



Profiting from Supply Chain Exchanges

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**“e-Business is the complex fusion of business processes,
enterprise applications, and organizational structure
necessary to create
a high-performance business model”**

**Dr. Ravi Kalakota and Marcia
Robinson,
*e-Business, Roadmap for Success***



Growth of B2B Commerce

Comparative Estimates: Worldwide B2B eCommerce, 2000-2004 (\$ billions)

	2000	2001	2002	2003	2004
Ovum	\$218	\$345	\$543	\$858	\$1,400
IDC Research	213	--	--	--	2,233
eMarketer	224	449	841	1,542	2,775
Goldman Sachs	357	740	1,304	2,088	3,201
AMR Research	--	--	--	--	5,700
Forrester Research	604	1,138	2,061	3,694	6,335
Gartner Group	403	953	2,180	3,950	7,290



Gartner Group: “Supply Chain Management Trends: 2001 and Beyond”

- ERP vendors will continue to be late delivering SCP products for the extended trading network
- There will be a shift away from inward-facing packaged applications
- Inventory visibility will increase in importance and focus
- SCP collaboration technologies will mature in 2001
- Product solutions that facilitate CRM/SCM integration will increase
- B2B services and business service marketplace offerings will proliferate through 2002
- The need for strong “four wall” and B2B direct procurement solutions is increasing
- Requirements for globalization functionality will continue
- Supplier and vendor contract terms and conditions will drive SCM vendors to add contract management functionalities to their solutions
- Supply chain analytics will continue to grow in importance

Source: Gartner Group “Supply Chain Management Trends: 2001 and Beyond” 17 April 2001



e-Business Evolution



Examples

- Web site
- Portal
- Online product information
- Online corporate information
- Indirect materials procurement
- Online store, manual back-end
- MRO* procurement
- Email-based customer support
- Direct materials procurement
- Online store, integrated back-end
- Integrated logistics & financial settlement
- Participation in public marketplaces
- Collaboration with partners—planning, scheduling, logistics (eCPFR)
- Integrated supply chain, procurement & sell-side systems (eCTP, eVMI)
- Machine-to-machine connectivity
- Collaborative product & process development

* Maintenance, repair & operations

Value Increases at Each Step



Business Benefits

- Information more accessible

- Faster price and product discovery
- Improved price transparency
- Simplified process for initiating orders, customer service

- Significantly reduced transaction cost
- Lower raw materials cost
- Increased order fulfillment accuracy
- Improved customer service

- Visibility into supply chain & plant systems
- Improved coordination among trading partners
- Business process integration with trading partners
- More efficient asset utilization

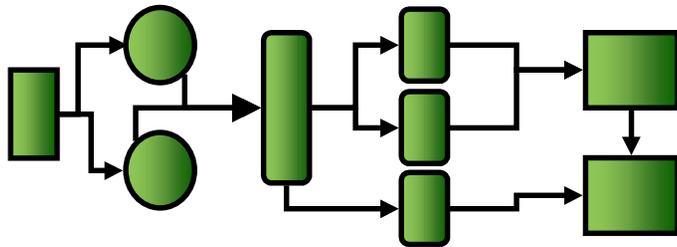
Low

Value

High

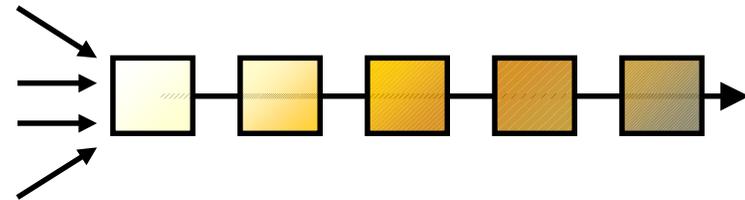
Process Industry Differentiation

Process Manufacturing



- Products are manufactured in a continuous fashion
- Multiple interdependent products are being made simultaneously
- Complex to allocate individual product manufacturing costs

Discrete Manufacturing



- Predictable process
- Predictable manufacturing cost
- Does not require complex models
- Less capital intensive
- More flexible flow pattern



e-Business Is Putting New Demands on Process Manufacturers

As e-business becomes business, process manufacturers will need to...

