



# Agenda

- RosettaNet in the News
- Organization Overview
- Components of a Standard
- Standards Management Process
- Implementation Activity
- 2002 Programs

# *Industry Recognition:* Analyst Community

*RosettaNet, A Refreshing Approach to Standards:*

**“ROSETTANET STANDS APART**  
from most consortia that produce  
standards for the business use of XML.  
With its resources, focused and  
incremental approach as well as its  
governance structure, **ROSETTANET**  
**IS SHOWING RESULTS.”**

Gartner Group, Inc.

6.25.01

“Through 2004, RosettaNet will be the only source  
of ‘plug-and-play’ XML-based, consensus supply  
chain standards to have **ACHIEVED MORE**  
**THAN TOKEN USE IN PRODUCTION.”**

Gartner Group, Inc.

6.25.01

RosettaNet  
is “one of the  
**MOST AMBITIOUS**  
inter-enterprise content  
and process integration  
efforts currently underway.”

Patricia Seybold Group

4.3.01

# *Industry Recognition:* Trade & Business Press

“RosettaNet is perhaps the **MAIN SUCCESS STORY TO DATE**. It hasn’t been easy ... but if XML is going to live up to its expectations, every other industry is going to have to **FOLLOW ROSETTANET’S LEAD**.”

Business Week  
7.23.01

“RosettaNet is arguably the **MOTHER OF ALL** industry-specific **XML EFFORTS**.”

eWEEK  
2.26.01

“RosettaNet's e-business communications standards are **GIANT STEPS** on the journey toward **SOLVING** some of these problems.”

CRN  
3.19.01

In a special year-end issue of tomorrow's **LEADERS**, RosettaNet is named a **TOP 10 WINNER OF 2000** by InternetWeek.  
12.18.00

# The latest Trend

## Intel Readies EDI Retirement

Santa Clara, Calif.--Intel said it will replace EDI with RosettaNet standards by 2006, making it the first company to publicly commit to retiring electronic data interchange.

The chip maker also said it has reached a RosettaNet milestone: By year-end, Intel will be swapping data in RosettaNet's XML formats over the Internet with 50 trading partners. Intel could save as much as 2 percent of revenue, or roughly \$564 million, annually by tuning its supply chain with Internet technology, estimated Vernon Keenan, founder of analyst firm Keenan Vision. That includes the move away from EDI.

--Mitch Wagner

More: <http://www.internetweek.com/story/INW20011217S0001>

INTERNETWEEK.com, December 2001

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### A non-profit consortium

- Supports the high-tech manufacturing (end-to-end processes within vertical industry supply-chain)
- Supports industry segments (electronic components, information technology, and semiconductor manufacturing)
- Global in presence, participation and adoption

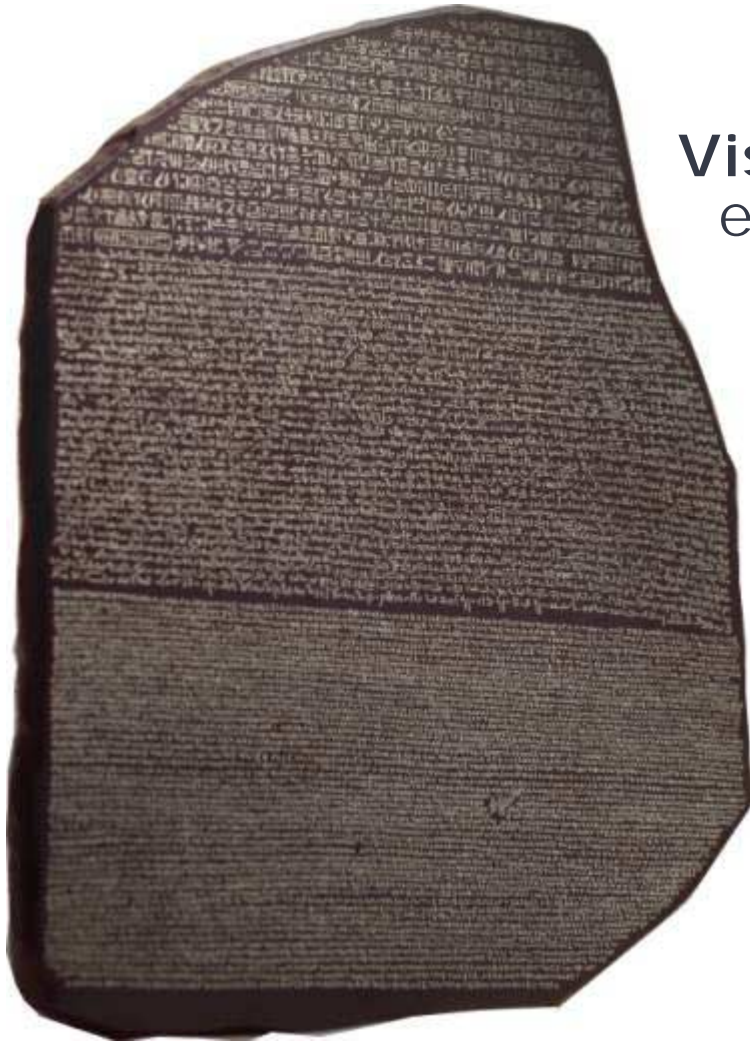
### A standards body

- Creates standards which seek to
  - ... standardize the interaction process (public process)
  - ... standardize the data exchanged to support a business process

### An XML Implementation

- Ready-to-implement XML implementation
- PIPs are ready to download and implement today
- High visibility, momentum, and adoption
- Supported by broad set of software providers

# RosettaNet Vision & Mission



**Vision:** The leader in global e-business standards.

**Mission:** RosettaNet drives **collaborative** development and rapid **deployment** of Internet-based business standards, creating a **common language** and **open processes** that provide measurable benefits and are vital to the evolution of the **global** trading network.

# Today's RosettaNet Consortium

## STRONG

Led by three Global Supply Chain Boards and Solution Provider Board consisting of business and technology leaders.

## EXPANSIVE

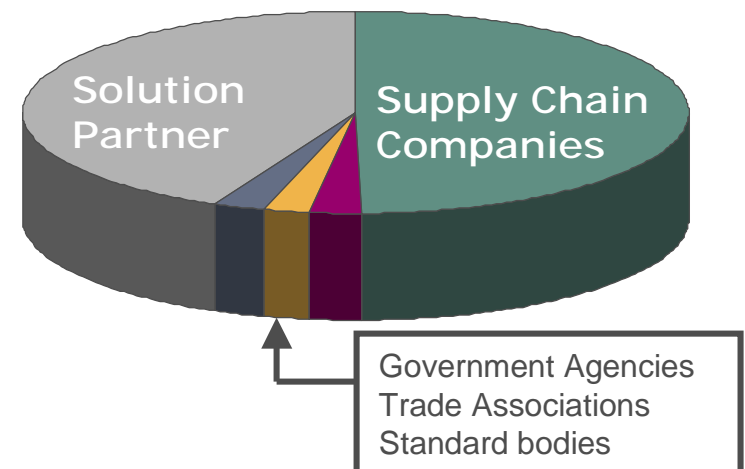
Active across the globe in the Americas, Europe and Asia including Japan, Korea, Singapore, Taiwan and Malaysia.

## GROWING

Over 400 Partner companies.

## ACCELERATING

Over 600 implementations worldwide in 2001.



# Key Organizational Milestones

## *Building A Global E-Business Infrastructure at Internet Speed...*

October

- PIP® Production Milestone
- Singapore/ Taiwan Orgs. launched
- SM & SP Boards formed

February  
RosettaNet  
founded

June  
1<sup>st</sup> Partner  
Conference

February  
Readiness  
milestone

June  
Information  
Technology  
Board formed

August  
Electronic  
Components  
Board  
formed

April  
RosettaNet  
Japan  
launched

### •2000 Objectives Met:

- Built formal global presence
- Re-engineered the PIP assembly line
- 55 board members moved into PIP production

# Key Organizational Milestones

## *Building A Global E-Business Infrastructure at Internet Speed...*

January

Establish SM  
& SP Boards

February

RosettaNet  
Korea Announced

August 1, 2002

RosettaNet  
Merges with UCC

2001

2002

### 2001 Objectives Met

- 80 unique, high quality, PIPs® released to validation
- Business process scenario(s) in production,
  - 75% of IT/EC board members with 2 scenarios
  - 90% of SM board with 1 scenario
  - 70 non-board members with PIP in production
- Solution provider advisory board formed
- ROI assessment in Q4/01

### 2002 Goals

- Increase speed and reduce cost of B2B integration through RosettaNet
- Accelerate global adoption and production implementation of current standards
- Extend standards to support new business processes and business models
- Accelerate transition to long-term, self-funding model

# RosettaNet Governing Process

## RosettaNet Executive Board

- Provide overall guidance
- Address prioritization and integration across boards



## RosettaNet Managing Boards

- Address supply chain specific issues
- Prioritization
- Resources
- Implementation and adoption



## RosettaNet Partners

- Votes on standards
- Participates in workshops
- Implements



# Electronic Components (EC) Supply Chain Board

- Agere Systems
- Agilent Technologies
- Arrow Electronics
- Avnet
- AVX
- Cisco Systems
- Future Electronics
- Hitachi Semiconductor
- IBM
- Intel
- KEMET
- Micron Technology
- Molex
- Motorola
- Motorola
- National Semiconductor
- NEC
- Nokia
- Philips Semiconductors
- Samsung Electronics
- Solectron
- Sony
- STMicroelectronics
- Texas Instruments
- Toshiba
- Tyco Electronics
- Xilinx

# Information Technology (IT) Supply Chain Board

- Arrow Electronics
- Avnet
- Cisco Systems
- Federal Express
- GSA
- Hewlett-Packard  
(+Compaq)
- IBM
- Ingram Micro
- Intel
- Siemens AG
- Solectron
- Sun Microsystems
- Trilogy
- UPS Logistics

# Semiconductor Manufacturing (SM) Supply Chain Board

- Agere Systems
- Agilent Technologies
- Air Products & Chemicals
- Amkor Technology
- Applied Materials
- ASE
- Chartered Semiconductor Manufacturing
- Infineon
- IBM
- Intel
- JSR
- Micron Technology
- Motorola
- National Semiconductor
- NEC
- Samsung
- Shin-Etsu Handotai (SEH)
- Shinko Electric Industries (SEI)
- Silicon Precision Industries (SPIL)
- Sumitomo Bakelite
- Sumitomo Mitsubishi Silicon (SUMCO)
- Taiwan Semiconductor Manufacturing Company (TSMC)
- Texas Instruments
- Tokyo Electron Limited (TEL)
- Tokyo Ohka Kogyo (TOK)
- Toppan Printing
- Toshiba
- UMC

# Solution Provider Board (SP)

- CommerceRoute
- Drake Certivo
- Dun & Bradstreet
- E2open
- eConnections
- Fujitsu Limited
- i2 Technologies
- IBM
- IONA Technologies
- Manugistics
- Mentor Graphics
- Microsoft
- NEC
- Oracle
- Peregrine Systems
- PricewaterhouseCoopers
- QPR Software
- SAP
- TIBCO Software
- Viacore
- webMethods

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- RosettaNet in the News
- Organization Overview
- *Components of a Standard*
- Standards Management Process
- Implementation Activity
- 2002 Programs

# Partner-to-Partner Electronic Business Interface

## Company A

Company Specific processing



Translate from Rosettanet standards to Company A system data set.

Internet & XML



RosettaNet defines processes and a framework for how data gets passed over the Web and certain handshake criteria.

