Leveraging the Full Value of E-commerce



1999 Annual Conference



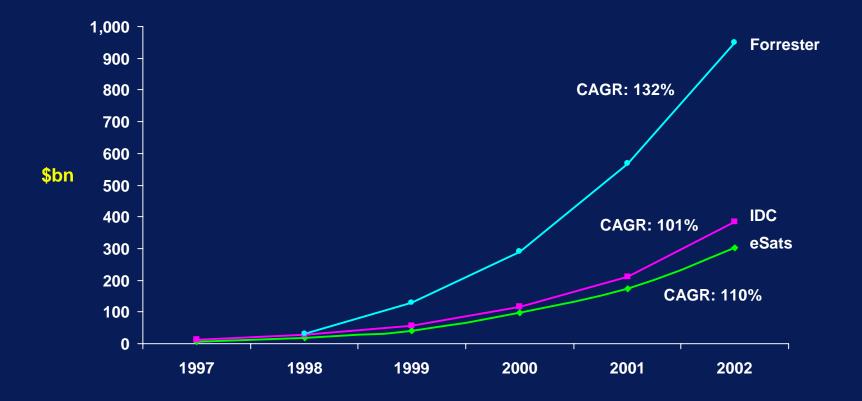
Matt Anderson, Vice President Craig DeLano, Principal

Agenda

- The growing importance of e-commerce
- E-commerce leverage points in supply chain management
- Defining the right approach for your company

The Growing Importance of E-commerce

E-commerce as a whole is expected to grow rapidly



Source: eStat, IDC, Forrester, London Business School.

Note: EDI revenue not included in forecasts.

B-B e-commerce is larger and growing faster than B-C e-commerce

Business-to-Consumer Revenue Projections (\$ US)

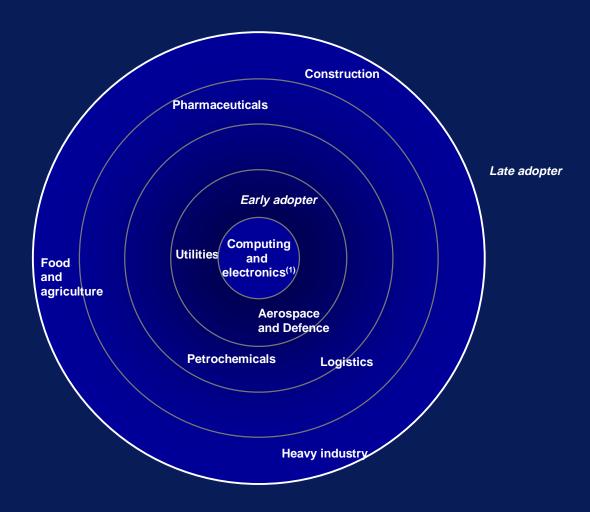


Business-to-Business Revenue Projections (\$ US)



Source: Forrester Research 1998.

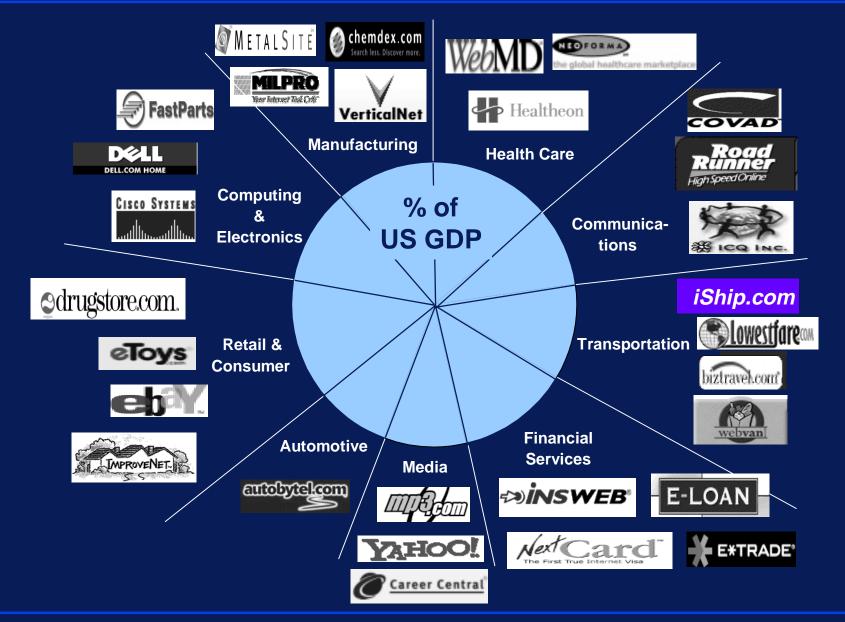
B-B e-commerce is currently concentrated in technology-related industries, but its eventual influence is predicted to be widespread