Respond much more quickly to their customers

Develop more agile and responsive manufacturing processes

Customize and personalize their products and services

Know the cost and net profit of every transaction

Innovate to protect margins

Outsource technology, services and processes selectively

Evaluate make vs. buy decisions to fulfill customer orders

Understand how customers use their products

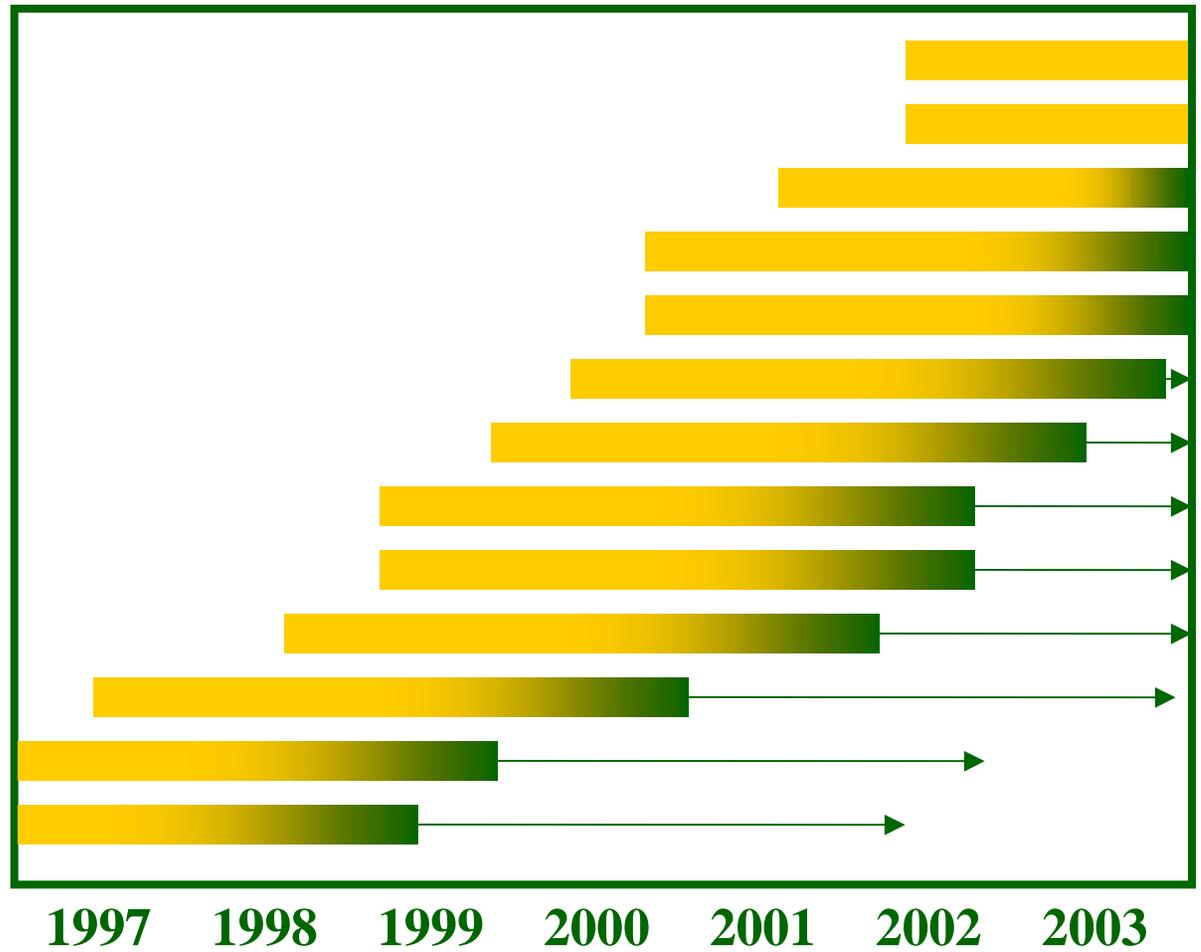
Prepare back office systems for e-business by tightly integrating manufacturing execution and supply chain systems