## Company B

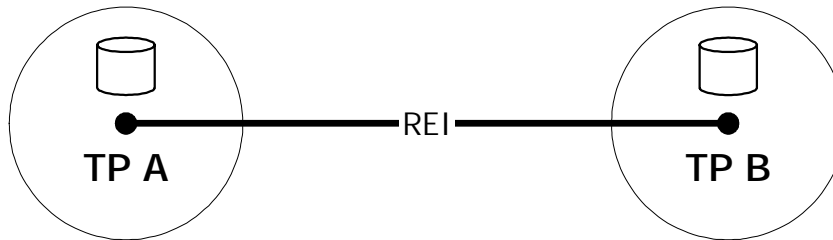
Company Specific processing



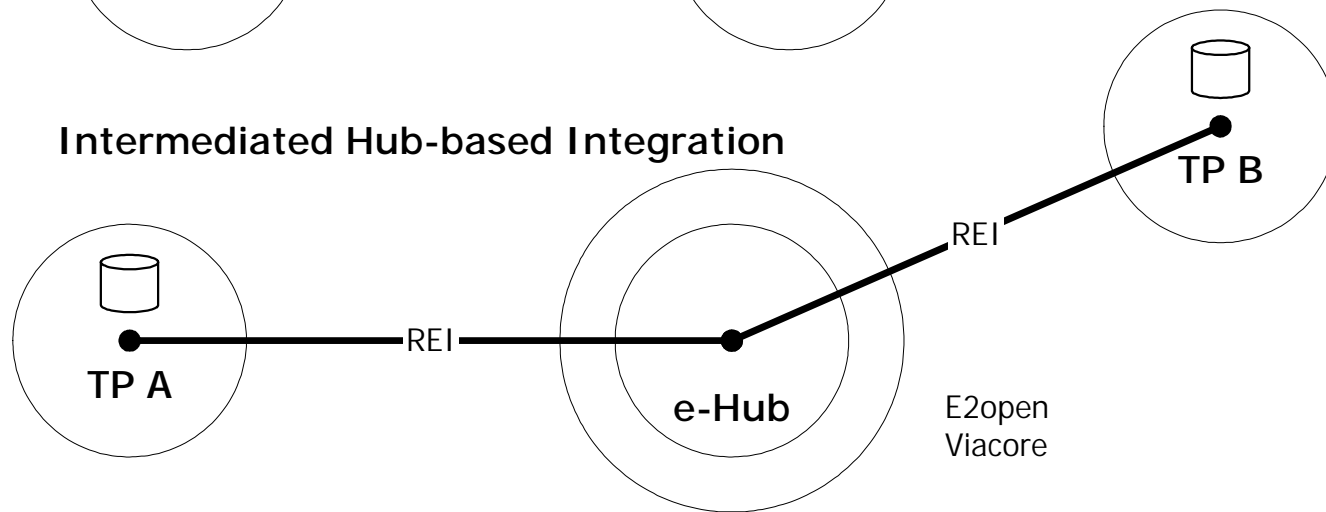
Translate from RosettaNet standards to Company B system data set.

# RosettaNet Integration Models

## Direct Point to Point Integration

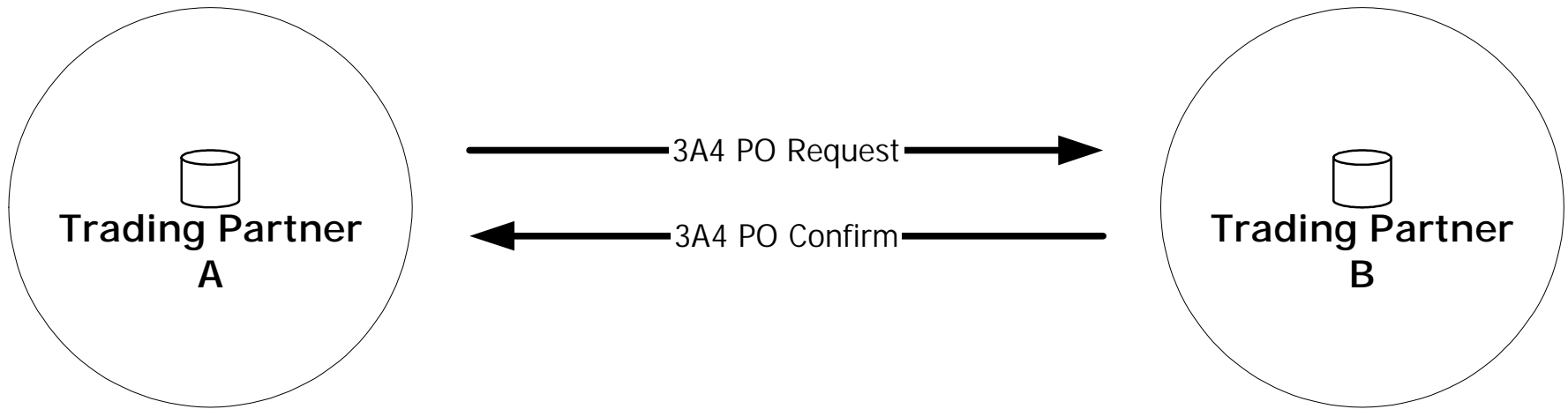


## Intermediated Hub-based Integration



# RosettaNet

## From Data Exchange to Process Integration



- “Public Process” standardization
- Data standardization

# Information Exchange Standards

## Process-centric

- Real-time
- Process Definition
- Internet-enabled
- XML
- Global
- All businesses
- Standard industry dictionaries

## Message-centric

- Batch
- Message Definition
- VAN-enabled
- X.12/EDIFACT/JECALS
- Regional
- Large businesses
- Custom industry dictionaries

# E-Business Exchange

human-to-human  
business exchange

Partner-to-Partner  
eBusiness exchange

Telephone	Ecom Application
Business Process	eBusiness Process
<b>DIALOG</b>	<b>PIP<sup>®</sup></b>
Grammar	Framework
Words	Dictionary
Alphabet	XML
Sound	Internet

RosettaNet

# RosettaNet Business Process Architecture

- Partner Interface Process® (PIP®)
- RosettaNet Dictionaries
- RosettaNet Implementation Framework (RNIF) Core (Messaging Services)

# Partner Interface Process<sup>®</sup> (PIP<sup>®</sup>)

- Depict activities, decisions and interactions that fulfill a business transaction
- Specify structure and format of business document payloads
- Organized by clusters and segments

# RosettaNet Cluster/Segments

## *RosettaNet Partner Interface Process® Standards*

### Cluster 1 Partner Profile Management

### Cluster 2 Product Information

### Cluster 3 Order Management

### Cluster 4 Inventory Management

### Cluster 5 Marketing and Support

### Cluster 6 Service and Support

### Cluster 7 Manufacturing

- Manage Profile Subscriptions
- Request Profile Data
- Profile Change Notification
- Profile Process Request

- Preparation for Distribution
- Product Change Notification
- Product Design Information
- Collaborative Design

- Quote & Order Entry
- Transportation & Distribution
- Returns & Finance
- Ship from Stock & Debit/Credit

- Demand Planning and Release
- Inventory Allocation
- Inventory Replenishment
- Inventory Reporting
- Sales Reporting
- Price Protection

- Lead Opportunity Management
- Marketing Campaign Management
- Design Win Management
- Provide Service

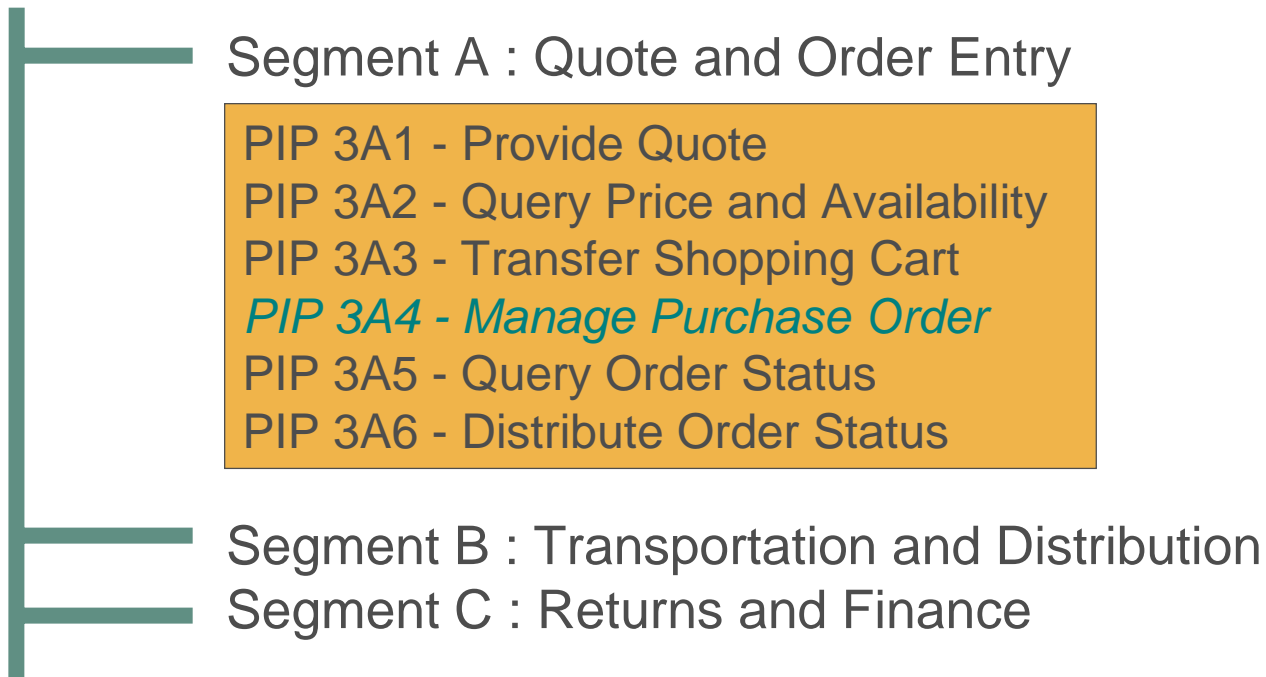
- Warranty Administration
- Technical Service and Support Information

- Design Transfer
- Manage Manufacturing WO and WIP
- Distribute Manufacturing Information (Genealogy and Quality)

# RosettaNet Cluster/Segments

Categorized by high-level business function (**cluster**) and sub-function (**segment**)

## Cluster 3: Order Management



# RosettaNet Business & Technical Dictionaries

- Ensures consistent information exchange during PIP<sup>®</sup> execution
- Technical dictionary (form, fit, function)
  - Specifies common product properties/attributes
- Business dictionary
  - Specifies common partner properties
  - Enables partners to identify one another
- Shares common standards for Partner & Product Identification
  - Partner Identification
  - Product Identification

# RosettaNet Implementation Framework (RNIF) Core

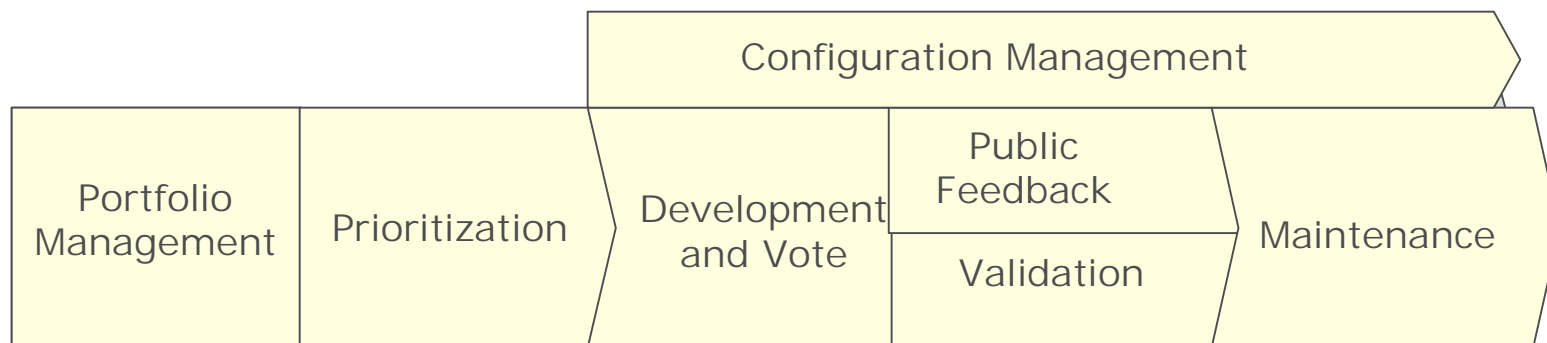
- Defines RosettaNet Object (RNO)
- Specifies how to transport RosettaNet Object between trading partners' network applications
- Version 2.0 features and benefits:
  - HTTP and SMTP transfer protocols
    - Better support for e-marketplaces
  - Support for .pdf, .gif files
    - Can send complex documents
  - Support for S/MIME v.2
    - Greater security, privacy and authentication

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- ***Standards Management Process***
- Implementation Activity
- 2002 Programs