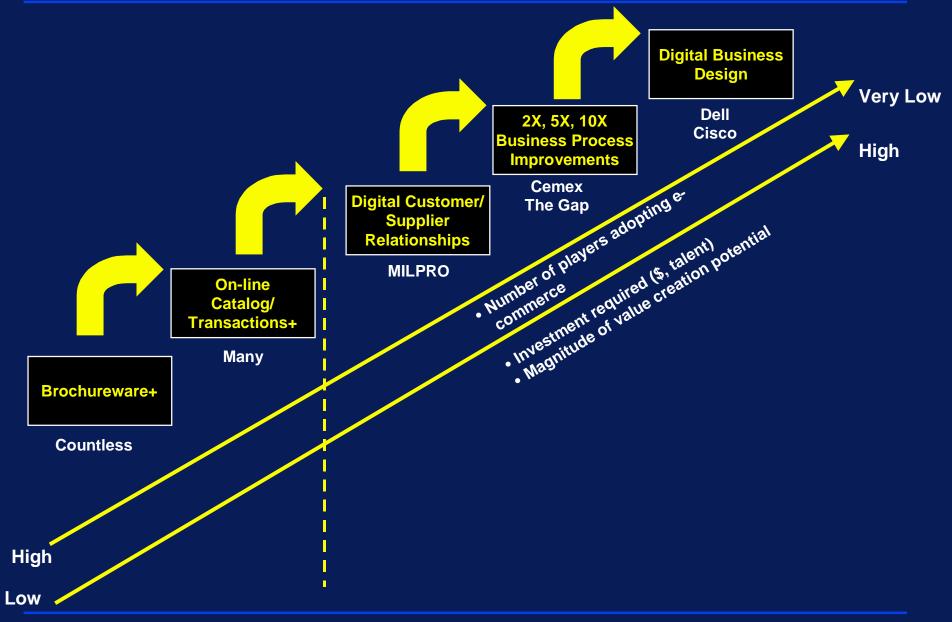
Source: Forrester Research.

Note(1): Computing and Electronics currently represents 40-50% of e-commerce value in US.

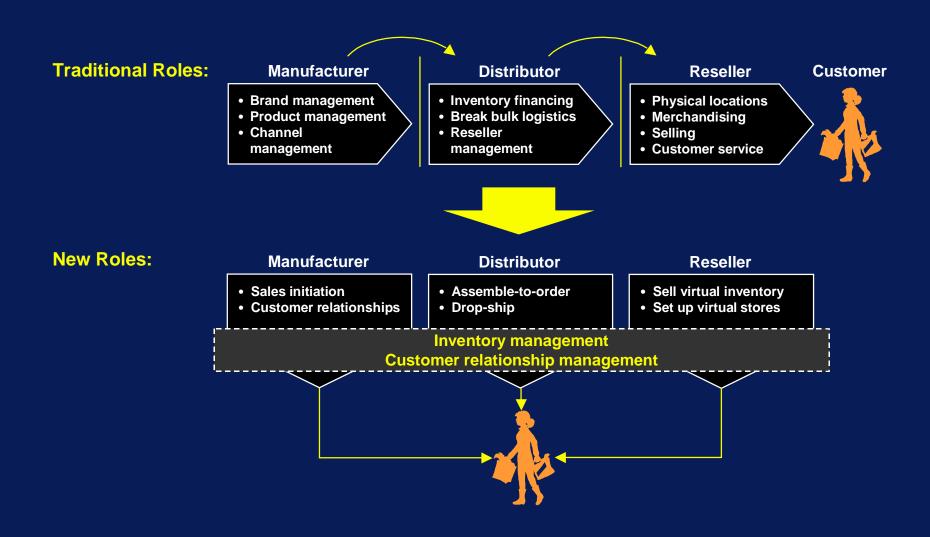
Early adopters cut across all sectors of the economy



Most companies are in the infancy of Internet adoption. Step function value creation occurs when companies go beyond basic e-commerce transactions.



The internet is increasingly driving changes in the supply chain through greater interaction with the end customer



Source: Forrester "Disintermediation Realities," Dec. 1998.

E-commerce is not the goal

"Let's be clear on one thing: If you take a business that is a bad business and put it online, it's still a bad business – it's just become an online bad business."