E-Commerce Adoption: The Process Industries Are Coming “On-Line”

growth

hyper-growth

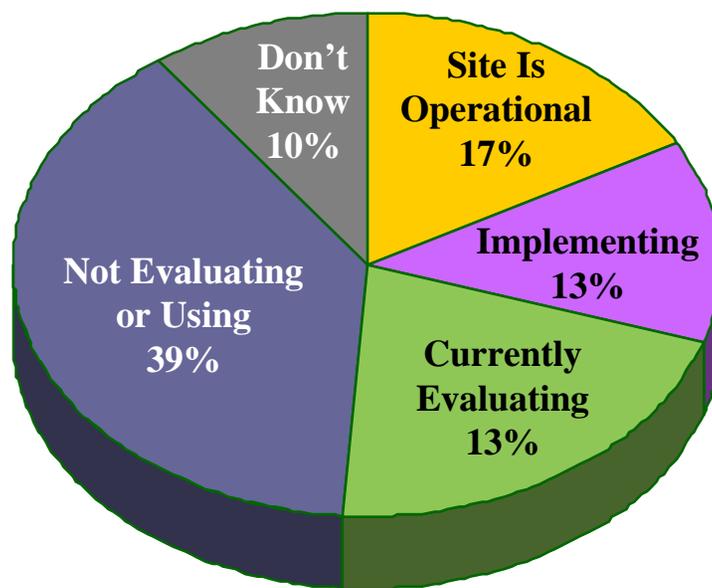
Industrial Equipment
Construction
Food & Agriculture
Heavy Industries
Consumer Goods
Paper & Office Products
Pharmaceuticals & Medical
Petrochemicals
Shipping & Warehousing
Motor Vehicles
Utilities
Aerospace & Defence
Computing & Electronics