# Standards Management Process

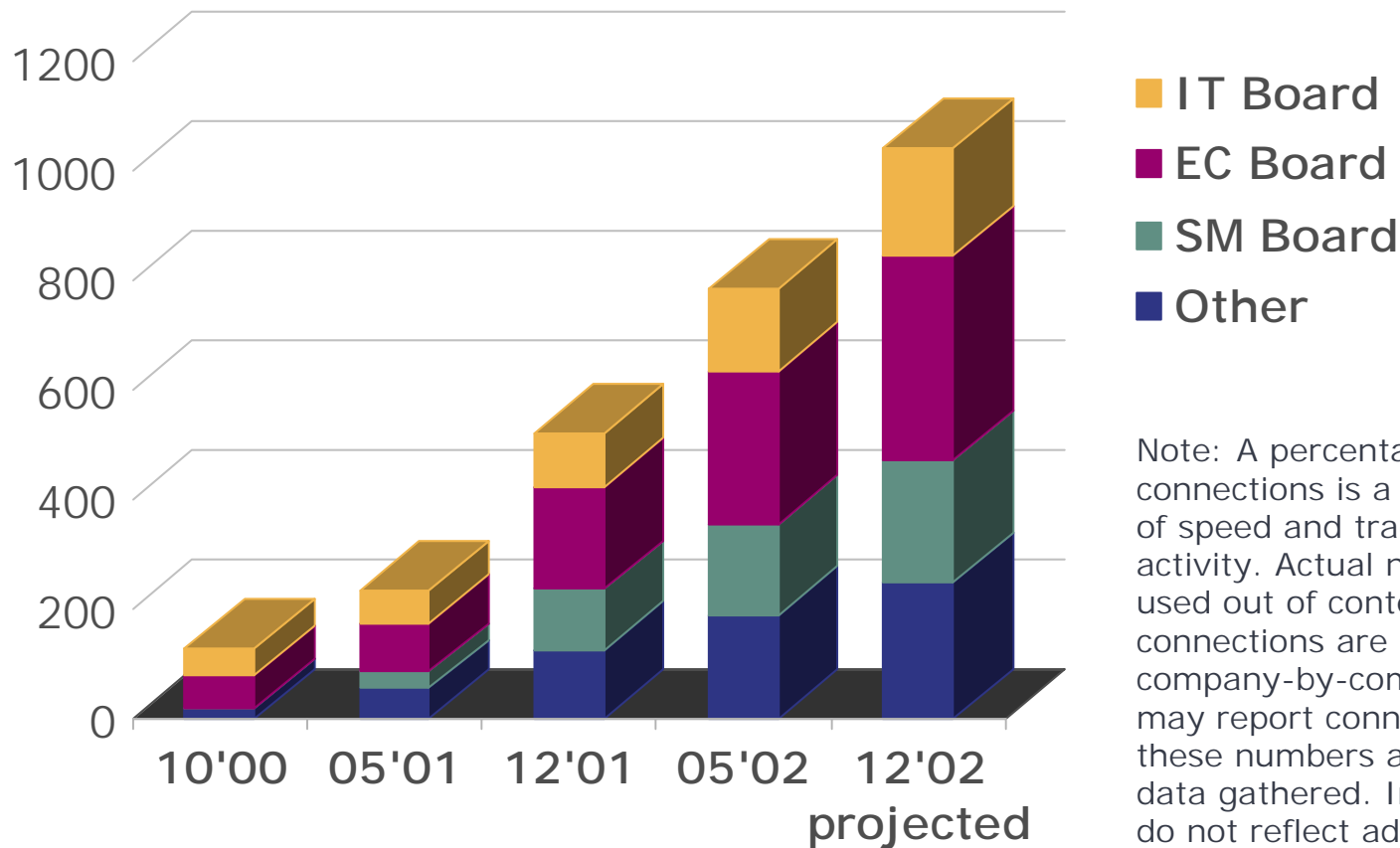
## *Standards Development Methodology*



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# Partner Connections



Note: A percentage increase of partner connections is a quantitative indicator of speed and traction of implementation activity. Actual numbers should not be used out of context. Because actual connections are calculated differently company-by-company and partners may report connections inconsistently, these numbers are estimates based on data gathered. In addition, numbers do not reflect additional volume of multi-PIP activities.

# Success Stories

- Arrow & Trading Partner RosettaNet Purchase Orders (3A4)
  - Manual Order Processing Reduced 93-95 percent
  - Inventory turns were doubled
  - Order response time was reduced from 8-10 hours to 2 hours for exceptions requiring manual intervention, and less than 20 minutes for non-exceptions
  - 24x7 and real-time ordering were achieved
  - Order accuracy was improved eliminating additional re-entry tasks and other costs
  - ROWC (Return on Working Capital) was improved due to better inventory management
  - Whitepaper is available at [www.rosettanel.org](http://www.rosettanel.org)

# ROI Study

- Avnet & PriceWaterhouseCoopers
  - Analyzed the impact of implementing 3 PO PIPs
    - 3A4 Purchase Order Process
    - 3A6 Purchase Order Status
    - 3B2 Advance Ship Notification
  - Benefits Achieved via RosettaNet Implementation:
    - Reduced Costs
    - Reduced order processing time
    - Reduced head count
    - Streamlined activities, including eliminating manual tasks
    - Stronger team environment
  - 2000-2004 Expected savings = \$13.8 million
  - ROI for same period is 230%

# European RosettaNet User Group (ERUG) and RosettaNet Scandinavia

## ERUG Participants

- Arrow
- Avnet
- CISCO
- Eurodis
- Ingram Micro
- Intel
- Motorola
- Nokia
- Philips Semi
- Siemens
- STMicro
- Texas Instruments

## RosettaNet Scandinavia

- Anilinker
- Elcoteq
- Elma
- Helsinki University of Technology
- Iocore
- KPMG
- Mobile-Zoom
- Nokia
- QPR
- Salcomp
- Sonera

# RosettaNet Europe Information

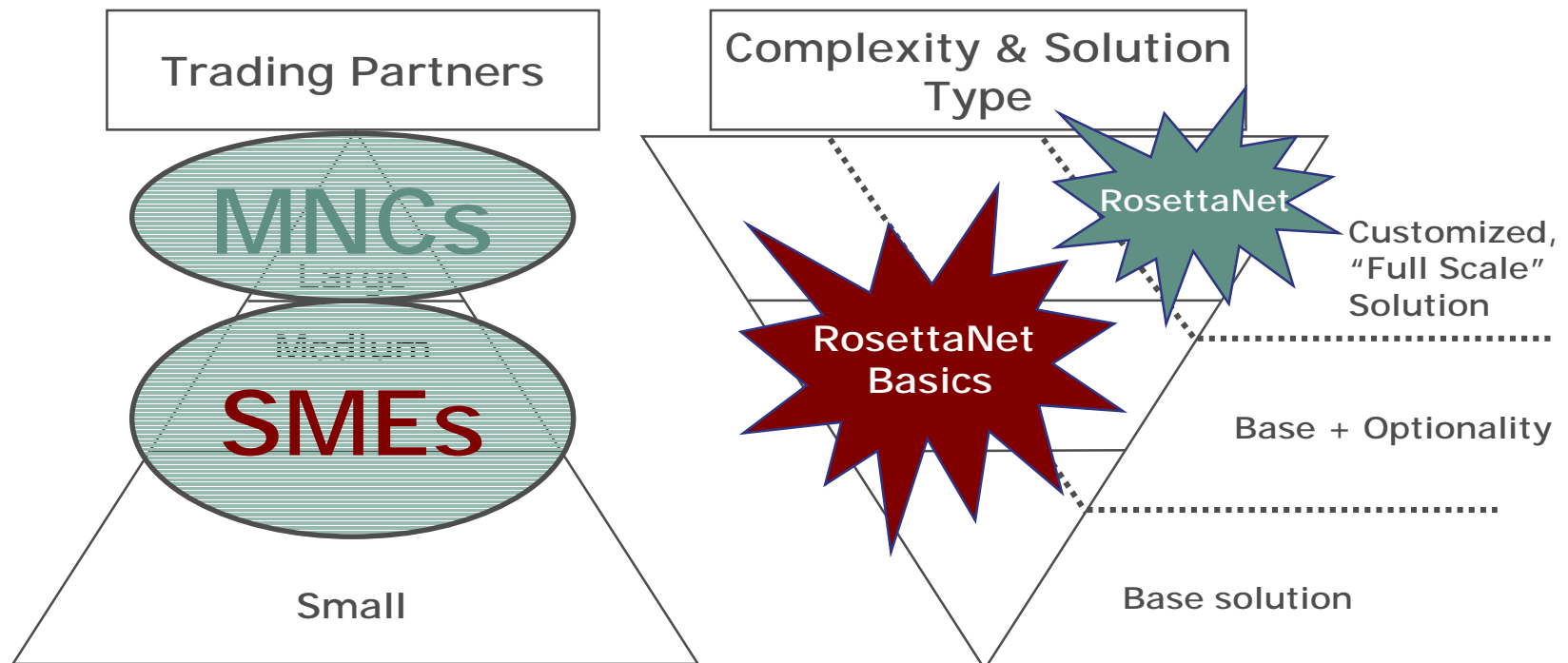
- RosettaNet Global Website
  - [www.rosettanel.org](http://www.rosettanel.org)
- RosettaNet Europe
  - [www.rosettanel.org/europe](http://www.rosettanel.org/europe)
- European RosettaNet User Group (ERUG)
  - [www.edifice.org/ERUG](http://www.edifice.org/ERUG)
- RosettaNet Scandinavia User Group
  - [www.rosettanel.fi](http://www.rosettanel.fi)

# RosettaNet Basics Program (RNB) – Origin / Concept (1 of 2)

- *JAN/FEB2001* - RosettaNet Board Members discuss idea to increase RosettaNet adoption pace by enabling Small-to-Medium Enterprises (SMEs)
- *FEB2001* - Board agrees to launch a Milestone Program to address mid-tier customer and supplier TPs by developing RNIF-compliant solutions “for the masses”
- *FEB/MAR2001* - Intel assumed role of RosettaNet Board Member sponsor
- *APR2001* - RosettaNet Basics (RNB) team formed by a group of EC and IT multi-national companies (MNCs)
  - **Compaq, Hewlett-Packard, Insight & Intel**
  - Cisco joined at one point, and then stepped down

# RosettaNet Basics Program (RNB) – Origin / Concept (2 of 2)

- RNB team created **Usage Recommendations (URs)** for a subset of RosettaNet PIP™s by clearly defining *how to use* the existing PIP mandatory & optional attribute content
- **Solution providers (SPs)** have provided gateway software & limited services at cost effective price points for SMEs



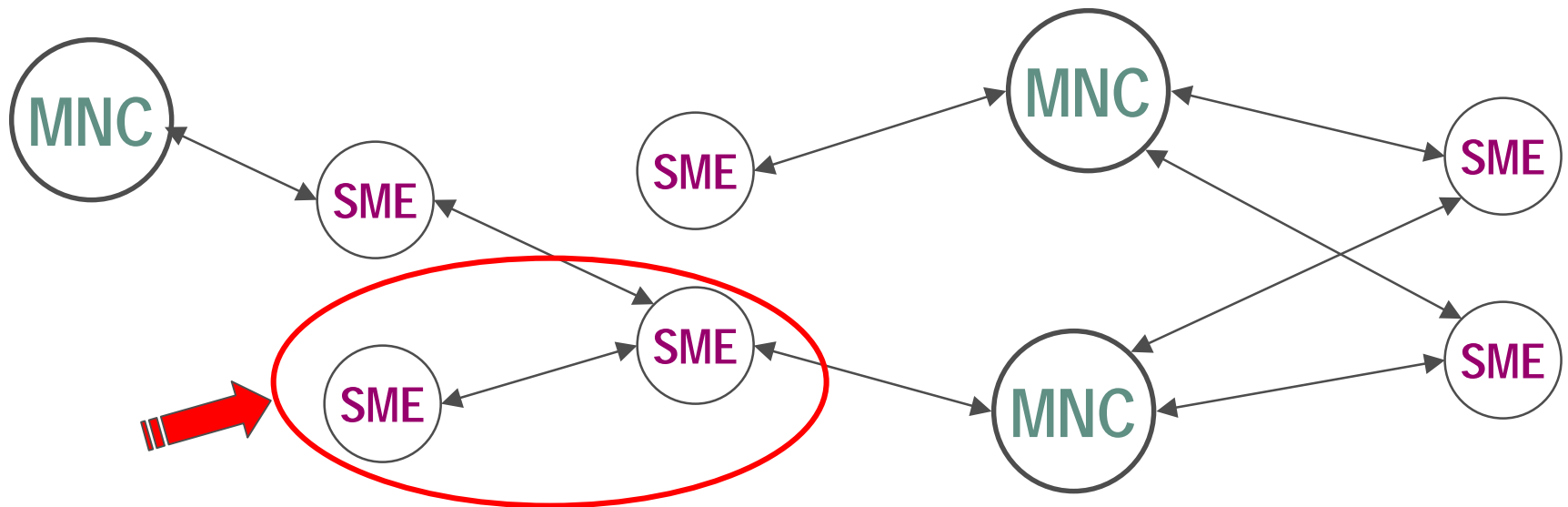
# RosettaNet Basics Program - Benefactors

## Primary Benefactor

- Small-to-Medium Enterprises (**SMEs**)
- Companies with ~\$500M annual revenue and <2500 employees

## Secondary Benefactor

- Multi-National Companies (**MNCs**)



# RosettaNet Basics Program - Benefactors (con't)

- RNB solutions are intended for use by Small-to-Medium Enterprises (SMEs) to connect to their larger, Multi-National Corporation (MNC) Trading Partners (TP).
- Even though most MNC TPs will not have a direct use for RNB solutions, MNC TPs still play a critical role in guiding their supply or demand chains towards an appropriate solution.
- Once the SME has installed, configured and tested their RNB solution, they can use either the RNB URs as templates to quickly ramp up on purchase order and ASN.
- Eventually, SMEs and MNCs can work together to create additional URs from any RosettaNet PIP. These new URs will simply represent the optimal selection of attributes to be used in any particular TP relationship.

