

Creating Lasting Values Through Supply Chain Collaboration

A Research Project Conducted by the
Stanford Global Supply Chain Management Forum
and the
MIT Integrated Supply Chain Management Program

*A Preliminary Research Readout
October 31, 2001
v5a*

Agenda

- Introduction and Reference
 - Network Master Project
 - Multi-Tier Coordination & Network Master
 - Coordination and Collaboration
- CLV Observations

Network Master Project

- Early 2001 conducted study to develop a vision of possible structures and designs for coordinated supply networks
- Identify entities and governance structures that could enable coordinating across several companies in different tiers of the supply network
- Understand vision of the future
 - How companies will compete
 - How companies can achieve multi-tier coordination
 - Supply chain versus supply chain?

What will the future be like?

- Limited number of SC vs. SC cases
 - Fragmented industries (no ‘common’ suppliers)
 - Vertically integrated companies competing
 - Companies that have sole source relationships throughout the supply network
- Future looks more like SC vs. SC Metaphor
 - Companies – not supply chains – competing on their supply network capabilities
 - Based on external capabilities that have been integrated
 - Most powerful company of SN – channel master – determines terms of trade
 - Companies developing independent, deep one-to-one relationships (dyadic) rather than across multiple tiers
- Multiple alternatives for coordinating

Multi-Tier Coordination Alternatives

- Network master concept - An entity (or entities) that serves three ‘master’ coordination roles
 - Information Systems and Sharing Coordination
 - Logistics-Operations Coordination
 - Benefits & Tradeoffs Coordination
 - Manage tradeoffs required to improve supply network performance, coordination and allocate benefits, costs & risks
- Not necessarily one entity
 - Possibly a different entity or process for each requirement
 - Currently many efforts to create information systems master
 - LLPs are closest example of evolving ‘logistics master’
 - Closest example of ‘benefits & tradeoffs master’ is channel master

Coordination & Collaboration

- Economics theory proposes two fundamental methods for coordinating among organizations
 - Markets mechanisms to coordinate
 - Hierarchies to coordinate
- Applying Network Master concept offers a refined set of coordination options
 - Clarifying collaboration, partnerships and alliances
 - Note tradeoffs for different method choices
 - Higher control via hierarchies, longer-term commitments
 - Lowest control via markets, short-term commitments
- Collaboration is one method of coordinating

Basic to Refined Coordination Options

Markets			Hierarchies		
Trans-Actional (different goals)	Alliances (some common goals)			Partnerships (multiple owners, some common economic goals)	Vertical Integration (single owner, common economic goals)
	Info Sharing Alliance (passive info sharing)	Collaborative Logistics/Operations Alliance	Collaborative Network Alliance		

Collaboration \neq Partnership

From Collaboration, Alliances and the Coordination Spectrum Working Paper
 Rice and Ronchi, September, 2001

Alliances, Collaboration & Partnerships

- Alliance – a type of relationship
 - Among two or more organizations
 - All agree to work together for some common goal
- Collaboration, collaborative – describes interaction
 - Collaborative
 - Active versus passive engagement
- Multiple alliances (market mechanisms)
 - Passive information sharing
 - Active collaboration to coordinate logistics and/or network-level tradeoffs
- Partnerships (hierarchies)
 - Legal implications
 - Suggests some ownership

Defining Alliance Options

- Information Sharing Alliance
 - Some potential common goals
 - Passive information sharing
 - Limited adjustment of systems to enable sharing
 - Limited joint analysis
- Collaborative Logistics-Operations Alliance
 - Some common goals
 - Active information sharing
 - Active coordination, planning & problem solving to improve logistics flows and operations
- Collaborative Network Alliance
 - Common goals
 - Active information sharing, coordination, planning
 - Mutual investments in relationship-specific assets
 - Balanced risk across the parties

Coordination & Collaboration – Description

Markets				Hierarchies	
Trans- actional	Alliances			Partnerships	Vertical Integration
	Info Sharing Alliance	Collaborative Logistics/ Operations Alliance	Collaborative Network Alliance		
Buy and Sell Products & Services	Buy and Sell Prods & Svcs, <u>Passive</u> <u>info</u> <u>sharing</u>	Buy & Sell Prods/Svcs, Share info, <u>Active</u> <u>coord & plan,</u> <u>Common</u> <u>plng sys &</u> <u>processes</u>	Long-term contracts, Share key info, Active coord, <u>Mutual</u> <u>investments</u> <u>& risk</u>	Run the Business with other Part Owners (Partners)	Run the Business as Owner

Coordination & Balancing Risk

Markets				Hierarchies	
Trans- actional	Alliances			Partnerships	Vertical Integration
	Info Sharing Alliance	Collaborative Logistics/ Operations Alliance	Collaborative Network Alliance		
Price	Price	Price, Long-term contracts, Contingency contracts, 'Hostages'	Shared goals, Long-term contracts, Contingency contracts, 'Hostages'	Partial control via ownership	Ownership control