Source: Forrester Research

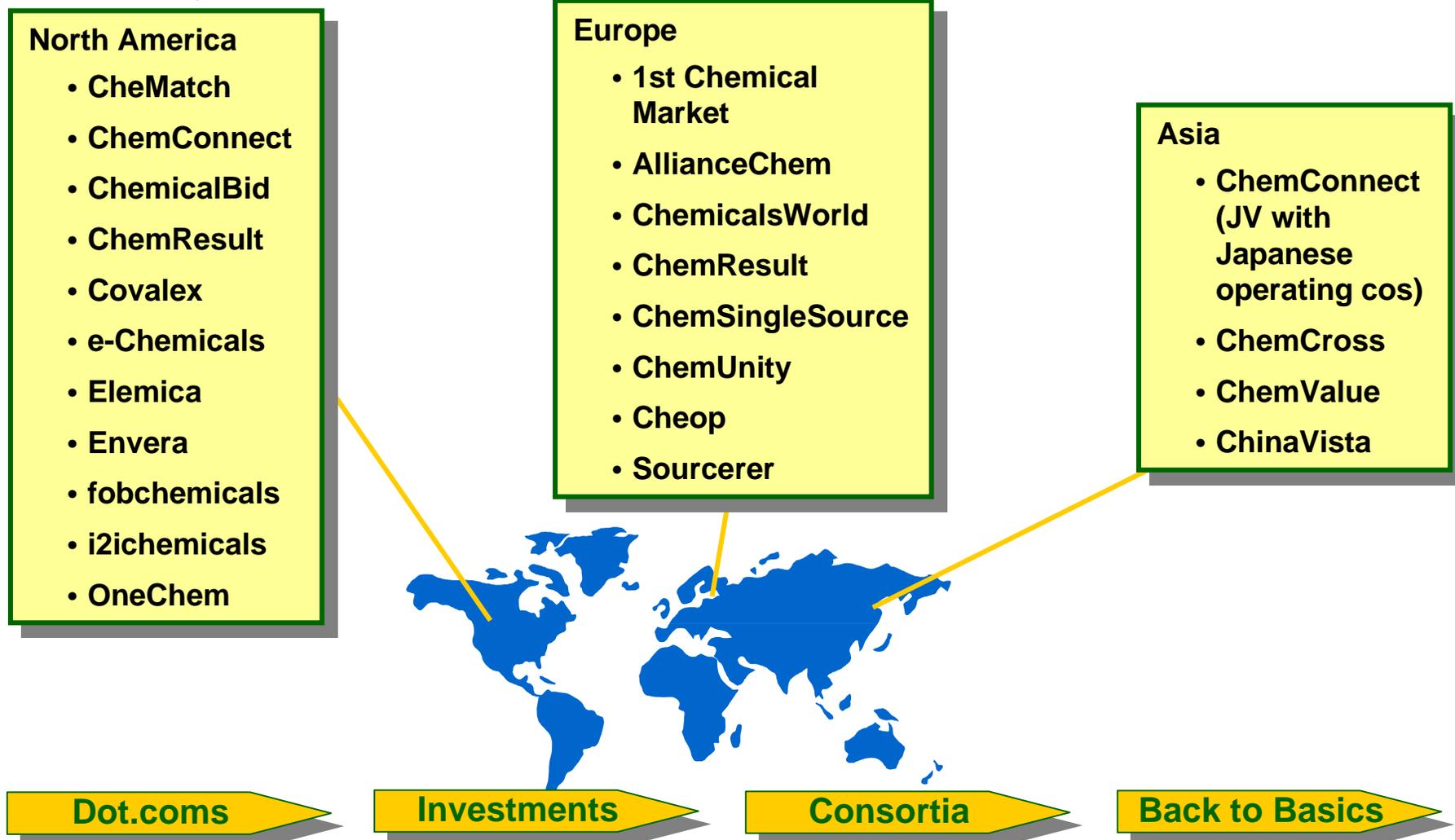
Implementation of Customer Facing e-Business

% of Chemical Companies That Have Implemented Customer-Facing e-Business Solutions, 2001



Source: AMR Research, 2001

Many companies have formed to bring e-business to the chemical industry



From Public to Private Marketplaces



- Public e-marketplace for steel suspended operations in June



- Changed focus of its public e-marketplace, PlasticsNet.com to focus on private e-marketplaces



- Shut down Chemdex and Promedix public marketplaces
- Shifts focus to providing software and services to other e-marketplaces



- Closed its public e-marketplace, fob.com and changed business model to focus on health and safety information



- Adjusting business model to focus on private marketplaces

"If you talk to some of the independents, they'll tell you they have 200 or 300 or 400 customers. But these people aren't doing transactions because they're not integrated."

