

Supply Chain Innovations for Competitive Advantage

Hewlett-Packard Case Study

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Agenda

- HP Today
- HP Supply Chain & Why it Matters
- HP Supply Chain Innovations and Best Practices

(hp)

HP Today

- Fortune 11 company
- Operations in 178 countries
 -43 currencies, 15 languages
- 151 000 employees
- 70 000 service partners
- 210 000 sales partners
- 11 patents a day



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HP Today – \$86.7B in Sales





\$26.7B **Personal Systems** Group

\$25.2B **Imaging and Printing** Group

\$33.3**B Technology Solutions Group** Servers, Storage, Software (\$17.78)

Consulting, Support, Outsourcing (\$15.5B)

#1 mission-critical

#1 in retail PCs #1 in notebook PCs #2 in total PCs #1 in pocket PCs/ handheld devices

- #1 in Inkjet printers #1 in LaserJet printers #1 in scanners #1 in wide-format ptrs #1 in all-in-one devices #1 in print servers #1 in photo media
- #1 in total servers (CY03)
- #1 in fault-tolerant servers
- #1 Windows® IA-32 servers #1 services for open IT
- #1 in Linux[®]-based servers
- #1 in UNIX® servers
- #1 in external storage
- #1 in mgmt. software
- #1 in high-performance technical computing
- infrastructure services environments #1 enterprise-ready Microsoft integration & support services #3 in IT services #1 industry's largest channel partner network

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HP Supply Chain

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Why Supply Chain Matters to HP...

Customers	 Supply Chain execution directly impacts customer satisfaction & total customer experience (TCE) 'Putting the customer first' drives Supply Chain strategy & execution across the value chain
HP	 Supply Chain actively manages \$51B of HP company spend (64% of revenue) Rigorous attention to cost optimization influences overall profitability
Shareholders	 Superior Supply Chain performance can dramatically increase market capitalization Supply Chain results translate into; improved cost structure enabling revenue & profit growth increased cash flow
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HP Supply Chain

A fast, flexible, cost-efficient link between our product portfolio & our customers



2005 shipments: 50M printers, 30M PC's, 30M Servers, 300M cartridges Created by Julie R Anderson



HP's Supply Chain Network



North, Central & South America

Canada, Mexico, United States, Costa Rica, Brazil <u>\$9 billion</u>

Contract design and manufacturing, software, semiconductors, storage, interconnect, power supplies, packaging materials

Western & Eastern Europe

Austria, France, Germany, Italy, Netherlands, Scotland, Switzerland, UK, Czech Republic, Hungary, Romania <u>\$5 billion</u> Contract design and manufacturing, semiconductors, media, packaging materials

Asia Pacific

China, India, Indonesia, Japan, Korea, Malaysia, Philippines, Singapore, Taiwan, Thailand <u>\$37 billion</u> Contract design and manufacturing, semiconductors, displays, storage, interconnect, power supplies, media, packaging materials



Supply Chain Strategy Overview







What Makes HP Supply Chain Unique?

Operational Effectiveness & Efficiency	 Focus on relentless improvement of the Supply Chain cost structure Drive standardization and simplification Continuously improve customer satisfaction
Partner for Success	 Focus on open collaborative business partnerships Deliver seamless integration of data & processes to better serve the customer Creates alignment around common business goals
Supply Chain Innovation	 Invent new methodologies, tools & processes to create efficiencies & enhance performance Continuous improvement of Supply Chain functions Delivers competitive advantage & differentiation

Review of HP Supply Chain Leading Best Practices





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Time



HP Supply Chain Leadership

- Stage 4: Practices (Excellent)
 - Design for Supply Chain
 - Procurement Risk Management
 - Buy/Sell
 - E-sourcing (auction analytics)
 - Asymptotic Best Cost
 - Dynamic Replenishment
 - Supply Chain Visibility
 - Supply Chain Modeling & Analysis
 - Social & Environmental Responsibility
 - Warranty Management
 - Inventory Optimization
 - Demand Shaping