Coordination by Network Master

Markets				Hierarchies	
Trans- actional	Alliances			Partnerships	Vertical Integration
	Info Sharing Alliance	Collaborative Logistics/ Operations Alliance	Collaborative Network Alliance		
	Industry stds body (RosettaNet), Extranet, Public exchange, 3P Info Mgt (Tilion), Separate systems	Private exchange, (Nistevo, Logistics.com), 3P Logi Mgt, (UPS, Lead Logistics Providers), Coordinated systems	Private exchange, 4P Mgt (Accenture, 3PLs), Common systems (Chrysler SCOR)	Public exchange owned by participants (Covisint, Transora), Horizontal Coops (agriculture), Vertical Coops	

Sum

- Near term emphasis on dyadic or relationships between two companies
- Multiple coordination alternatives
 - Market mechanisms
 - Information Sharing Alliances
 - Collaborative Alliances
 - Partnerships
 - Full Hierarchy – Vertical Integration

CLV

MIT Team Preliminary Readout

- Project Background
- Progress to date
- Observations
- Next steps

Project Background

Background

- Supply chain integration
 - Considered a key element of competitiveness in the fast moving and complex global market.
 - Requires close collaboration among supply chain partners.
- Collaboration in a supply chain
 - A well-accepted concept by companies, but
 - It is unclear how successful companies have been in developing mutually beneficial and sustainable partnerships.

Project Concept

- Conduct research to gain deeper understanding on
 - How collaborative efforts can be developed
 - How impact of collaborative efforts can be measured & valued
 - How continuing relationships can be maintained & improved.
- Study how two different companies develop collaborative supplier and customer relationships
 - Intel Corporation (research conducted by Stanford team)
 - Procter & Gamble Company (research conducted by MIT team)
 - Study of collaboration in both high-tech & consumer products industries provides valuable breadth
- Potentially additional companies after this initial phase

Project Scope

- Each research team will:
 - Choose 6 suppliers & 6 customers respectively for Intel/P&G
 - Include interviews with Intel/P&G personnel
- Stanford study of Intel relationships will focus on
 - Suppliers of Direct Materials, Capital Equipment & Support
 - Customers of Systems Manufacturing & Flash Prods
 - Subsequent phase may study other relationships
- MIT study of P&G relationships will focus on
 - Suppliers of raw materials & services (including 3PL)
 - Customers in mass merchandising and grocery channels

Progress Report

Progress: Data Collection

- 36 interviews conducted with 40 people
- Interview ‘sets’ conducted at 7 suppliers & 5 customers
 - Supplier sets:
 - 3M, Cebal, Chesapeake, Packtion, Schneider National, Shell, Triplefin
 - Customer sets:
 - Hannaford Bros., Kmart, Safeway (UK), Target, Wal-Mart
- Partial set conducted at 1 supplier & 1 customer
 - Supplier: Beauty Care Supplier Technology Council (STC)
 - Customer: Meijer
- Information sharing spreadsheets: 23% returned

Additional Data Collection

- Additional data to collect
 - Necessary interviews
 - Supplier:
 - Beauty Care Supplier Technology Council (STC)
 - Customer:
 - Meijer
 - Useful interviews
 - Supplier:
 - Schneider National
 - Customer:
 - Kmart, Safeway UK (P&G), Target (both)
 - Information sharing spreadsheets

Observations

Data Analysis Limitations

- Anecdotal data
 - Data is not statistically significant... cannot assert ‘conclusions’
 - Some ‘observations’ possible and potentially interesting
 - This offers a review of some initial observations
 - An assortment of observations to date
 - Disguised case examples presented to protect the participants’ confidentiality

Themes & Analyses

- Dimensions of Relationships
- “A Rose is a Rose is a Rose” – Building a collaborative relationship
- P&G is changing...
- Quotables
- Segmentation Analysis

Dimensions of Collaborative Relationships

- Multiple relationships across firms
 - Commercial, Operational (logistics, IS), Technology
 - Mirror team or 'Bow tie' relationship
 - Increasing with increasing amount of outsourcing
- Observed very different functional relationships within one collaborative relationship
 - Firms not consistent in managing external relationships
 - Adversarial commercial relationship but productive technology sharing
 - Existence of an adversarial operational or commercial relationship appears to limit the willingness of the other party to share and commit
 - End result appears that performance fails to reach potential
 - Failure of internal alignment, a lack of internal collaboration
- Some evidence of a 'portfolio approach'
 - Understand the overall relationship
 - Recognize the tradeoffs – develop a cost to serve vs. benefits of relationship model