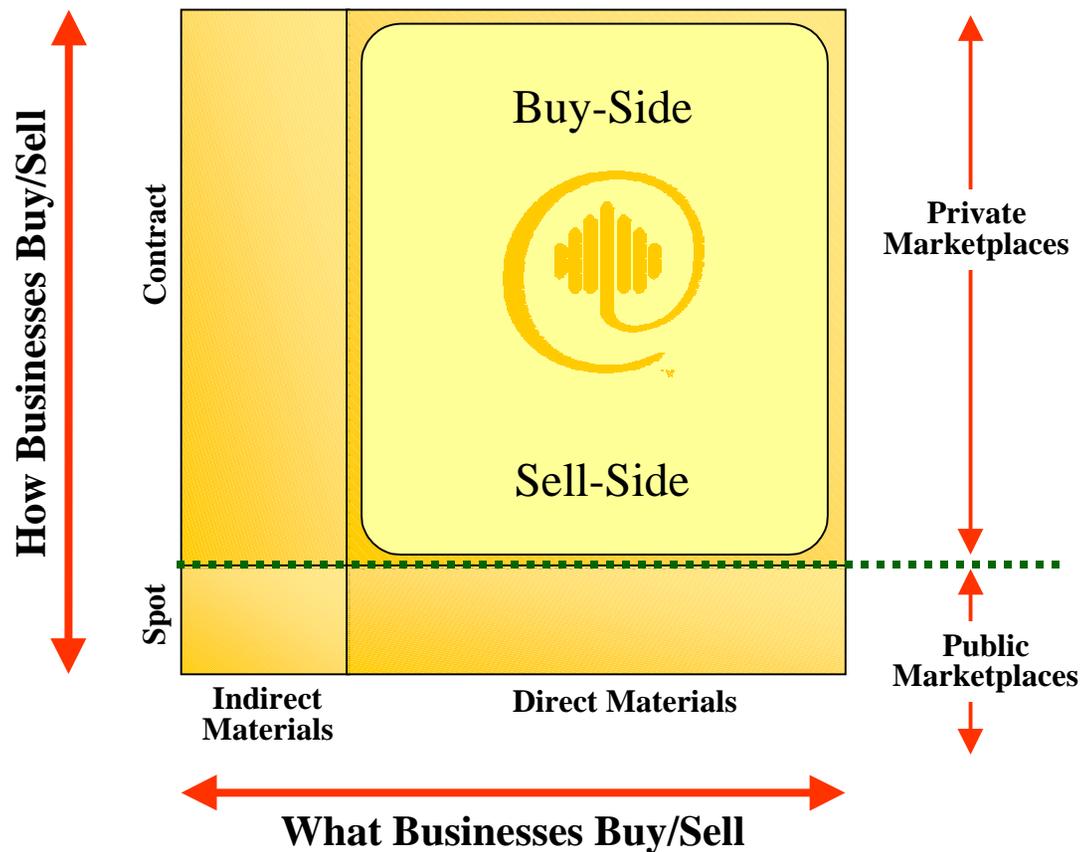
– Jon Ekoniak, an analyst with U.S. Bancorp Piper Jaffray Inc.



Public v. Private Marketplaces

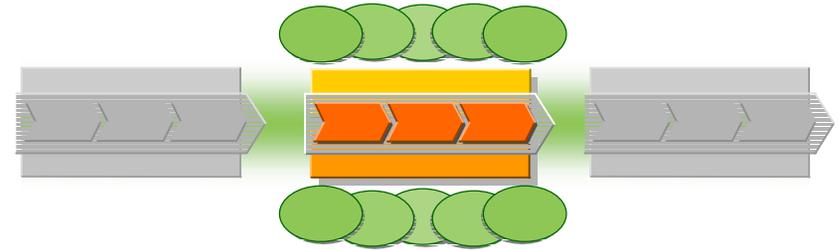
- There is a place for both
- Private marketplaces are part of the natural evolution of business models and will be a key part of a company's strategy to be competitive by offering more value to its customers
- Public marketplaces add value where private marketplaces cannot, especially where price, product or supplier discovery is important or where the goals of the members are similar and the members are trading competitively, e.g. indirect procurement

e-Business Collaboration Capability— Focused on delivering value



- *Maximize your use of direct materials*
- *Operate with your key suppliers and customers as if you were one enterprise*

Demand-side Optimization



Business Goal—Profit Advantage through:

- Increased revenues and market share by enhancing the customer experience while reducing inventory, distribution and transaction costs

