tech electronics industry

## Challenge

- Provide rapid business partner enablement without rewriting or replacing existing systems
- Ensure data security
- Use open standards to lower integration costs

## Solution

- WebSphere Application Server with web services connectivity
- Tivoli Policy Manager for secure web services delivery
- DB2 data repository to store business partner integration information
- IBM Software Services to support development of private industry UDDI directory and web services gateway

## Business Value

- Scalable and secure platform that reduce cost, complexity and time-to-benefit of business partner integration
  - 4 times less expensive than building internal infrastructure
  - 70% cost savings in business partner enablement costs
  - 50% less time than traditional point-to-point deployments
- Reduce design cycle time through collaboration with business partners
- Reduce inventory management costs through improved visibility across value chain

## Competitive Value

- "E2open's unique solution for enterprise-to-enterprise integration would be nearly impossible to implement without web services. By leveraging IBM's WebSphere functionality and IBM's service capability we have been able to bring to market in a very short time a very reliable and globally scalable offering."

Greg Clark, CEO, E2open

WebSphere software



- ▶ According to Greg Clark, CTO, E2open, "E2open's unique solution for enterprise-to-enterprise integration would be nearly impossible to implement without web services. By leveraging IBM's WebSphere functionality and IBM's service capability we have been able to bring to market in a very short time a very reliable and globally scalable offering."



WebSphere software



# IBM WebSphere Business Connection Summary

IBM Software Group

## IBM's B2B Summary

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- **Real Customer Engagements:**
  - In-depth understanding of real requirements
  - Range of business models
- **Robust Set of B2B Offerings:**
  - Web-services based B2B integration solution
  - Available pre-built business process collaborations
  - Range of function and price points
- **Cross-Industry Focus:**
  - Electronics
  - Distribution/retail
  - Automotive/manufacturing
  - Insurance
  - .....
- **Enterprise Value:**
  - End-to-end integration
  - Open standards
  - Attractive pricing

WebSphere software



► The payoff of integration is increased business efficiency. Savvy IT companies are beginning to take a fresh approach to managing their systems environment. No longer are they looking at their IT systems as discrete functions, but rather as parts of broader business processes. They are shifting their focus to a higher level and asking questions, such as "How do we reduce the time and effort it takes to step through an order transaction?" and "How can we more cost-effectively handle customer inquiries?" They find that the answer to these questions almost always involves interactions between multiple systems and multiple companies.

► Websphere Business Connection was built with leading edge customers to address the specific needs of extended enterprise collaboration. It took into account that for a business to achieve their ROI goals, businesses of all sizes must be able to connect to them thus we have a range of participant on-boarding offerings.

► WBC is an integrated part of IBM's investment in Websphere and its extensions into Websphere Business Integration. It leverages these investments and extends them into new uses enabling the connectivity of a business with its partners.

► If anything has proven true, it is that e-business must translate into real value: better service for customers, better communication between employees and partners, and most of all, better return on investment. To experience these benefits, companies must integrate their various business processes -- from manufacturing to delivery, along with every supporting process in between.

# WebSphere Business Connection

## Benefits Summary

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### Technical Benefits

- Supports range of connectivity and business integration environments
- Promotes open, standards-based business-to-business communication
  - Web Services
  - EDI-INT
  - EDI-VAN
  - RosettaNet
  - ebXML
- Includes tools to customize business processes
- Remote deployment of spoke software for fast deployment
- Complements WebSphere Business Integration Enterprise Edition
- Architected using modular components
- Built on scalable, proven technology

WebSphere software



- To summarize, WBC eases the complexity required to support interoperability among different environments. The WBC family promotes B2B communications based on open Web services interfaces, industry standards include RosettaNet and ebXML, as well as EDI including EDIINT and EDI-VAN. Pre-built connectors to many popular applications and templates for established business processes facilitate quick prototyping and rapid deployment. The WBC family includes remote management of spoke software for easy onboarding of smaller partners. The WBC family is architected using modular components and built on scalable, proven technology to provide a flexible and reliable offering, making it easier to start with a specific project and grow as needed.