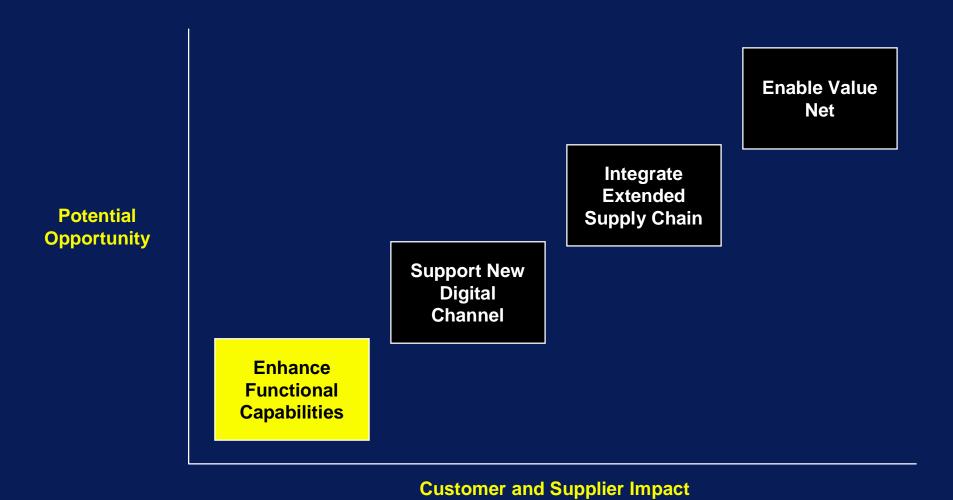
- Michael Dell

E-commerce Leverage Points in Supply Chain Management

E-commerce can enhance supply chain management at many levels



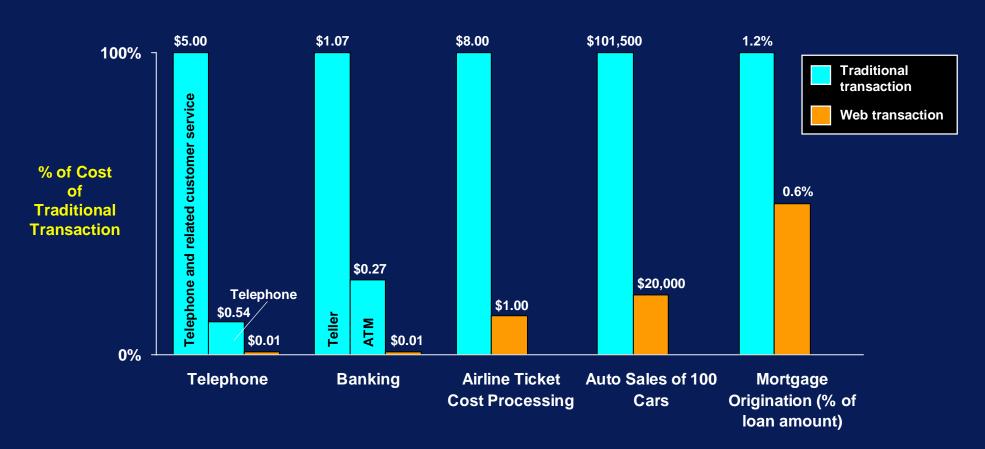
Enhance Functional Capabilities



On-line transactions are usually considerably less costly -



Traditional Vs. On-line Transaction Costs

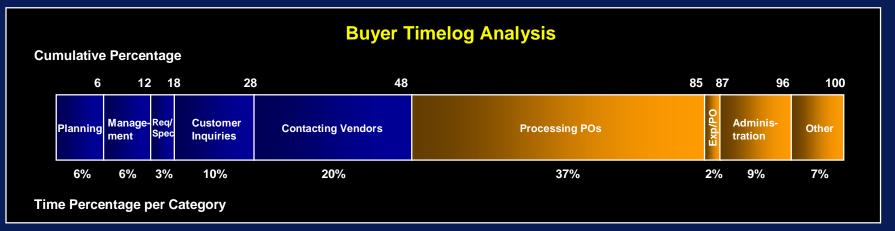


Source: eStat collated from Booz Allen & Hamilton, National Automobile Dealers Association, Auto-by-tel, and First Mortgage Network.

E-commerce can also reduce administrative burden







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Tech Data, a major PC distributor, transformed (and streamlined) its selling processes through the implementation of a range of electronic, customer-direct ordering interfaces



Historical Challenges:

- Call centers provided primary customer service and order management capabilities
 - Administrative focus rather than customer service
 - Fragmented process characterized as "hurry up and wait"

Tech Data E-Commerce Solution



- TD on CD: A CD-ROM catalog that provides product and service information
- TD On-line: A client-server-based system that offers product searches, pricing, availability, order entry and inquiry options to preferred customers
- TD Web: Tech Data's Web site that offers password-protected access to their electronic catalog, a directory of manufacturers web sites, and order-tracking with direct links to UPS and FedEx

Early results associated with Tech Data's expanded e-commerce offerings have been positive



Customer Advantages

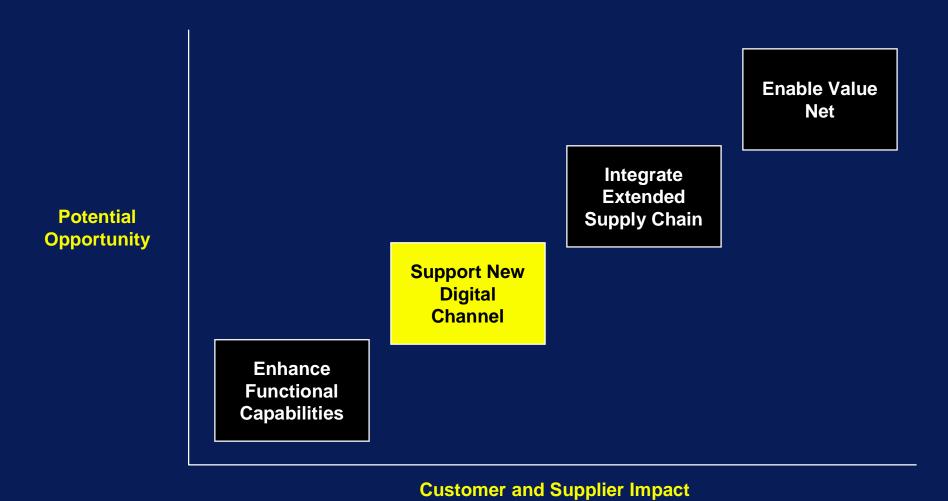
- Customer has expanded access to suppliers offerings
- Focus of call center is customer service rather than administrative support
- Delivery reliability is improved via automated mail order confirmation with link to order status inquiry page
- Marketing and sales efforts can be concentrated on customer needs and seeking ways to provide additional value-added services to the customer



Tech Data Benefits

- Reduced SG&A expenses from 6% to a company record low 4%
- Increased annual sales by 45%, while increasing sales staff by 6%
- Invested roughly \$16 million on tools, which has returned \$41 million in 3 years, representing enhanced revenue, productivity increases and reduced operating costs