# RosettaNet Basics Program – Value Proposition

- Value driven by return-on-investment (ROI). RosettaNet currently oversees ROI studies being conducted by Stanford University, the University of Illinois, etc.
- Only a small number of MNCs have deployed RosettaNet solutions with their SME TPs. In these cases, ROI comprised mostly of:
  1. *Business process improvements*
  2. *Reduction/re-allocation of labor*
  3. *Reduction/elimination of EDI VAN charges*
  4. *Elimination of manual processes (phone, fax, etc.)*
  5. *Streamlining of internal systems infrastructure*
- In one example, an MNC realized payback in < 1 quarter.

# RosettaNet Basics

## 2002 Integration - URs

- Have completed “RNB” transition to RosettaNet.org’s Product Management team & PIP Factory team (**Popick**)
- RosettaNet’s revised implementation guides are now based on RNB methodology. These implementation guides will be used in ALL future PIP/UR validation efforts.
- RosettaNet’s Senior Program Director (**Cox**) also working to integrate RNB into the 2002 Milestone Program deliverables.
- Integration 100% complete.

# RosettaNet Basics 2002 Integration – Solution Provider (SP) Participation

- Worked with RosettaNet organization to integrate SP participation into mainstream
- Integration includes the following, 2002 SP-driven, RosettaNet Foundational (F) programs;
  - RosettaNet Ready (F)
  - Interoperability (F)
  - Educator (F; *recently initiated*)
- Currently, 9 of the 11 RNB SPs are active in 2002 Foundational Programs.
- Still working with other SPs to support RNB
- Integration 100% complete.

# RosettaNet Basic – Completed Usage Recommendations (UR)

Priority	PIP™	UR	Business Process Message Name	Publish (ed) Date
1	3A4	UR-1	Create a Purchase Order	24SEP2001
2	3A7	UR-1	Notify of PO Acceptance	04OCT2001
3	3A8	UR-1	Change a Purchase Order	12NOV2001 *
4	3A9	UR-1	Cancel a Purchase Order	26NOV2001 *
5	3B2	UR-1	Advanced Shipment Notice	23JAN2002
6	3Ax	Multiple	Updated/ <u>Validated PO</u> Series	04FEB2002

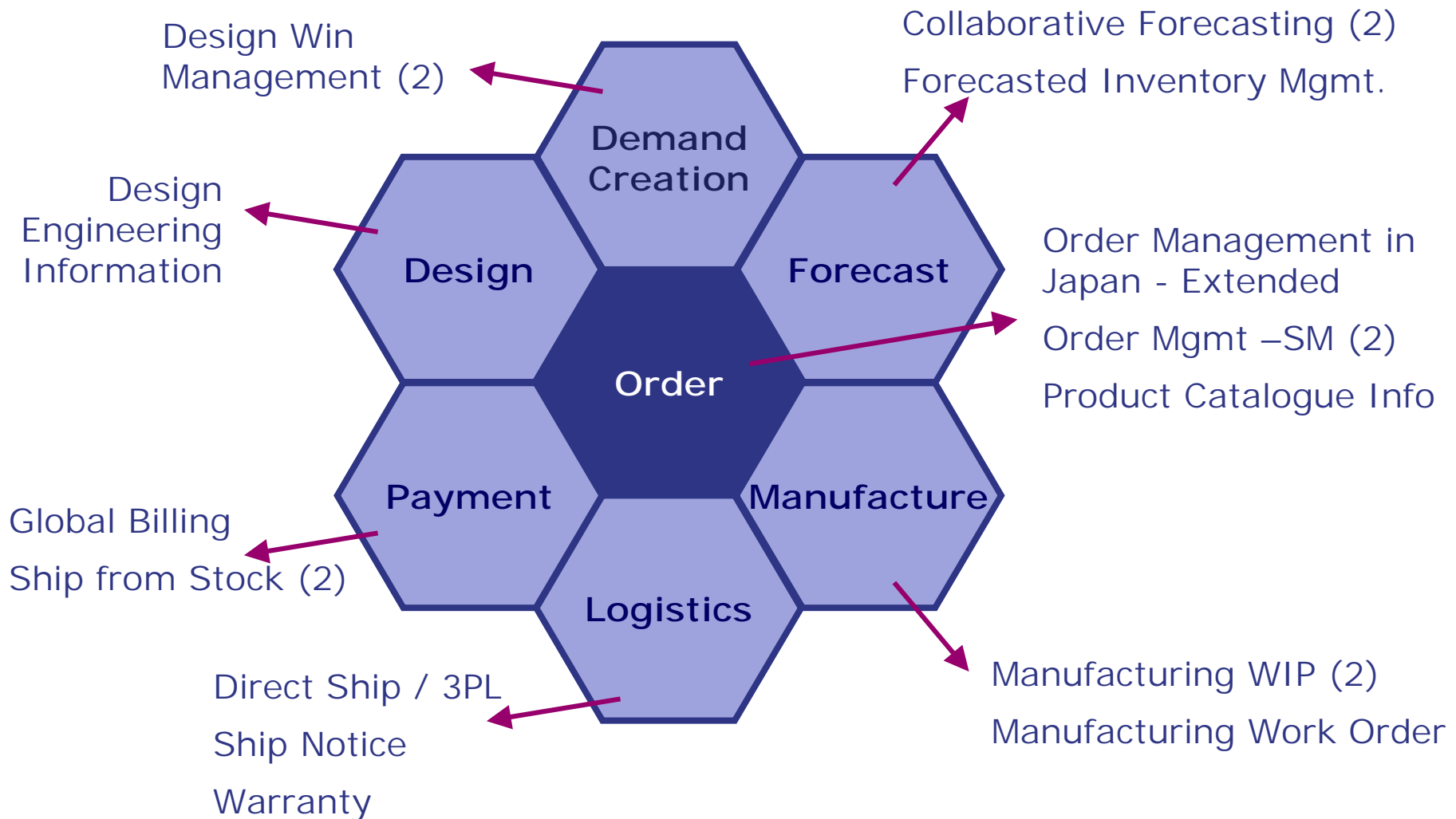
\* = completed ahead of schedule

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# RosettaNet 2002 Milestone Programs

## *E-Business Process Alignment*



# RosettaNet 2002 Milestone Programs

## Overview

Milestone Program	IT	EC	SM	Sponsor	Date
Forecasted Inventory Mgmt		X	S	JSR & NEC	10.2002
Global Billing		X	S	Intel	*12.2002
Manufacturing WIP - phase 2			S	TSMC	9.2002
Manufacturing Work Order			S	TSMC	10.2002
Order Management (SM) – phase 2			S	Motorola	6.2002
Ship Notice			S	Amkor	*9.2002
Collaborative Forecasting (2)		S		STM & TI	12.2002
Design Engineering Information		S		Sony	12.2002
Design Win (2)		S		Motorola	*12.2002
Direct Ship / 3PL		S	X	Intel	3.2003
Order Mgmt in Japan – Extended		S		Sony	12.2002
Ship from Stock – phase 2		S		Arrow	12.2002
Product Catalogue Information	S			Intel	6.2003
Warranty	S			HP	12.2002

**Legend:** S – Sponsoring Board  
X – Boards Involved in Milestone

\* *Proposed Milestone Date Change*

# RosettaNet Foundational Programs

Program	Phase	Investigate	Design	Implement	Status
<b>IMPROVE IMPLEMENTATION:</b> Lower cost, reduce complexity, speed adoption					
Interoperability	Active				G
RosettaNet Ready™	Active				Y
Implementation Costs	Active				G
PIP® Specification Format*	Active				G
RosettaNet Methodology	Active				G
<b>EVOLVE ARCHITECTURE:</b> Next-generation architecture, evolution to horizontal standards					
Domain Model*	Active				Y
Dictionary Architecture*	Active				G
RosettaNet & UCC Architecture	Forming				-
External Network Support	Forming				-
Multiple Messaging Services	Pending				-
Unique Global Identifiers	Pending				-
RosettaNet Registry™	Pending				-
<b>EXTEND BUSINESS PROCESSES:</b> Enhance existing and support new IT, EC and SM processes					
RNTD Development	Active				Y
RNBD Development	Pending				R

\* Previously a component of the Next-Generation Architecture Program

# RosettaNet European Contact

Thierry Ceillier, Vice-President EMEA RosettaNet

CP995 CH-1110 Morges 1

Switzerland

Mobile +41 79 210 52 71

Fax +41 21 802 36 35

[thierry.ceillier@rosettanel.org](mailto:thierry.ceillier@rosettanel.org)



<http://www.rosettanet.org>

(Credits: Many slides within this presentation were provided by RosettaNet)

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# **IBM's RosettaNet Experience**

## **FINSE Seminar,**

### **23 October 2002**

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Patricia Spugani

Manager, B2B Business Strategy & Standards

IBM B2B Initiatives, Corporate CIO Office

[spugani@us.ibm.com](mailto:spugani@us.ibm.com)



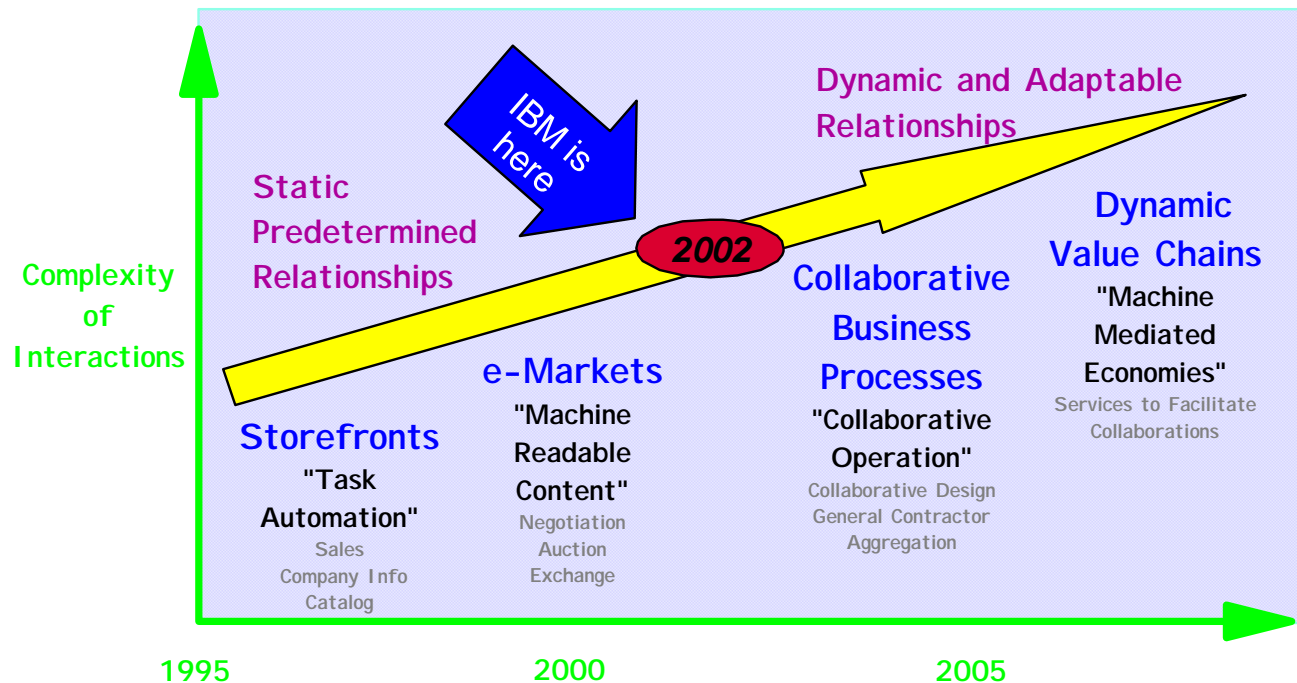
# Agenda

- RosettaNet Overview
  - History
  - The Standard
  - RosettaNet Recent Activity
  - Next Steps
- IBM's Experience
  - IBM's RosettaNet Participation to Date
  - IBM B2B Strategy and Standards Strategy
  - RosettaNet Standards Usage at IBM
  - Case Study
- Next Steps