# WebSphere Business Connection

## Benefits Summary

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### Business Benefits:

- Accelerates e-business initiatives with customers, suppliers, partners
- Improves Return on Investment and operational efficiency
  - Low cost of implementation
  - Speedy deployment
  - Range of functional and pricing models
- Creates collaborative business integration environment
- Leverages existing applications and infrastructure
- Enables growth path for business processes
  - Upgradeable packages of public/private business processes
  - Industry-specific processes
- Implements fast deployment for small partners
- Available global implementation services
- Creates opportunities for competitive advantage, such as integration with:
  - Business intelligence
  - Supply chain partners
  - Procurement providers
  - Outsourcing services
  - CRM services

WebSphere software



- WBC allows businesses to focus on implementation of B2B projects whether they are simple or complex. Business partners can deploy software to solve today's integration needs and scale to add partners and implement more business processes as needed. WBC creates a collaborative business integration environment and provides new opportunities for competitive advantage, including integration with supply chain partners, procurement providers, business intelligence, outsourcing services, and CRM services. With these secure, scalable offerings, customers can have confidence in future value through long term availability, open standards, and IBM's unique ability to offer the full range of business integration needs.

# WebSphere Business Integration Process Templates and Adapters: Leadership in Process Integration

## IBM Adapters:

|                              |               |                     |               |
|------------------------------|---------------|---------------------|---------------|
| Broadvision 4.1              | Version 1.5.0 | PeopleSoft 8.x      | Version 1.2.0 |
| Broadvision 5.0              | Version 1.5.0 | PeopleSoft 7.x      | Version 3.3.0 |
| Broadvision 5.5              | Version 1.5.0 | Portal Intranet 6.1 | Version 2.3.0 |
| I2 Active Data Warehouse 4.x | Version 1.6.0 | SAP R/3 3.x         | Version 4.5.0 |
| I2 Active Data Warehouse 5.x | Version 1.6.0 | SAP R/3 4.x         | Version 4.5.0 |
| Oracle Applications 11i      | Version 1.6.0 | Siebel 2000         | Version 3.3.0 |
| Oracle Applications 11       | Version 1.6.0 | Vantive 7.0         | Version 3.5.0 |
| Oracle Applications 10.7     | Version 1.6.0 | Vantive 8.x         | Version 3.5.0 |

## IBM Process Templates for Manufacturing:

|                         |             |                                  |             |
|-------------------------|-------------|----------------------------------|-------------|
| AR Invoice Sync         | Version 2.0 | Item Manager                     | Version 4.0 |
| ATP to Sales Order      | Version 1.0 | Order Billing Status             | Version 2.0 |
| Available to Promise    | Version 1.0 | Order Delivery Status            | Version 2.0 |
| BOM Manager             | Version 3.0 | Order Status                     | Version 2.0 |
| Contact Manager         | Version 2.0 | Price List Manager               | Version 2.0 |
| Contract Sync           | Version 3.0 | Purchasing                       | Version 2.0 |
| Customer Credit Manager | Version 2.0 | Regen Process Manager            | Version 2.0 |
| Customer Manager        | Version 3.0 | Return Billing Status            | Version 2.0 |
| Demand Forecast         | Version 3.0 | Return Delivery Status           | Version 2.0 |
| Demand History          | Version 3.0 | Return Status                    | Version 2.0 |
| Department Manager      | Version 2.0 | Sales Order Processing           | Version 3.0 |
| Employee Manager        | Version 2.0 |                                  |             |
| GL Movement             | Version 2.0 |                                  |             |
| Installed Product       | Version 4.0 |                                  |             |
| Inventory Level Manager | Version 3.0 |                                  |             |
| Inventory Movement      | Version 2.0 |                                  |             |
| Invoice Generation      | Version 4.0 |                                  |             |
|                         |             | Shipments to Date                | Version 3.0 |
|                         |             | Supply Plan Deployment Regen     | Version 2.0 |
|                         |             | Supply Plan Input Regen          | Version 3.0 |
|                         |             | Supply Plan Input Net Change     | Version 3.0 |
|                         |             | Trading Partner Order Management | Version 1.0 |
|                         |             | Vendor Manager                   | Version 2.0 |