Support New Digital Channel



New digital channels can create considerable supply chain challenges, particularly if they bypass traditional distribution steps



Market Issues

- Small, dispersed orders
- No "touch and feel"
- Highly variable sales

Service Issues

- Customer support requirements
- Limited shelf life
- Large assortments
- Fragile or temperature sensitive products
- Complex, multi-item orders

Economic Issues

- Insufficient consumer premium
- Low-margin products high-cost distribution
- Sub-scale distribution operations
- Low-value product high delivery-to-sales cost ratio
- Numerous sku's and stock points

For example, the internet grocery channel, requiring home delivery, faces many of these challenges



- Low order value high cost-to-sales ratios
- Low profit margin in traditional channel
- Compressed delivery windows (before or after work)
- Large assortment of SKU's high inventory and order picking cost
- Specialized transportation and storage
- Few affluent areas with sufficient geographic/population density

Streamline's supply chain is designed to overcome many of these challenges





Features

- Customer selection
- Breadth of product line
- Alignment
 - The Box
 - Weekly unattended delivery
 - Auto replenishment
- Outsourced distribution centers

Many positives in an exciting market – jury remains out



Streamline success with customers . . .

- 90% retention
- 40+ deliveries per year
- \$100 per order
- 94% consider Streamline primary provider of groceries and household goods/services
- 75% share of wallet

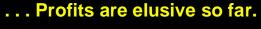
Other models are surfacing . . .

- WebVan
 - \$1 billion investment in automated DC
- Peapod
- Home Runs



... Has attracted competition.

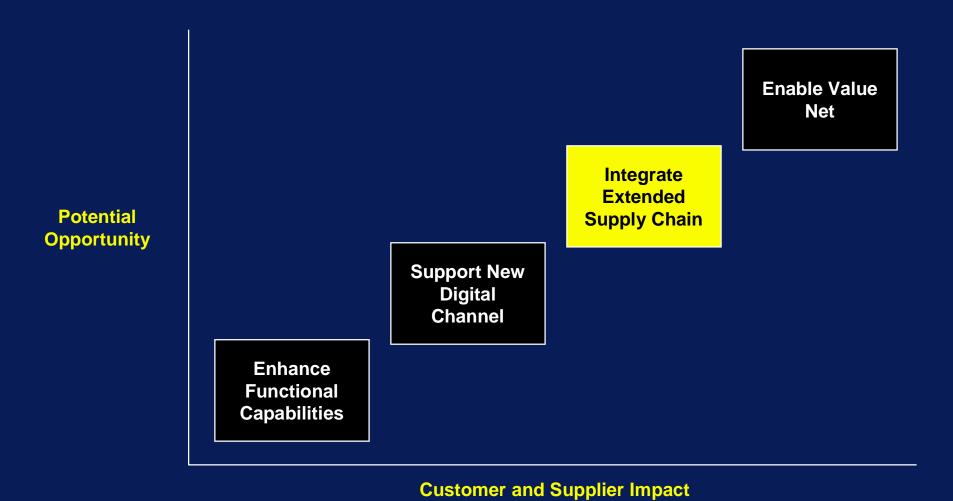
- ShopLink is imitator
 - Same suburbs of Boston
 - Same DC location
 - Same trucks
 - Same unattended delivery
 - On demand, not scheduled



- Not yet profitable
- Plan to build:
 - Scale
 - National presence
- ... but concept is attractive
- Borders/Shaheen
- NetGrocer/Amazon

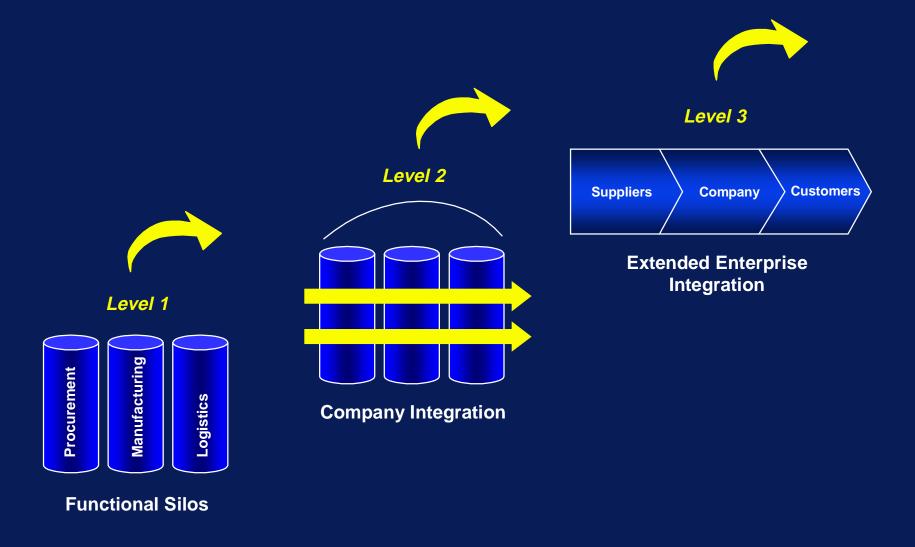


Integrate Extended Supply Chain



E-commerce is being leveraged to integrate the extended supply chain





Integrating the extended enterprise requires advanced customer service and procurement practices