# IBM has participated in and supported RosettaNet since it was founded

- Original founding member
- Membership in Four Boards
  - Information Technology, Electronic Components, Semiconductor Manufacturing, and Solution Provider
  - Executive Board member
- Sponsorship
  - Staffing – RosettaNet architecture
  - Web Services White Paper
  - Redefinition of RosettaNet IP Policy
- Participation
  - Work Order
  - Maintenance of 3A6
  - Development of Next Generation Architecture

# IBM is on the verge of entering the more complex world of collaborative and dynamic e-business

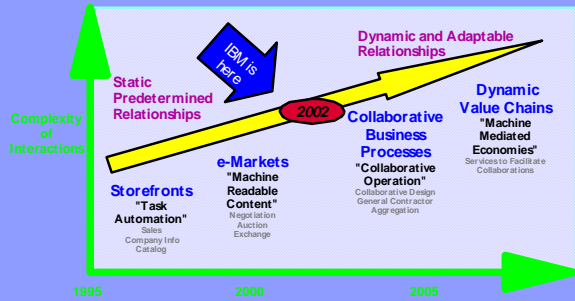


## IBM continues to develop new capabilities to increase our electronic business relationships and to embrace collaborative and dynamic e-business

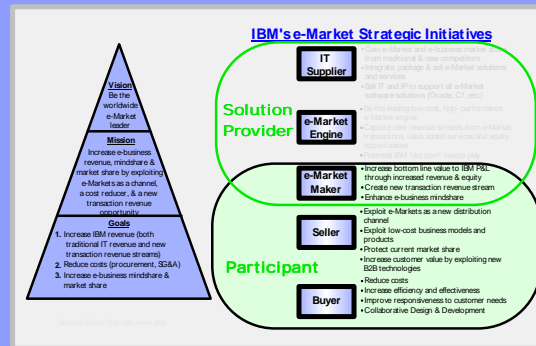
- Large Enterprise (LE) Customers worldwide process PC and xSeries server B2B orders
- IBM conducts B2B with our 3 leading US distributors, enabling them to place i-Series and p-series server orders directly from their Internal ERP systems
- Over 30,000 suppliers globally have eProcurement capabilities with IBM
- Several of Technology Group's Microelectronics Division partners engaged with IBM using RosettaNet Standards in a collaborative B2B relationship, executing advanced ship notification and forecasting interactions.

# IBM faced a variety of influences that drove the company to invest and engage in B2B

## Changing Internet business models



## IBM B2B corporate strategy



## Market opportunity

The B2B opportunity is there.

The B2B opportunity in Computers & Electronics is estimated at \$720B.

US companies are focusing their application software initiatives on e-commerce (Gartner, May 2002)

- IT budgets are giving e-commerce solutions a high priority, making it part of spending at rates through next 18 months, and have increased by 10% in 2002 - with further increases anticipated in 2003
- Drive to lower costs associated with supplier/buyer trading process, enhance customer service and loyalty, and improve the process automation and management of online sales, marketing and supplier/buyer relationships

There is rapid growth in e-business exchanges

AMR Research: Private marketplaces are expected to dominate transaction volume in the B2B arena.

Meta Group: By 2005, private exchanges will become the main vehicle for managing supplier relationships. Some 35 percent of global 2000 companies will have replaced their manual business processes with private e-market technology by 2002 or 2003, and that number will exceed 65 percent by 2005.

AMR Research reports, companies who invested in e-procurement and e-sourcing have experienced:

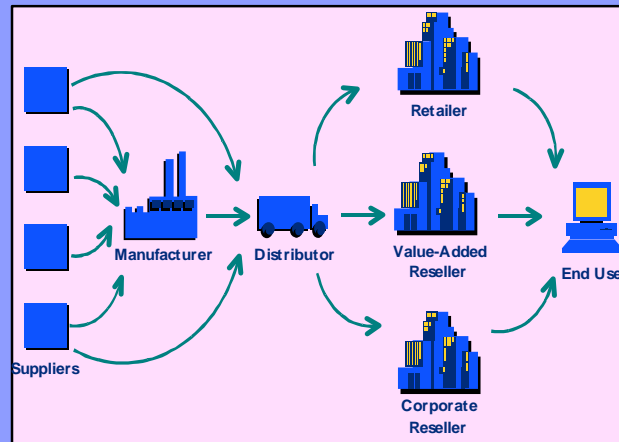
- +10-25% cost savings
- +30-55% cycle time reduction

Gartner Group has found that enterprises that provide responsive and personalized customer interaction show a 5% higher retention of customers and will have more repeat business than those that provide a minimum capability.

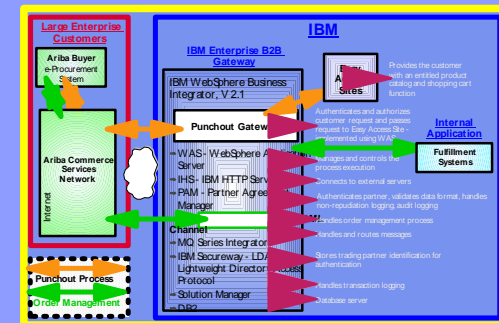
## Customer demand



## Supply chain efficiencies



## Competition and the need to demonstrate leadership



# The B2B opportunity is here now ...

The B2B opportunity in Computers & Electronics is estimated at \$720B.

## Businesses are investing.

- US companies are focussing their application software initiatives on e-commerce (Gartner, May 2002)
  - IT budgets are giving e-commerce sw/solutions a **high priority**, making it **part of spending strategies** through next 18 months, and have **increased by 10%** in 2002 - with further increases anticipated in 2003
  - Drive is to lower costs associated with supplier/buyer trading process, enhance customer service and loyalty, and improve the process automation and management of online sales, marketing and supplier/buyer relationships

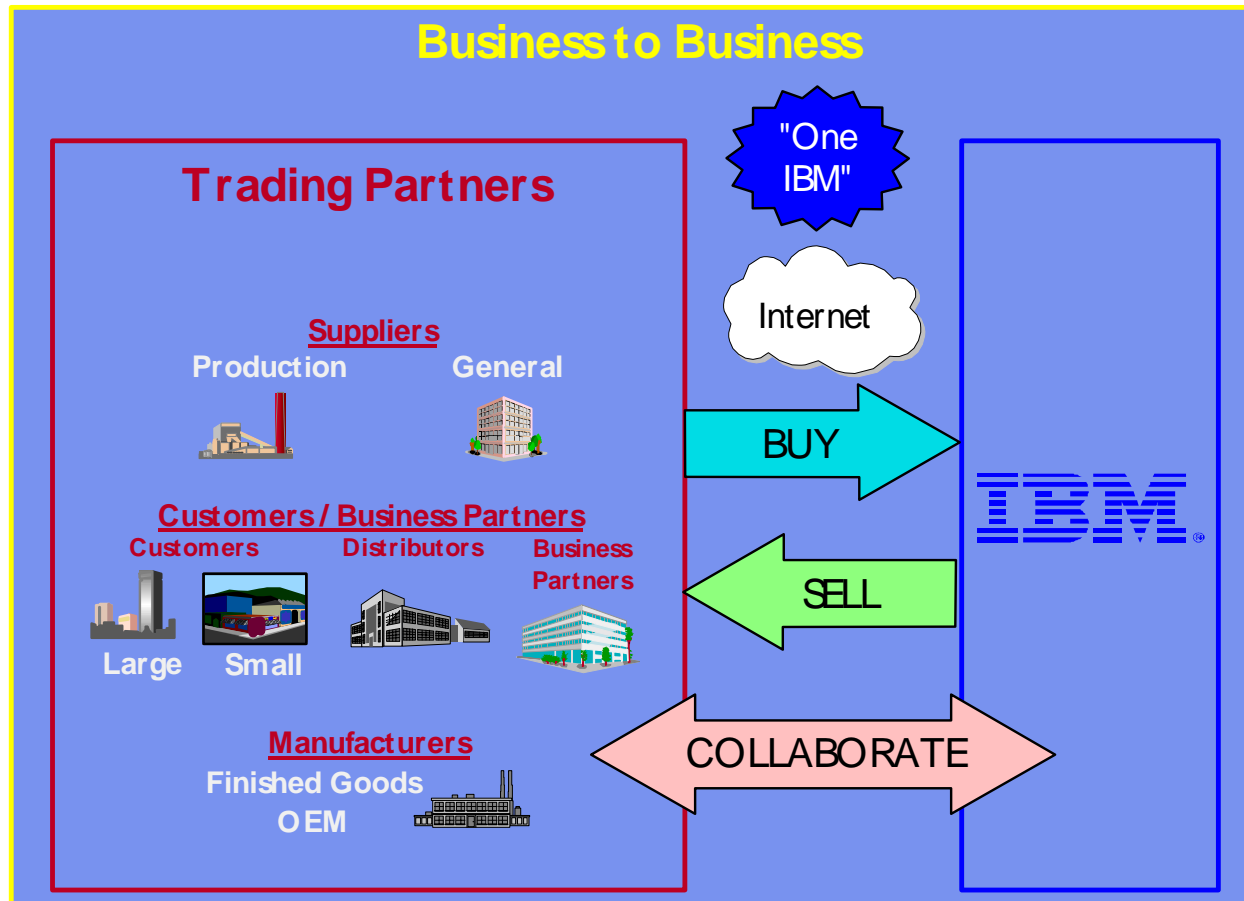
## There is noted growth in B2B private exchanges.

- AMR Research: **Private marketplaces are expected to dominate transaction volume** in the B2B arena.
- Meta Group: By 2005, private exchanges will become the **main vehicle for managing supplier relationships**. Some 35 percent of global 2000 companies will have replaced their manual business processes with private e-market technology by 2002 or 2003, and that **number will exceed 65 percent by 2005**.

## B2B benefits are real.

- AMR Research reports, companies who invested in e-procurement and e-sourcing have experienced:
  - **10-25% cost savings**
  - **30-55% cycle time reduction**
- Gartner Group has found that enterprises that provide responsive and personalized customer interaction show a **50% higher retention of customers and will have more repeat business** than those that provide a minimum capability.

# B2B is ... the seamless electronic integration among multiple businesses in support of process collaboration and transaction support.