- Stage 3: Practices (Advanced)
 - Supply Chain Governance
 - Benchmarking
 - Total Customer Experience
 - People Development
 - RFID
 - High Performance Supplier Scorecard (HPSS)
 - Business Excellence Process
 - SigmaPlus
 - Lean
 - BPM



Design for Supply Chain





DfSC - Homer – Product Packaging



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Procurement Risk Management

Solution for managing supply, demand & pricing volatility

Value

- Protects margin, earnings & supply from price & supply volatility
- Optimizes predictable, reliable, pricing

- Management of uncertainty
- Reallocation of risk between customer and supplier
- Evaluation of contract alternatives







Maintain control of multitier supplier relationships

Value

- Lowers material costs
- Improves cash flow advantage
- Reduces inventory

- Price masking
- Adherence to contractual agreements
- Spend aggregation
- Assurance of supply





E-Sourcing

Web-enabled solution that automates & improves end-to-end sourcing processes

Capabilities

- Provides strategic sourcing & negotiation management (eRFI, eRFP, eRFQ, auctions, bid optimization)
- Enables supplier relationships & interactions management
- Creates strategic sourcing knowledge, sharing, leverage & visibility
- Enhances team collaboration (Engineering, SC, Procurement)

Value

- Increases negotiated cost savings
- Reduces total cost of ownership
- Improves procurement workforce productivity
- Reduces time-to-market
- Ensures enterprise-wide contract compliance





Asymptotic Best Cost (ABC)

Advanced procurement tool used to predict best overall commodity cost using feature/price/value dimensions

Value

- Ensures delivery of market competitive product prices
- Defines price as customer value not always 'lowest cost'
- Enables competitive pricing in outsourced environment

- Enables ability to benchmark cost against features & customer price/value expectations
- Provides regression price analysis
- Ensures maximum leveragability when negotiating price with suppliers
- Provides a external reference point for product feature-sets





Dynamic Replenishment

Optimize inventory globally through collaboration with suppliers

Value

- Assurance of supply
- Better inventory management
- Supply chain responsiveness

- Statistically based inventory targeting logic
- Rules based supply / demand matching optimization
- Automated replenishment process





Supply Chain Visibility

Single view of operational information and performance data

Capabilities

- Capture of supply chain events and analytic processing
- Set of standard metric definitions
- User selectable metrics to monitor
- Drill down capability
- Early warning alerts
- Track and trace key events
- Role based secure access

Value

- Proactive business performance management
- Informed decision making
- Upstream and downstream monitoring





Supply Chain Modeling & Analysis

A network modeling process to reposition supply chain assets that minimize demand-supply imbalances to profitably respond to market changes

Value

- Improves speed to market
- Decreases supply chain costs
- Minimize demand-supply imbalances by proactive network redesign/configuration

- Multi-scenario comparison
- Optimize via graphical interface
- Remote collaboration
- Fixed parameters (e.g. lead time, holding costs, demand variability, service performance)
- Inventory optimization
- Centralized training



Warranty Chain Management Early Warning Solution



Early identification and correction of warranty issues

Value

- Faster recognition and identification of issues
- Savings stemming from reduction in "bad" production and warranty costs
- Improve brand image
- Improve quality and serviceability of future designs

- Extraction of issues from structured and unstructured sources
- Analysis, reports and scorecards
- Ability to discover trends and issues
- Issue tracking and resolution
- Closed-loop process for issue resolution





Social Environmental Responsibility

HP's Global Citizenship Policy sets expectations for HP's human rights, labor practices, ethics, occupational health and safety and environmental impacts

Value

- Lifecycle responsibility (sourcing to recycling)
- HP leadership in establishing the Electronic Industry Code of Conduct
- Extensive industry benchmarking

4 Phase Supplier Engagement Model

- Providing products and services that are environmentally sound throughout their lifecycles
- Extends HP's social responsibility to HP's global supply base
- Defined SER supplier conformance







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