Mercer Levels of Procurement Excellence

1. Leveraged Buy:

Volume Consolidation/Supply Base Optimization

Leverage Points:

- Utilize supplier fixed costs more fully
- Exploit competitive supply base structure
- Leverage buyer's share
- Enhanced negotiation and contracting skills

2. Linked Buy:

Supplier-Buyer Integration/Linked Cost Minimization

Leverage Points:

- Improved coordination/ forecast accuracy and predictability
- Optimized logistical flows/value added roles (including outsourcing)
- Streamlined transactional information flow
- Elimination of redundant/non-value added activities
- Improved supplier cost productivity
- Commitments to enable supplier investments

3. Value Buy:

Specifications/ Consumption Optimization

Leverage Points:

- Increased and early supplier involvement in solution design
- Reduced complexity/ simplified specifications
- Increased standardization
- Clarified response time objectives
- Rationalized requirements
- Controlled consumption rates
- Total cost of ownership perspective

4. Integrated Sell:

Strategic Supplier Alliances

Leverage Points:

- Integrate multicompany products/ services and channel portfolio
- Introduce creative risk sharing
- Exploit supplier capabilities and potential
- Manage complex channel relationships
- Cross utilize infrastructure and operating resources among multiple parties in value chain

E-procurement, fully utilized, supports all levels of procurement excellence



E-Procurement Leverage Points

1. Leveraged Buy

- Increased competitive tension
- Enhanced buying power
- Broadened supply options

2. Linked Buy

- Purchasing/accounts payable transaction reduction
- Streamlined user process
- Enhanced service level with reduced inventory
- Reduced supplier processing cost
- Enhanced pricing accuracy
- Improved product availability visibility
- Enhanced access to short supply/end of life products

3. Value Buy

- Reduced maverick buying
- Enhanced consumption analysis capabilities
- Enhanced design process efficiency and linkage
- Streamlined maintenance/after sales service process
- Enhanced project planning, execution, and inspection

4. Integrated Sell

- Optimized value chain roles (e.g., Cisco, IBM)
- Strategic control of supply
- Reduced industry working capital intensity

BASF uses the internet as a 'low cost communications backbone for chemical companies moving toward supplier-managed inventory systems'



	BASF
Innovation:	Information provision to suppliers
Value Proposition:	Increased collaboration with suppliers leading to reduced inventory and lower administration costs
Business Initiative:	 Internet communication link allows suppliers (Monsanto Co., Union Carbide Corp.) to: Check BASF's current inventory Analyse historical usage Calculate consumption forecasts Move towards supplier-managed inventories Use of telemetric devices to accurately measure stock levels Stock replenishment occurs when inventory reaches a predetermined level Development of consignment arrangements BASF billed for consumption only Suppliers receive more accurate demand data
Impact:	 More accurate forecasting Time savings Reallocation of BASF human resources
e-commerce:	Internet, Web VMI

Source: 'Supply-Side Economics - Manufacturers Turn To Supplier Managed Inventory With A Boost From The Internet' Information Week, Nov 2, 1998.

Ford's latest initiative aims to improve collaboration between the automotive manufacturer and its suppliers, dealers, and customers



Ford	
Innovation:	
innovation:	Web-based interface that provides Ford suppliers access to business processes. Implemented June 1, 1999
Value	Reduce cycle time and inventory requirements by sharing data
Proposition:	about business processes with suppliers, dealers, and customers
Business	Portal provides seamless access to Ford data
Initiative:	 Product design information
	Quality control
	Sales and aftermarket services
	User can customise interface
	New format is easier to use
	 Launched with 1500 companies, 1100 of which provide production supplies
	Next phase is to integrate supplier back ends with Ford systems to allow automated data flow
Impact:	Improved efficiency
	Increased access to data
e-commerce:	• Internet

Source: 'Ford rebuilds extranet as supplier portal', Internet Week, May 17, 1999

Cemex, a Mexican cement producer, has used technology to tightly integrate with customers and carriers





Issue

 Customers constantly canceling or changing orders and delivery times

Solution

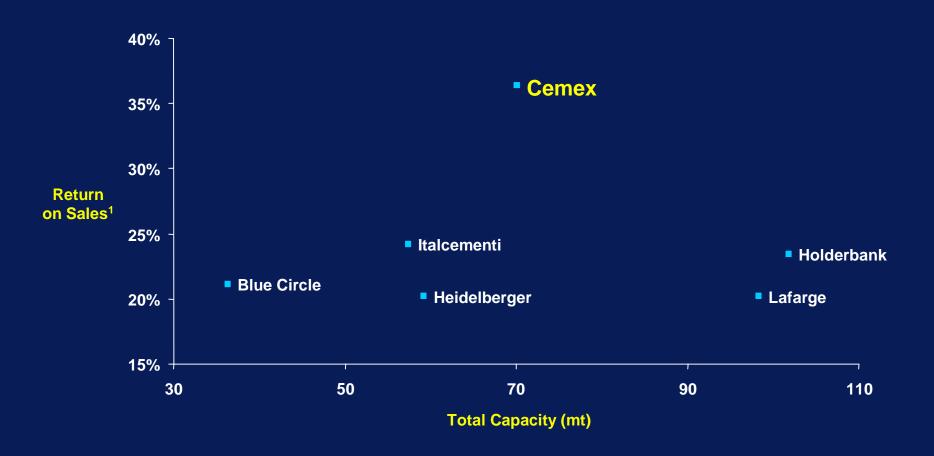
- Central tracking and direction
- GPS in trucks
- Automatic re-optimization of delivery path

Outcome

- 20 minute delivery window vs.
 2-3 hours
- 98% reliability vs. 34%
- Reduced truck fleet 30%
- Premium pricing

Cemex's digital business design is a true industry breakthrough





¹Return on Sales = EBITDA/Net Sales.