IBM is enabling B2B capabilities by allowing for buy, sell and collaborative interactions with our trading partners

# IBM's vision for B2B is to be able to create a virtual enterprise across our entire supply chain, from customers to suppliers

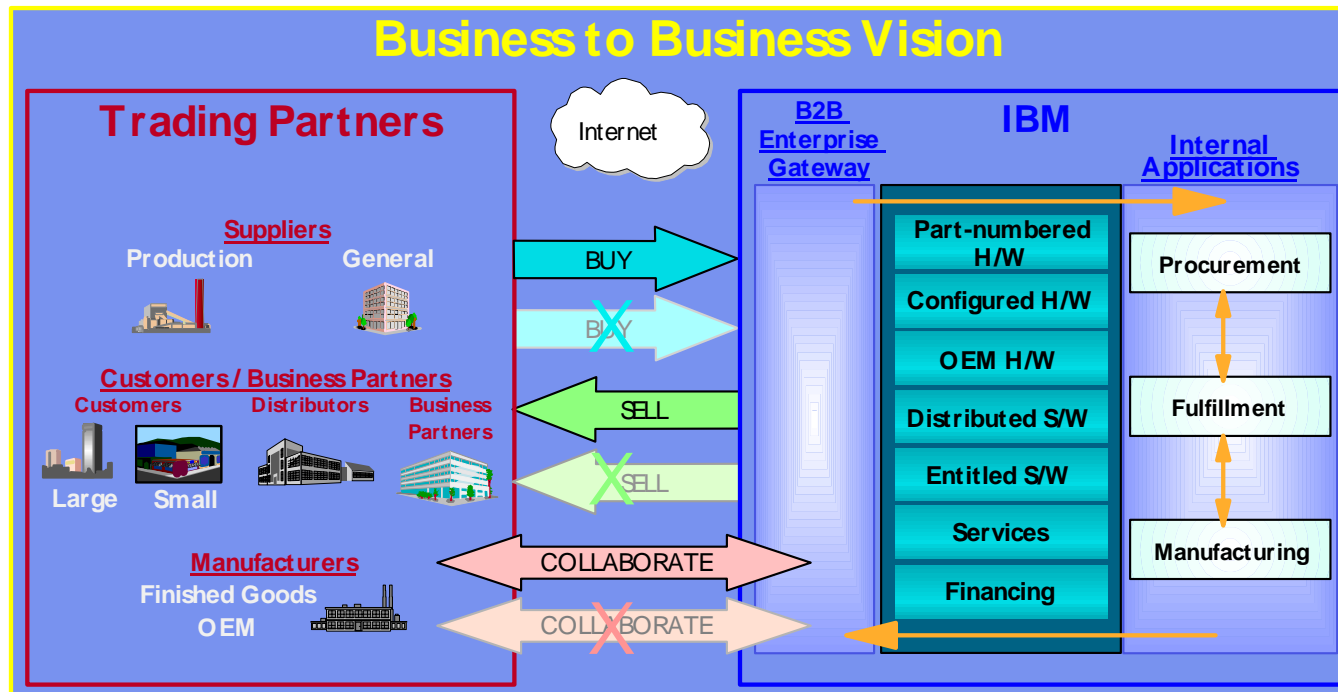
## Vision: Through B2B leadership . . .

We seamlessly *integrate* our processes with our customers, partners and suppliers.

We *satisfy* our customers, partners and suppliers better than anyone.

We *handle* any *business process* execution, anytime, anywhere through the Web.

We *dynamically create* and dismantle virtual enterprises.



# IBM B2B Strategy

To manage B2B adoption, IBM is focusing efforts in four main areas: Business Transformation, Partner Enablement, Technology and Architecture, and Standards

## Business Transformation

- Drive and coordinate B2B Transformation across the enterprise
- Create a "One IBM" experience to electronically do business with IBM in the same way, regardless of brand or geography
- Be recognized by our customers and partners as a leader in B2B

## Partner Enablement

- Create a streamlined and scalable process to accelerate B2B trading partner enablement
- Proactively market our B2B capabilities to target partner segments based on value and capability
- Leverage strategic partnerships to accelerate and maximize efficiency of B2B adoption, i.e., E2open, RosettaNet
- Make it easy to do business with IBM through B2B

## Technology and Architecture

- Establish an end-to-end enterprise B2B architecture to support the "One IBM" experience for our trading partners
- Establish a highly available, scalable, flexible, edge of enterprise infrastructure to support the current and adapt to future B2B business relationships
- Leverage service-oriented technology that enables agility and responsiveness to changing business configurations / environment
- Create a showcase for IBM's technology products and services

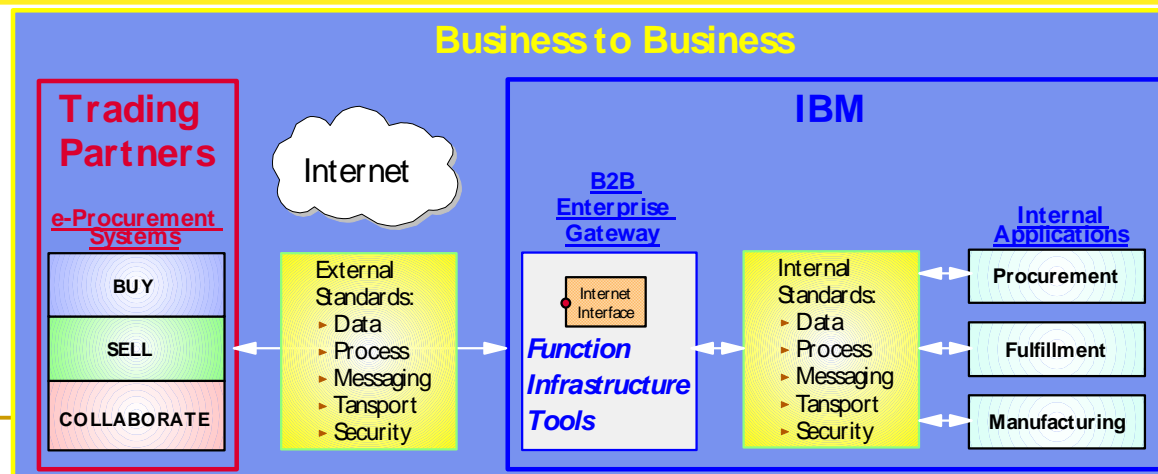
## Standards

- **Lead in the development of open B2B standards in the electronics industry that support both IBM business unit objectives and IBM's Strategic Roadmap for Open Standards**
- **Lead in deployment of these B2B standards between IBM and our trading partners to make it easier to do business with IBM**
- **Deploy B2B standards as part of our B2B infrastructure to reduce costs and increase speed of adoption**

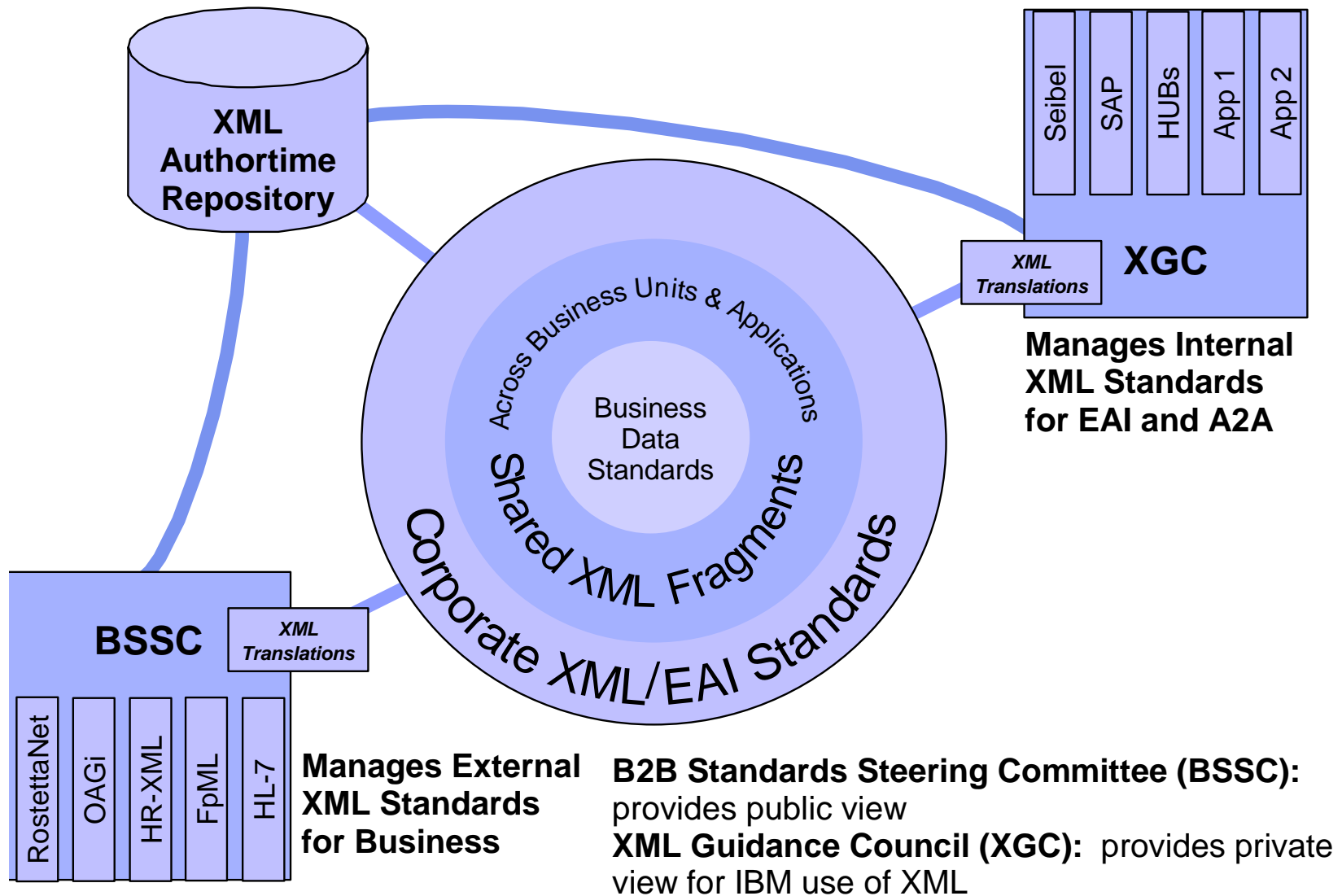
# B2B Standards

By taking a leadership position in B2B Standards, IBM ensures the implementation of the common internet protocol(s) and standard processes required for scalable, rapid, and cost effective B2B solutions

- **Identify B2B Standards** to adopt by balancing current and emerging open standards against Business Unit requirements
- **Drive investment** in and leverage the development of appropriate open B2B standards through industry standards consortia
- **Gain support** both within IBM and from other enterprises to adopt these standards
- **Guide the convergence of B2B standards** to meet IBM's Strategic Roadmap for Open Standards, both internally and externally
- **Design, develop, and deploy B2B standards** within IBM to reduce costs and increase speed of adoption (EAI)
- **Develop and deploy compliance metrics** for standards based interactions



# XML Standards Management



# IBM Internal Processes for Standards

- **BSSC – B2B Standards Steering Committee**
  - Sets direction for B2B Standards within IBM
  - Cross-functional/cross-enterprise team
  - Responsible for participation and Intellectual Property
  - Meets twice/month
- **XGC – XML Guidance Council**
  - Manages technical level of XML within IBM
  - Responsible for all XML within IBM
- **XML Authortime Repository**
  - Stores all XML for IBM
  - Provides corporate wide visibility and access to standards in use

# RosettaNet Standards Usage at IBM

Trading Partner	Business Area	B2B Interaction	RosettaNet Business Interaction
Server Distributors	Server Solution Sales	<ul style="list-style-type: none"> <li>■ Sell</li> </ul>	<ul style="list-style-type: none"> <li>■ <u>Order Management</u>: Order Entry and Status</li> </ul>
Original Equipment Manufacturers	Micro - Electronics Sales	<ul style="list-style-type: none"> <li>■ Sell</li> <li>■ Collaborate</li> </ul>	<ul style="list-style-type: none"> <li>■ <u>Product Information</u>: Distribute Product Master</li> <li>■ <u>Order Management</u>: Order Status and Advanced Shipment Notification</li> <li>■ <u>Inventory Management</u>: Inventory Reporting</li> </ul>
Original Equipment Manufacturers	Micro - Electronics Purchasing	<ul style="list-style-type: none"> <li>■ Buy</li> <li>■ Collaborate</li> </ul>	<ul style="list-style-type: none"> <li>■ <u>Order Management</u>: Advanced Shipment Notification</li> <li>■ <u>Inventory Management</u>: Inventory Reporting</li> </ul>
Suppliers, Manufacturers	IBM Procurement	<ul style="list-style-type: none"> <li>■ Buy</li> <li>■ Collaborate</li> </ul>	<ul style="list-style-type: none"> <li>■ <u>Product Information</u>: Query EC Technical Information</li> <li>■ <u>Order Management</u>: Order Entry, Modification and Status, Advanced Shipment Notification, Ship Receipt, Invoicing and Remittance</li> <li>■ <u>Inventory Management</u>: Forecasting, Inventory Reporting</li> </ul>
Hardware Manufacturers	Hardware Maintenance	<ul style="list-style-type: none"> <li>■ Sell</li> <li>■ Collaborate</li> </ul>	<ul style="list-style-type: none"> <li>■ Service Request, Response and Status</li> </ul>

