Achieving Multi-Tier Supply Network Coordination

Material for Discussion

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Objective of Our Study

Study Objective - Develop a vision of possible structures and designs for coordinated supply networks
- What entities, governance structures and processes are necessary to coordinate across several companies in different tiers of the supply network?

Using a Delphi Methodology to envision future state as seen by experts
- Multiple experts from different domains
  - Industry
  - Academia
  - Consulting thought-leaders
- Synthesize input from experts and share possible frameworks with respondents
  - Solicit feedback on initial synthesis of respondent input
- Synthesize feedback on frameworks and again share with respondents

Expected findings – This work designed to provide insight into:
- Possible frameworks for enabling an coordinated multi-tier supply network
- Issues & obstacles for creating an coordinated multi-tier supply network
- Suggested set of refined requirements
- Validation of trends identified in literature review

Soliciting input now with preliminary report anticipated June, 2001
Supply Chain Coordination & Collaboration 2001

- Coordination – Industry efforts are largely focused on individual company’s internal supply chains
- Collaboration – Lots of effort entitled ‘Collaboration’
  - Point-to-point collaboration between two adjacent tiers only
  - Either supplier-customer or customer-supplier centric
  - But not across more than two tiers in the supply chain
  - Software-focused to establish common information flows

Point-to-Point Coordination & Collaboration Today

![Diagram showing material flow, information flow, and financial flow between Supplier and OEM](image-url)
SC Coordination & Collaboration Future Potential

- Foundation - Internal company optimization (across functional departments) provides tangible and significant performance improvement

- Premise - Similar significant benefits exist for companies coordinating and collaborating across multiple supply chain partners (tiers)
  - Cost savings
  - Revenue enhancements
  - Responsiveness (faster time to market)
  - Redesigning supply chain leveraging contributions from each partner

- Highest leverage may come from coordination across a selected subset of supply network partners (strategic supply network):
  - Partners with which you are sharing sensitive business information
  - Partners which are mutually dependent, and information-dependent
  - Partners where the relationship is irreplaceable (in the short term) and/or meaningful (likely high-volume of transactions and/or sales)
Coordinate across multiple tiers of the supply network

Joint Planning, Forecasting, Operation
Coordinated Flow from Tier 2 to Customer
Strategic Supply Network – Selecting Partners
from the OEMs perspective

OEMs

Customers

Tier 2

Tier 1
(Suppliers,
CM, 3PL)

Strategic relationship
Material Flow
Information Flow
Financial Flows not shown
Strategic Supply Network – Selecting Partners
alternative SSN, from OEMs perspective

Note – it may make sense to include a few key partners at several tiers
Multi-Tier Coordination – Requirements to Achieve the Potential

- Connected information systems across the strategic supply network that provide information visibility (SC visibility)

- Logistics process and operations coordination across the strategic supply network

- System coordination across the supply network
  - Not focused solely on math models to optimize the network
  - New entities to help facilitate optimizing the strategic supply network
    - Track current network performance
    - Identify optimal network design possible
    - Coordinate network-level decision-making among partners
  - Governance structures that would facilitate coordination
  - Processes for making network-level investments among strategic supply network, including making tradeoffs (benefits, costs, risks) among partners
Multi-Tier Coordination – Input Requested

- Will the basis of competition in the future shift from company-vs-company to supply chain-vs-supply chain?
  - What does supply chain-based competition mean to you?
  - What examples can you cite?
- How could information systems be coordinated?
  - What other entities could facilitate this? Examples?
- How could logistics processes be coordinated?
  - What other entities could facilitate this? Examples?
- What new entities and/or governance structures are needed to enable an optimized supply network?
  - What other entities could facilitate this? Examples?
- Within the noted entities/governance structures, how would costs, risks and benefits be equitably shared among the supply network partners?