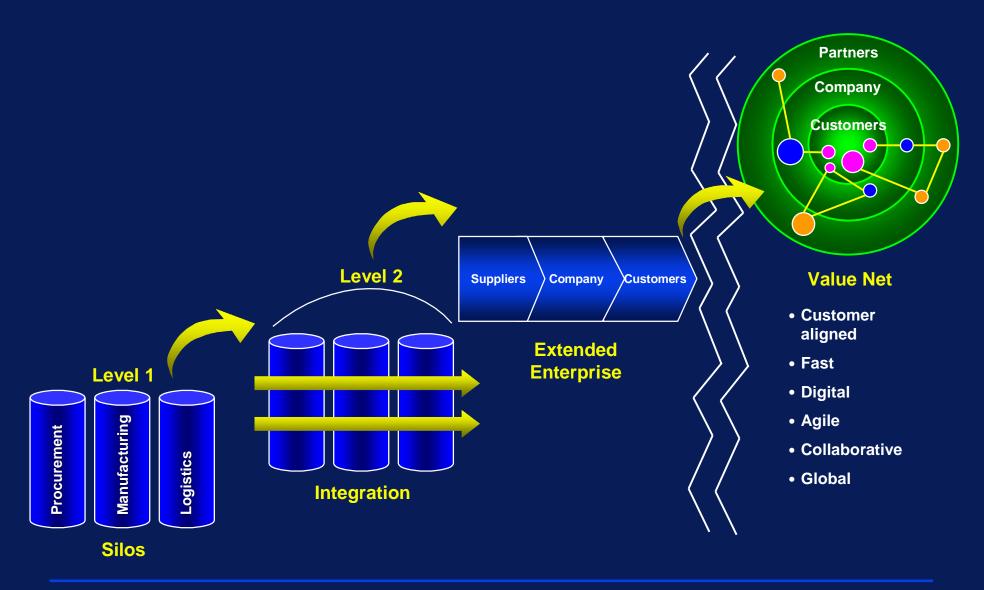
Enable Value Net

Enable Value Net Integrate **Extended Potential Supply Chain Opportunity Support New** Digital Channel **Enhance Functional** Capabilities

Customer and Supplier Impact

Innovators are replacing "supply chains" with "value nets"





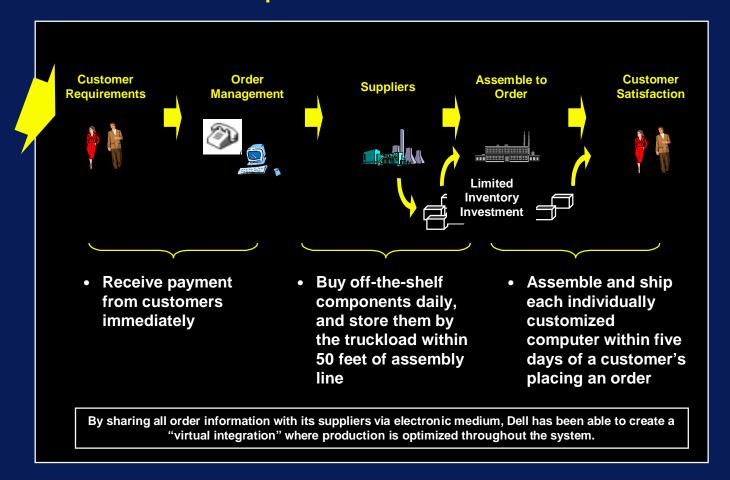
Dell revolutionized the PC industry through its "customer direct" marketing and its reinvention of the supply chain



Historical Challenges:

- High inventory investments
- Short product lifecycles
- Proliferation of end product configurations
- Customized components
- Long supplier lead times and supply variability

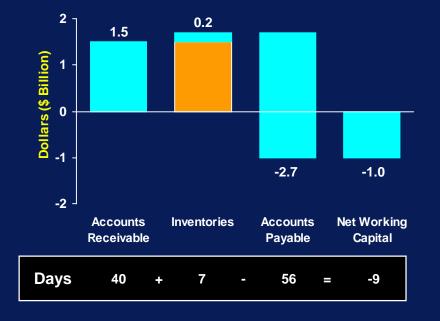
Dell Computers E-Commerce Solution



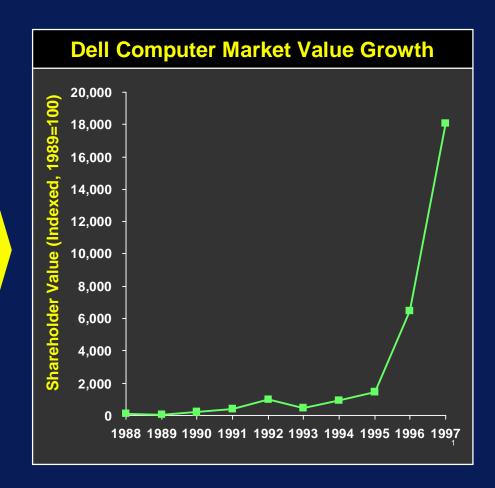
Dell's supply chain innovations have driven phenomenal success