# A sell side B2B project with Distributors ...

## Three Mid-Range Server Group US Distributors

### What was the challenge?

- IBM was not integrated and had numerous legacy systems
- Partners were challenged with multiple order entry points, manual processes and redundant activities

### What was the solution?

- 2000, IBM Server Group initiated the Supply Chain Optimization Project to enable B2B fulfillment transactions using a standards based approach
- RosettaNet was selected to be the standard for XML transactions
- 2002, Distributors electronically transmitted Purchase Order Requests with configuration information attached (PIP 3Y4) to IBM Enterprise B2B Gateway (receiving point), to Transaction Hub (order translator/router) and to the appropriate fulfillment applications

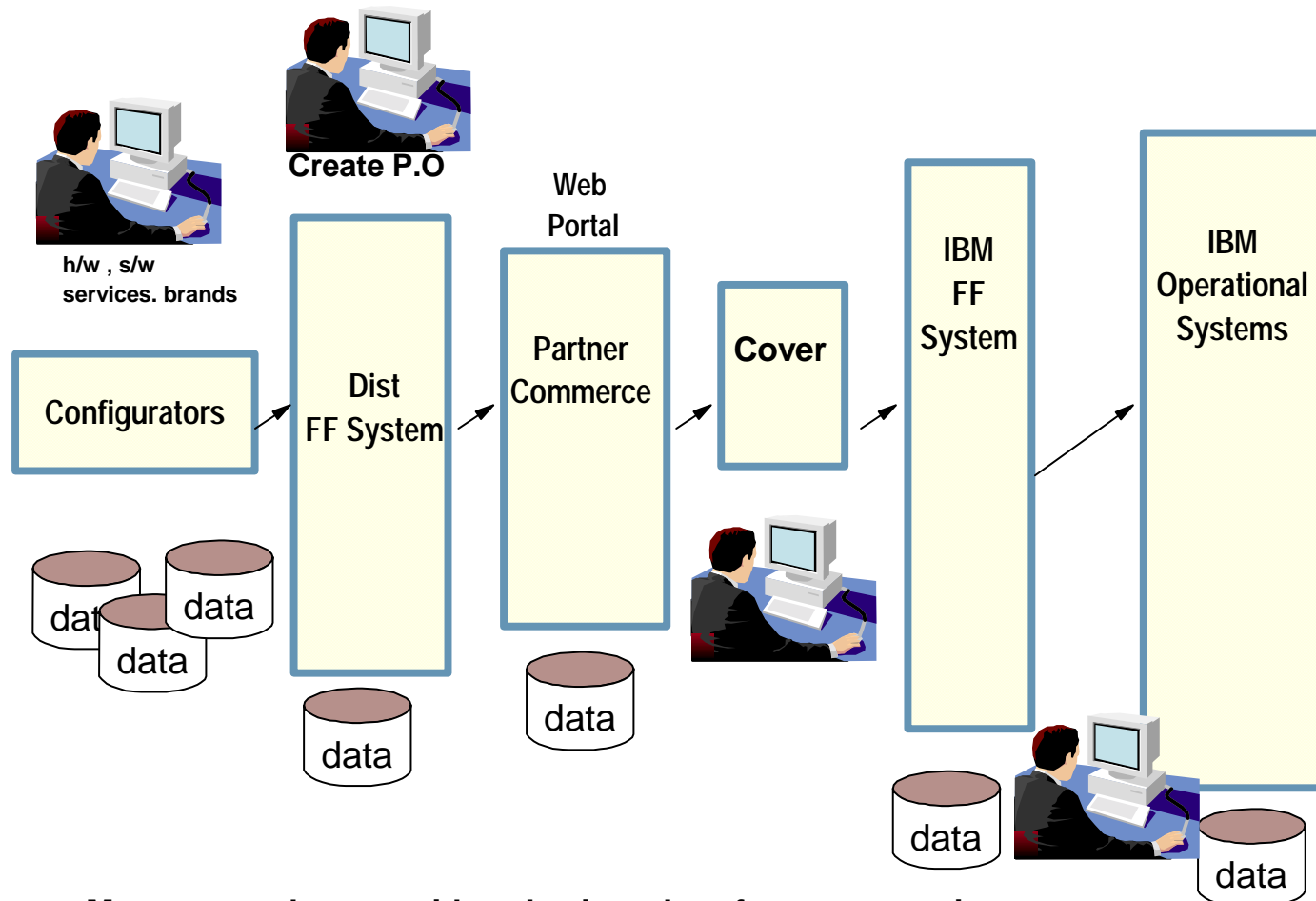
### What are the benefits of B2B?

- Reduced order processing cycle times from +/- 11 hours to < 90 minutes

### What is next?

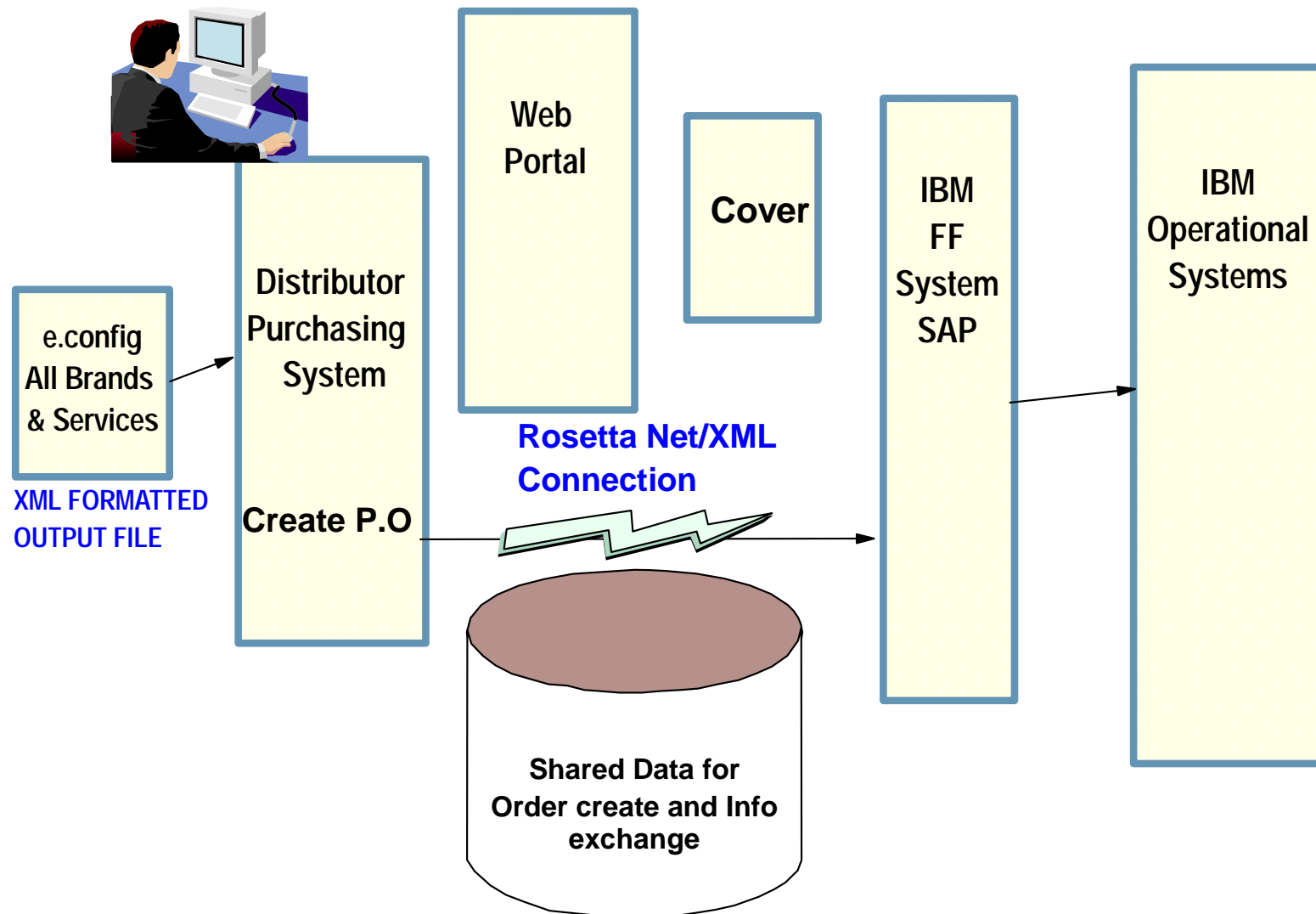
- Enablement of additional IBM products
- Further implementation of RosettaNet capabilities
- Reduction of ordering paths and an increase in information sharing between companies

# Prior to the B2B implementation, the Distributor order flow contained numerous manual tasks

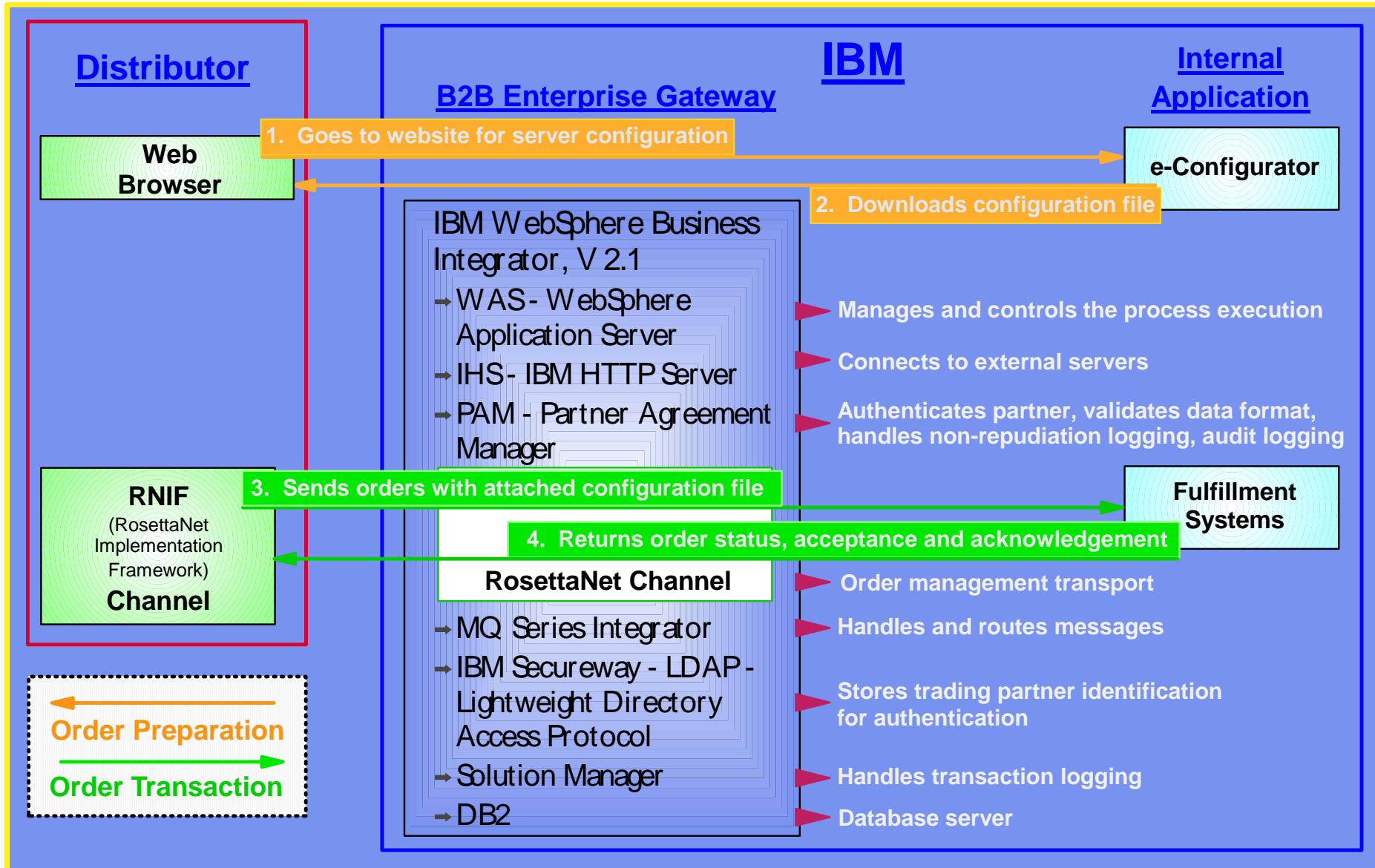


Many manual steps with re-keying; therefore, process is error prone

# The current B2B environment offers a much simpler and efficient ordering process



# IBM's deployment of RosettaNet supports the Order Preparation and Transaction Processes with our Server Distributors in the U.S.