WebSphere software



- ▶ IBM CrossWorlds® Connectors or Adapters enable process integration by pulling data and transactions from the business support systems throughout your company. The wide range of adapters can link to packaged, mainframe and legacy applications, databases, customer-facing Web sites, and trading partners' systems. Pre-built connectors are ready to use right away, requiring little development to deliver results. A subset of existing adapters is shown on the upper half of this chart.
- ▶ IBM CrossWorlds® also provides pre-built solutions for business process automation. Application-independent Collaborations (or integration modules) graphically define end-to-end processes and encapsulate basic integration and business rules for common business processes. The portfolio of collaborations for manufacturing, including electronics, automotive and industrial, is shown on the lower half of this chart.
- ▶ A complete list of adapters and collaborations can be found on ibm.com at: <http://www-3.ibm.com/software/info1/websphere/indexcw.jsp>

# Why IBM WebSphere?

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## 1. Leadership in Business Integration

## 2. World Class Open Services Infrastructure

## 3. Deploying Web Services



WebSphere cuts integration costs in half

### Integration cost savings through:

- Pre-built integration capabilities
- Unmatched ability to reuse existing assets
- Dynamic flexibility through open standards

WebSphere software



# Why IBM?

- **IBM integrates your business processes and data with your trading partners:**
  - ✓ Extensive set of adapters for legacy applications
  - ✓ Extensible solutions
  - ✓ Industry domain expertise
  
- **IBM is devoted to advancing open Internet standards and applications:**
  - ✓ More than 1000 developers devoted to XML
  - ✓ More than 1,500 developers devoted to Linux
  - ✓ Almost 4000 Java professionals, 20 labs worldwide and 110+ Java-enabled products and solutions
  - ✓ Leader in establishing Web Services for dynamic e-business
  
- **IBM's e-business strategy is fueled by the world's largest portfolio of software patents (approx 6,000)**
  
- **IBM is the world's largest information technology company**
  - ✓ World's largest IT services company
  - ✓ Business operations in 170 countries

*“Grow as you go” –  
with a single partner with global reach and scalable vision*

**WebSphere** software



• In summary, IBM integrates your business processes and your data with your trading partners, by offering:

- Extensible solutions
- an extensive set of available adapters for legacy applications, and
- industry domain expertise

• IBM is devoted to advancing open Internet standards and applications, rather than proprietary solutions, with:

- More than 1000 developers devoted to XML
- More than 1,500 developers devoted to Linux
- Almost 4000 Java professionals, 20 labs worldwide and 110+ Java-enabled products and solutions
- and is a leader in establishing Web Services for dynamic e-business

• IBM's e-business strategy is fueled by the world's largest portfolio of software patents

• Finally, IBM is truly a global company, and the world's largest information technology company

- as well as the world's largest IT services company
- with business operations in 170 countries

• so you can

• “Grow as you go” – with a single partner with global reach and scalable vision

# IBM has over 50 Web Services Customer Successes

<http://www-3.ibm.com/software/ebusiness/jstart/casestudies/webservices.html>





WebSphere software



To learn more about WebSphere Business Connection,  
visit:

[ibm.com/websphere/integration/busconn](http://ibm.com/websphere/integration/busconn)