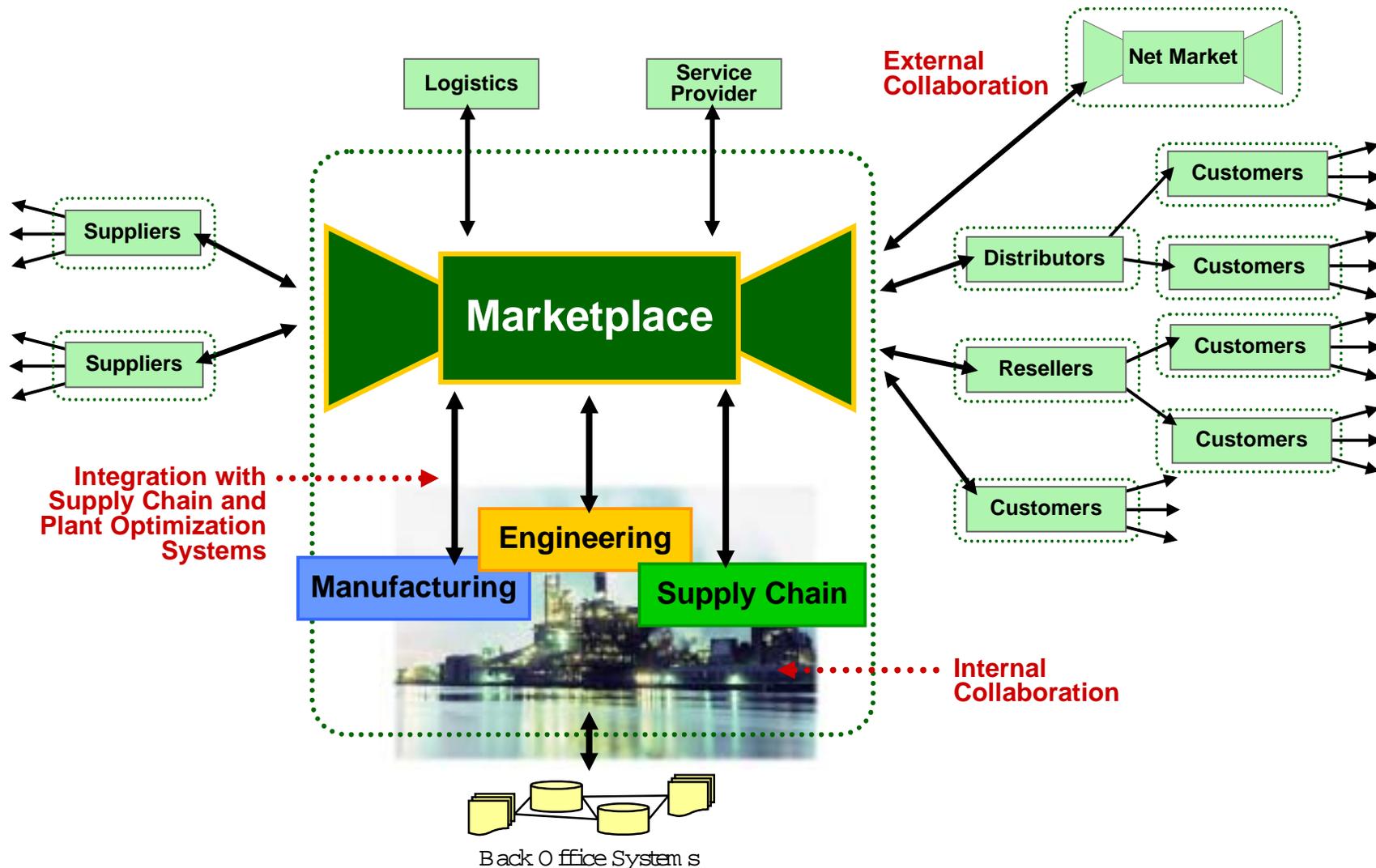
Business Process Solutions:

- Collaborative replenishment
- ATP/CTP/PTP
- e-Sales
- Logistics optimization & management