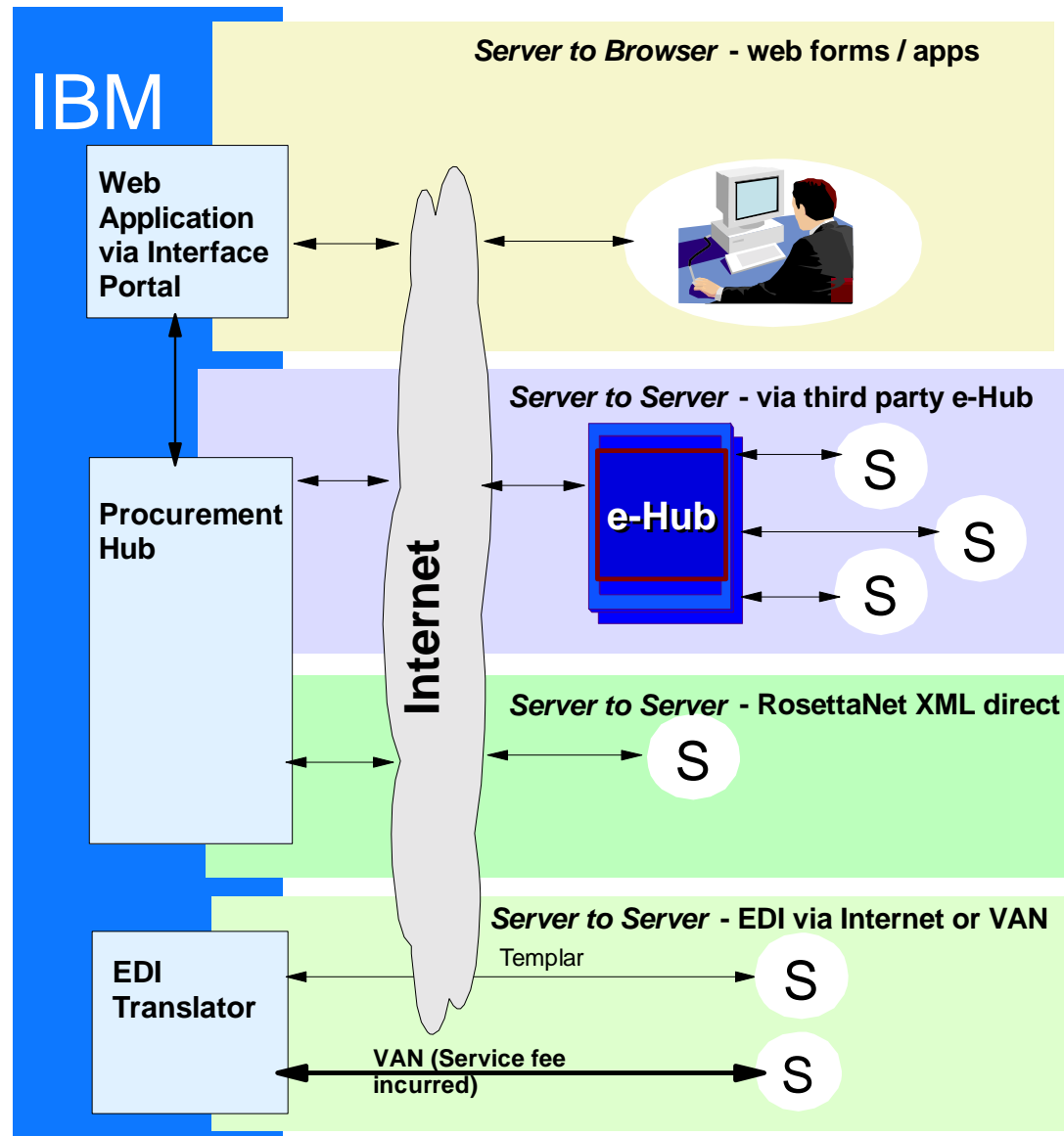
# IBM Global Procurement Overview

1. Over \$24 Billion in Direct Spend
2. Best in Class Procurement Leader
  - a. Over \$40B spend conducted through e-procurement today
  - b. e-Procurement innovator internationally
3. Technology enablement of end-to-end processes
  - a. Strategic sourcing and supplier selection
  - b. Collaborative Design and engineering
  - c. Collaborative forecasting and replenishment processes
  - d. Order management processes
  - e. Invoicing and payment processes
  - f. Credits and returns
4. Accomplishments over the last decade
  - a. Consolidation to leverage size & scale
  - b. Evolution from generalists to specialists
  - c. Supplier consolidation & strategic partnerships
  - d. Leader in supplier integration
  - e. B2B/S2S enablement of Tier 1 suppliers

## e-Procurement Toolset Context

1. For B2B integration with our suppliers, will need to support diverse supplier segments with varying levels of technical sophistication and interoperability capabilities, requiring both S2B and S2S interface methods
2. Suppliers range from large enterprises, such as component manufacturers and contract manufacturers to small-to-medium (SME) enterprises
3. Web Order Invoice will continue to support SME community with low transaction volume, for order management processes
4. EDI will continue to support existing medium to large suppliers to enable standards-based data exchange with medium to high transaction volume
5. RosettaNet will support new medium to large suppliers to enable standards-based process alignment and data exchange with medium to high transaction volume

# IBM Procurement – Buy Side Architecture



# e-Procurement Toolset Context

Criteria	Web Order Invoice	EDI	RosettaNet
Type	S2B	S2S	S2S
Supplier Segment	Small to Medium	Medium to Large	Medium to Large
Transaction Volume	Low	Medium to High	Medium to High
Transaction Value	Low to High	Medium to High	Medium to High
Technical Sophistication	Low	Medium to High	High
Barrier to Entry	Low	Medium to High	Medium to High
Standards Support	NA (Proprietary HTML UI)	ANSI X12 and UN/EDIFACT	RosettaNet XML
Value Statement	Basic order management and invoicing processes	Standards-based automated data exchange	Standards-based process alignment and automated data exchange
Strategy Positioning	Will continue to support large SME supplier community for order management transactions; employ web to migrate paper-based suppliers; migrate high-volume web suppliers to S2S-based integration methods	Will continue to support existing EDI-enabled suppliers, but reduce new EDI implementations for PP suppliers in favor of RosettaNet	Serve as principal and strategic S2S enabler for PP supplier segment, in alignment with industry direction, to reduce procurement costs and provide enhanced supply chain visibility and decision support

# IBM Procurement's Action Plan with RosettaNet

- a. Employ RosettaNet as our principal and strategic enabler with key medium to high value/volume suppliers
- b. Increase RosettaNet implementations while reducing new EDI implementations
- c. Employ RosettaNet for all key business processes
  - Integrated product development
  - Collaborative forecasting and replenishment
  - Order management
  - Shipping and receiving
  - Invoicing and payment
- d. RosettaNet-enable back-end applications
- e. Encourage RosettaNet-enablement of suppliers
- f. Continue investments in RosettaNet-related gateway infrastructure and related interoperability capabilities
- g. Participate in standards development activities in order to ensure that IBM requirements are met in new versions of standards, and continue to play a leadership role in the RosettaNet community in order to ensure its success
- h. Use E2open as an optional, external service provider in order to accelerate supplier enablement

# A buy side B2B project with a key supplier

## Supplier of Highly Configured Hardware, Software and Services

### What was the challenge?

- Current ordering process was inefficient and labor intensive
  - Manual ordering process
  - Invoice - Purchase Order reconciliation issues

### What was the solution?

- August 2002
- IBM configures order using web browser
- Purchase order is created in SAP, with configuration, and sent using RosettaNet to Supplier
- Purchase order receipt is sent back from supplier, and SAP PO is updated
- Invoicing is handled through EDI transactions

### What are the benefits of B2B?

- IBM: decrease in process costs, headcount avoidance, invoice reconciliation time & disputes, Internet leadership, procurement costs, technology scalable across multiple partners, and product visibility in ERP system
- Supplier: decrease in process costs, headcount avoidance, invoice reconciliation time & disputes, Internet leadership, and technology scalable across multiple partners

### What is next?

- Planning to deliver in 2003, Purchase Order Status (#3A6)

# RosettaNet Lessons Learned

1. Implementing RosettaNet PIPs requires complex and deep business and systems integration between trading partners
2. Implementing substantial business process change is challenging
3. Business case for justifying investments in RosettaNet rather than additional EDI implementations is challenging
4. Building a RosettaNet capability and conducting implementations require substantial investment
5. Watch points
  - a. Alignment with trading partner on process and use of PIPs
  - b. Requires business and technical participation
  - c. Requires thorough understanding of PIPs
  - d. Allow time for connectivity testing and resolution of security issues
  - e. Allow time for substantial business integration testing
  - f. Requires thorough project management with deep business and technical knowledge
  - g. Requires strong executive support

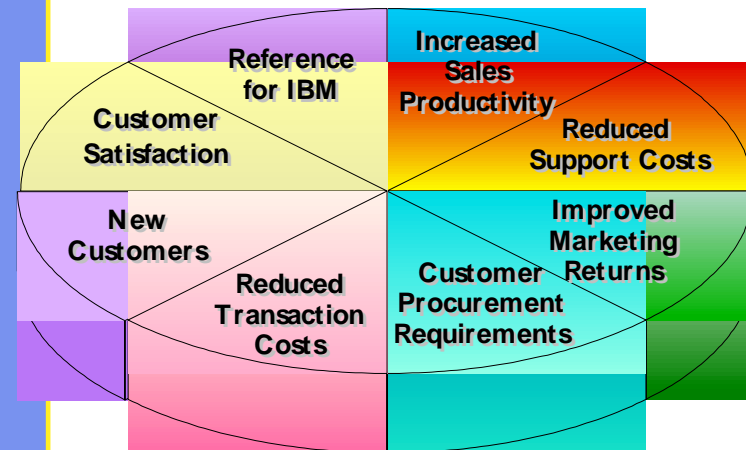
# RosettaNet Action Plan

- a. Employ RosettaNet as our principal and strategic enabler with key medium to high value/volume suppliers, and additional business partners
- b. Increase RosettaNet implementations while reducing new EDI implementations
- c. Employ RosettaNet for key business processes
  - a. Integrated product development
  - b. Collaborative forecasting and replenishment
  - c. Order management
  - d. Shipping and receiving
  - e. Invoicing and payment
- d. Automate processes into back-end applications
- e. Encourage RosettaNet enablement of suppliers
- f. Continue investments in RosettaNet-related gateway infrastructure and related interoperability capabilities
- g. Participate in standards development activities in order to ensure that IBM requirements are met in new versions of standards, and continue to play a leadership role in the RosettaNet community in order to ensure its success
- h. Use E2open as an optional, external service provider in order to accelerate supplier enablement.

# IBM and customers share objectives and benefits for B2B

## B2B Benefits

- Reduces costs
  - Automates purchasing process and ensures accuracy of transaction
  - Eliminates acquisition inefficiencies associated with order to payment
  - Reduces maverick spending
- Enhances service
  - Provides an additional, effective and customer-centric channel to transact and collaborate
  - Reduces end to end transaction time
  - Ability to order goods / services 24 X 7
- Integrates procurement
  - Integrates purchasing with accounting and ERP systems
  - Share data between buyer and supplier and across the supply chain
- Increases profit
  - Reporting capabilities increase the ability to make informed decisions
- Enhances customer relationships
  - Builds customer loyalty and can evolve into more collaborative relationships
  - Mutual gains



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**Thank you!**

**Patricia Spugani**  
**Spugani@us.ibm.com**