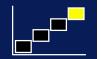
Working Capital Balances FY 1998 (through fiscal year ending September 30, 1998)



⇒ Because of its digitized system, Dell can operate with negative working capital and can increase its liquidity as it grows



Thought leaders believe value net attributes are the wave of the future



- "If you don't think people are trying to move toward the Dell model in all industries, you're crazy."
 - Jeffrey Trimmer, Director of operations and strategy, procurement and supply, Chrysler
- "The real unsung hero is how to do the fulfillment process."
 - Victor Fung, CEO of Li & Fung
- "We are selling speed and convenience, not just a hammer and a light bulb."
 - Wes Clark, Group President, W.W. Grainger
- "The virtual model allows you to be reliable and turn a profit even when you are small."
 - Mahmoud Ladjevardi, CEO, Soho Inc.
- "In the 70s companies were all concerned with costs . . . when the 80s came along, there was a very big refocusing on quality. Now in the 90s . . . the buzzword is time."
 - Mel Friedman, President, Sun Microelectronics

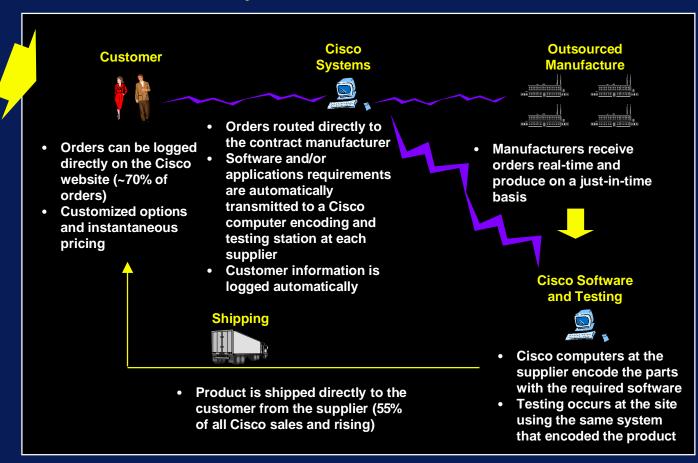
Cisco streamlined its production processes through a linked programming and testing system with each of its key suppliers



Historical Challenges:

- Network
 components
 production is a
 slow, highly
 technical process:
 - Multiple handoffs for programming and testing
 - Significant physical movements and handling of work-in-process

Cisco Systems E-Commerce Solution



Cisco is a truly digital company





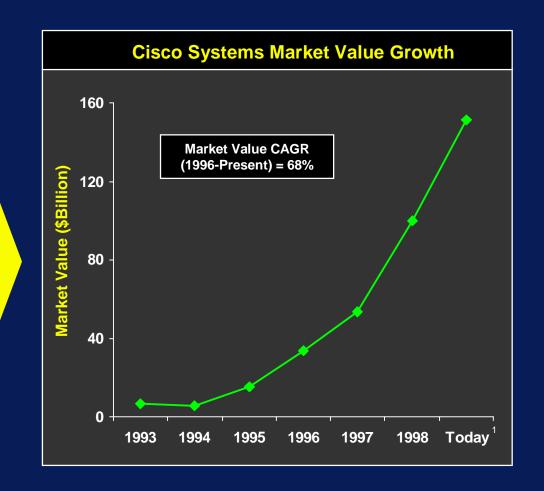
Cisco's digital supply chain has generated enormous benefits



The Benefits of Electronically Managed Supplier Relations

- Estimated production cost savings of \$500 million per year
- Inventory (DIOH) = 27 days, half of nearest competitor
- Time to market for new products reduced by 66% to 6 months
- Improved cycle times with greater

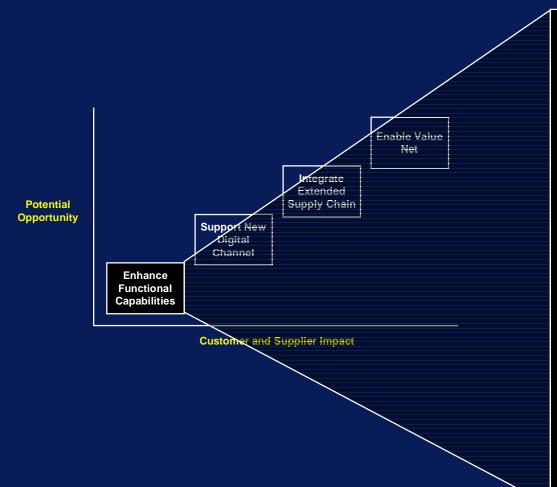
customization



¹February 10, 1999.