IBM Software Group

WebSphere software



 e-business software

# Backup

IBM Software Group

| <b>Technical Functions</b>  | WebSphere<br>Business<br>Connection<br>Express Edition | WebSphere<br>Business<br>Connection | WebSphere<br>Business<br>Connection<br>Enterprise<br>Edition | BI Hub<br>Implementation<br>(*) |
|---|--|-------------------------------------|--|---------------------------------|
| <b>Minimum CPU Requirements by OS</b>   |  |                                     |  |                                 |
| Microsoft Windows 2000 Server, Service Pack 2   | 633 MHz<br>Pentium III                                 | 633 MHz<br>Pentium III              | 1.26 GHz<br>Pentium III                                      | 2x 1.26 GHz<br>Pentium III      |
| Sun Solaris 8   | 440 MHz Sparc  |                                     |  |                                 |
| AIX V5.1  | 375 MHz<br>RS/6000                                     |                                     |  |                                 |
| <b>Additional Hardware Requirements</b>   |  |                                     |  |                                 |
| ✓ Minimum required RAM  | 512 MB   | 1 GB                                | 2 GB   | 16 GB                           |
| ✓ Minimum required HDD  | 10 GB  | 20 GB                               | 40 GB  | 80 GB                           |
| <b>Included Functionality:</b>  |  |                                     |  |                                 |
| ✓ J2EE runtime environment  | X  | X                                   | X  | X                               |
| ✓ Web services proxy  | X  | X                                   | X  | X                               |
| ✓ Web services connectivity   | X  | X                                   | X  | X                               |
| ✓ Security management and access control  | X  | X                                   | X  | X                               |
| ✓ Solutions Management, Federated Partner Profile, Document Exchange  |  | X                                   | X  | X                               |
| ✓ Routing/Processing engine with operational tools  |  | X                                   | X  | X                               |
| ✓ XML transformation runtime  |  | X                                   | X  | X                               |
| ✓ Non-Web services communication protocol support   |  | X                                   | X  | X                               |
| ✓ Database connectivity   |  | X                                   | X  | X                               |
| ✓ Messaging middleware connectivity   |  |                                     | X  | X                               |
| ✓ VAN connectivity  |  |                                     | X  | X                               |
| ✓ Tivoli Access Manager for e-business V3.9   |  |                                     |  | X                               |
| ✓ WebSphere Business Integration V4.1: CrossWorlds ICS, with operational and development tool, XML transformation runtime |  |                                     |  | X                               |
| ✓ WebSphere Portal 4.1 Enable Solution  |  |                                     |  | X                               |
| ✓ WebSphere Edge Server V2.0 for Multiplatforms   |  |                                     |  | X                               |
| <b>Connectivity:</b>  |  |                                     |  |                                 |
| ✓ Web services Partner Connections  | 10   | 50                                  | 100  | Unlimited                       |
| ✓ TPI Partner Connections   | N/A  | 1                                   | 1  | 100                             |
| ✓ Back-End Application/Technology Connections   | N/A  | 1                                   | 1  | Unlimited                       |
| <b>Note:</b><br>(*) Solution represents a recommended architecture and is not a formal product.                           |  |                                     |  |                                 |

# WebSphere Business Connection Protocol Support

| Offerings                             | Transport   |                                     | Delivery                                       |              | Bus Procotols  | Transformation   |                                  | Tools   |
|---------------------------------------|---|-------------------------------------|--|--------------|--|--|----------------------------------|---|
|                                       | Network Protocols   | Message Protocols                   | Security                                       | Inter-Change | Libraries  | Libraries  | Capability                       |   |
| <b>Business Connection Express</b>    | HTTP, HTTP(s), HTTPR, HTTPR(s), JMS (MQ)                      | SOAP                                | Base WAS Plugins                               | XML          | - J2EE Processes   |  |                                  | - WAS Tools   |
| <b>Business Connection</b>            | HTTP, HTTP(s), HTTPR, HTTPR(s), JMS (MQ)                      | SOAP, RNIF, S/MIME, ebXML, AS1, AS2 | X.509, SSL, PKCS, AS1, LDAP, Entrust, Verisign | XML, EDI     | - J2EE Processes<br>- CW Collaborations (process design and development not supported) | CW Adapters for B2B  | XML                              | - WAS Tools<br>- CW Operational tools only            |
| <b>Business Connection Enterprise</b> | HTTP, HTTP(s), HTTPR, HTTPR(s), JMS (MQ) plus VAN, Direct, MQ | SOAP, RNIF, S/MIME, ebXML, AS1, AS2 | X.509, SSL, PKCS, AS1, LDAP, Entrust, Verisign | XML, EDI     | - J2EE Processes<br>- CW Collaborations (process design and development not supported) | CW Adapters for B2B plus Ext industry libraries, EDI able to import DTDs | XML, EDI-EDI, EDI -XML, XML-X ML | - WAS Tools<br>- CW Operational Tools only            |
| <b>BI hub Implementation</b>          | HTTP, HTTP(s), HTTPR, HTTPR(s), JMS (MQ) plus VAN, Direct, MQ | SOAP, RNIF, S/MIME, ebXML, AS1, AS2 | X.509, SSL, PKCS, AS1, LDAP, Entrust, Verisign | XML, EDI     | - J2EE Processes<br>- CW Collaborations  | CW Adapters for B2B plus Ext industry libraries, EDI able to import DTDs | XML, EDI-EDI, EDI -XML, XML-X ML | - WAS Tools<br>- CW Operational and development tools |