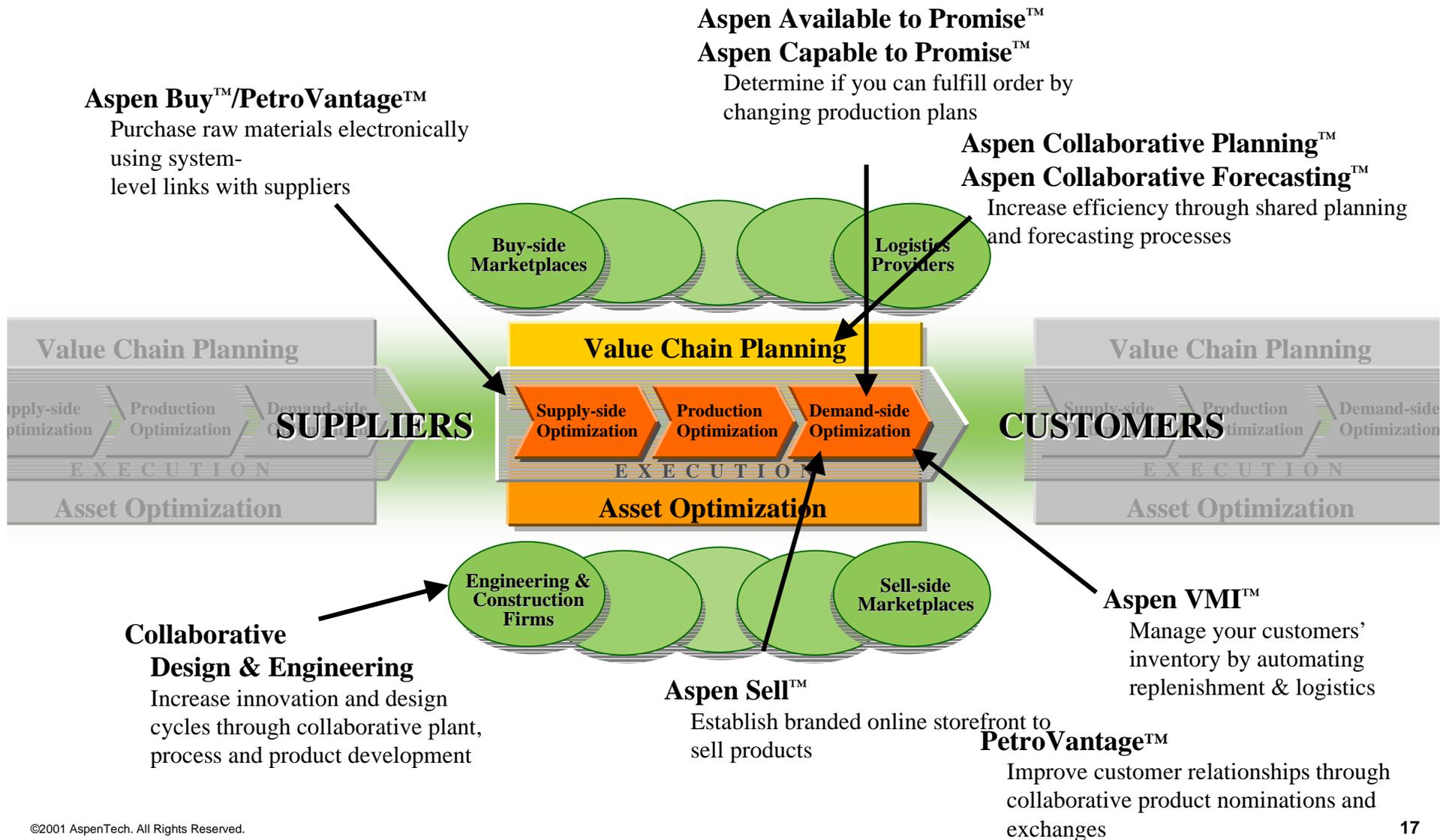
Key Performance Indicators:

- Inventory carrying costs
- Order transaction costs
- Order fill rate
- Distribution & transportation costs

e-Business for the Process Industries



e-Business Collaboration





Thank you

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