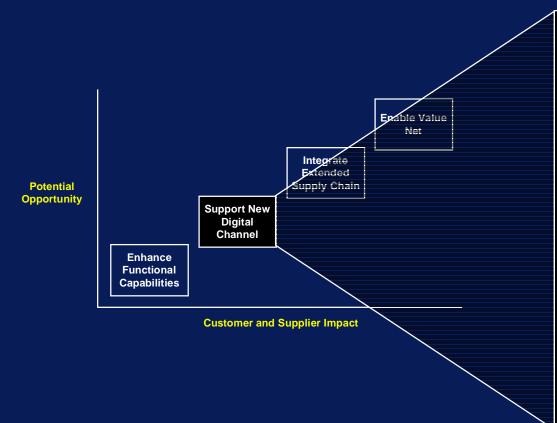
Defining the Right Approach for Your Company

Diagnostic questions: Enhance functional capabilities



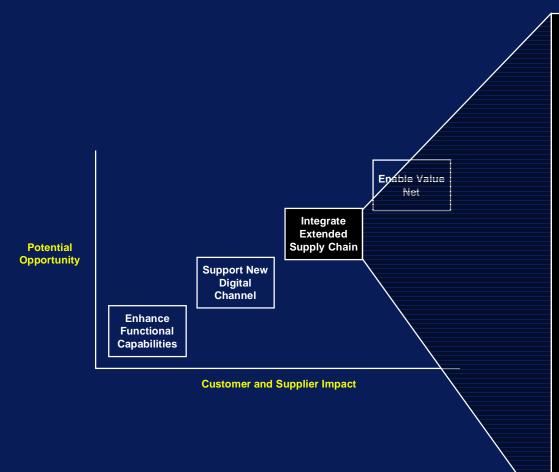
- How well does our administrative cost per dollar sales and dollar purchased benchmark with industry leaders?
- Are many of our sales and purchase orders paper, phone, or fax-based?
- Do our customer service reps and buyers spend a lot of time on small orders or administrative tasks?
- Does customer and supplier information (prices, specs, etc.) change frequently?
 Are we efficient at providing updates?
- Are we able to provide customers with immediate answers to their inquiries?
 24x7?
- Do we have appropriate control and agility regarding our transportation and in-transit assets?
- Is our website essentially "brochureware"?
- How well do we understand our customers and how they use our product/service?

Diagnostic questions: Support new digital channel



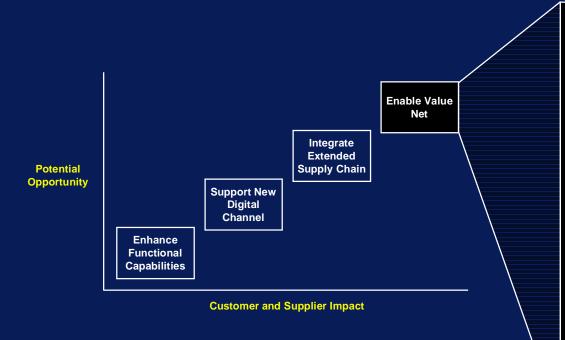
- Will the new channel have significantly different order characteristics size, mix, frequency, density, etc.?
- How will new order characteristics affect my distribution and service costs?
- How much additional cost can my product line support?
- What new distribution and service mechanisms must be put in place? Where should third parties be used?
- Do we really understand the service needs of any new customers?
- What strategic alliances would help our value proposition and our economics?
- Are completely new supply chain models needed to be profitable?
- How can we limit risk?

Diagnostic questions: Integrate extended supply chain



- Are there excessive levels of inventory across the extended supply chain?
 Obsolete inventory?
- Are customer needs clearly understood and met as they change over time?
- How quickly can we get new designs to market versus our competition?
- Are we fully leveraging our suppliers' creativity in the design process?
- Could the customer design his/her own product and order?
- Have we maximized our purchasing leverage and supply options (beyond internal consolidation)?
- Is the user fully integrated into the procurement process?
- Do our suppliers have a clear picture of our changing needs over time? Would a clearer picture help their economics?
- How could improved information flow enhance our after-sales service process?

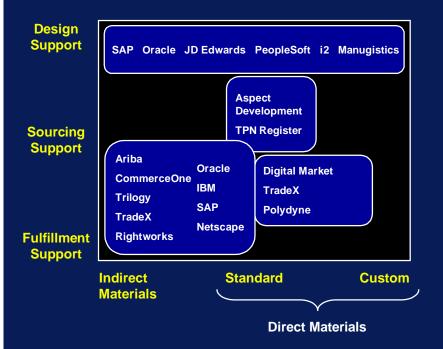
Diagnostic questions: Enable value net



- To what degree can "time" be a competitive weapon?
- Are there sequential activities in the extended supply chain that could be performed in parallel?
- Does a "one size fits all" supply chain appropriately satisfy customer needs and cost targets?
- How quickly could we expand or contract capacity or change geographic coverage if required?
- Are we performing activities that our customers or suppliers could more economically perform? Vice versa?
- Could our asset intensity be dramatically improved with a new business model?
- Are we under competitive threat from new business models? Could we be?

The right e-commerce solution may draw upon a number of different types of providers.

Software Solutions



E-commerce Fulfillment

- Internetss
- Fingerhut
- Iconomy

Virtual 3PL

- Order Trust
- Keystone Fulfillment

e-markets

- Fast Parts
- Free Market (UnifiedMarket)
- Chemdex
- e-chemicals
- Net Buy

Infomediaries

- iShip
- InterShipper
- Tranzlink
- PurchasingCenter

Conclusion: Takeaways

- E-commerce is not the goal, it is the enabler
- E-commerce should be thought of in terms of both selling and procurement processes
- E-commerce opportunities span the range from improving functional capabilities and reducing costs to enabling new business designs
- Value Nets may not be appropriate for all companies today, but is the model for where we believe all industries are headed long term
- The right e-commerce solution may draw upon a number of different types of providers

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