“A Rose is a Rose is a Rose” – Building a Collaborative Relationship

- Life cycle for building a collaborative relationship
 - Respondents indicate requires 3-4 years for one person to get to know the other organization
 - Resources need that much time to learn
 - Significant events can help (and hurt)
 - Change in leadership and new strategy
- One personal relationship can make all the difference (HB)
 - Liaison or ‘advocate’s’ commitment and continuity
 - Liaison lobbies for more resources, makes case for special test or trial at their customer or supplier, acts as advocate internally for their C or S
 - Additional resources are the only way to give ‘extra’ to customers as terms are fixed – enables the firms to share risk by reducing effective cost to other party
 - One person is not enough if that is the only support
- Serving the relationship
 - With resources that are begged borrowed and stolen

P&G is changing, but not clear how...

- Consistent observation that P&G is changing but not consistent how
 - Conflicting messages being sent....
 - P&G as a customer – They are now trying to “get the most from their dollar” now, more price oriented and less total delivered cost or total use cost oriented
 - We are treated like a commodity supplier when we provide technical support and VA
 - P&G is really learning how to think like one of their customers
 - P&G is becoming more flexible, better at listening
 - Are these messages indicative that P&G is tailoring how they manage relationships to different situations
 - Price becomes important in products and services that evolve to commodities?
 - Listening better where there is more to gain?
 - Localized issue
 - Local leader or liaison sets tone, can buffer the other party
 - Corporate P&G changing to less flexible but local operations softens
 - Another way to think about this... ‘Postponed Customization of Relationship’?
 - P&G has a standard relationship and clear approaches that are fixed
 - Policies are modified and ‘customized’ at the local level or interface with the other party
 - Either way, it is a conflicting message that confuses other parties

Quotables

- “P&G puts more effort and resources into the relationship at all levels (especially at the trading level), but they don’t have the best relationship. (We have) better relationships with smaller suppliers that have fewer resources but are more responsive and more prepared to adapt to (our) requirements, maybe even more capable to respond.”
- “P&G is evolving and beginning to understand the storefront perspective of the retailer, P&G thinking like this is their store.”
- “People who’ve been around for three years can bring value-added services to the customer that somebody new, no matter how smart they are, they aren’t able to bring.”
- “One of the biggest challenges our team faces is the fact that we’re charged with really pushing the envelope and creating the future and many times, our company (P&G) isn’t ready to go there yet. So we aren’t really committed about doing things differently but rather we tend to, organizationally, feed the masses.”
- “If a company wants to collaborate with --, -- will say to the prospective supplier “What are you going to give us?” or “How much of that saving do we get?”

Trust & Relationships

- It's a 'must' as we all know (“What does that mean to you?”)
- Trust exists between individuals
- More emphasis on two aspects of trust
 - Trust that other party is able and willing to do what they say they will do
 - Trust that the other party will be honest if they cannot meet the needs
 - “Gotta know your limits”
 - That the other party has your interests in heart as well as his/her own
 - No gaming, open and honest conversations about intent and commitments
- Trust takes a while to build but there are some other theories
 - Can't wait for trust to build over time – make a plan and try
 - Level of satisfaction with relationship swings back and forth
 - Some cases it is predictable with the movement of front-line people
 - Some cases it is a function of the business performance which is sometimes related to personnel changes at senior levels
 - From 'Poor' to 'Good and getting better' in 7 months, from adversarial to high trust, willing to collaborate in 12 mos, back to adversarial 6 mos later

Segmenting

- Segmented relationships by performance (using assessment of balanced benefits and stated satisfaction as close proxies) and
 - Consistency of relationship dimensions
 - Mutual investments
 - Common assessment
 - Common driver
 - Need
 - Opportunity
- Compared perception of collaborative trend
 - P&G assessment vs. Other Party

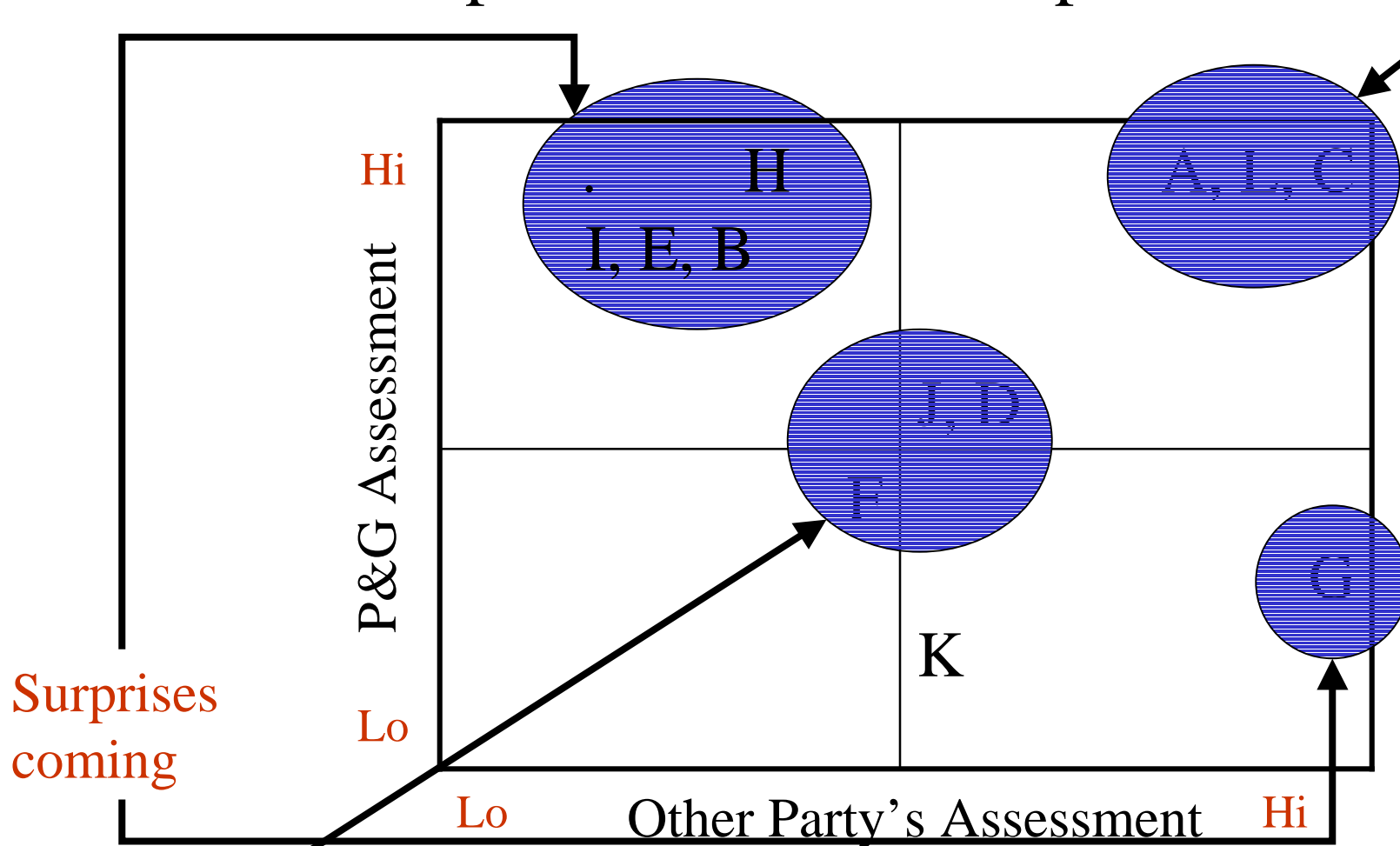
Performance vs. Consistent Relationship

Relationship Performance (proxy)	Hi	G, B (Hi perf but relnps at risk)		A, L, C (Hi perf relnps)	
		J, H, K (Underperforming damaged by inconsistency)		D (Underperforming)	
	Lo	F, E, I (Unhealthy relnps)			
		Lo	Consistent Relationship Dimensions		Hi

High performing relationships are consistent across dimensions

Perception of Relationship Trend

High Perf



On the fence
Squaring Off

Common perception of positive trend
associated with high performance

Segmentation Analysis

- Performance of the Relationship
 - Association between performance and maintaining consistent relationships across multiple dimensions
 - Commercial
 - Operations
 - Technology and product development
 - 2 of 3 ‘Unhealthy relationships’ have come to a ‘crossroads’
- Perception of Collaboration Trend
 - Evidence of collaboration and benefits derived for relationships where both assessed positive trend
 - No clear association between unbalanced market power and ability to collaborate and be successful
 - Relationships at risk are not without investment
 - Stakes may be higher when there are investments

Segmentation Analysis – High Performers

- High Performers
 - Association between performance and maintaining consistent relationships across multiple dimensions
 - Commercial
 - Operations
 - Technology and product development
 - High performer group have common motivation in collaborating – because there is an opportunity, for growth
 - Versus collaborating because of a need or because there is no other option
 - “It would be stupid not to” and “we can’t just walk away”
 - This does not suggest that collaborating because there is a need will not lead to high performance
 - Common among the high performer group
 - ‘Dispassionate willingness to look at data’
 - Openness about issues real-time
 - Consistent that openness is related to sharing common perception of the relationship

Collaboration KSFs and KFFs

	KSF	KFF
Dimensions of relationships	Recognized, constructive	Destructive, conflicting
Balance of power	Leverage unique capabilities	Exercise market power for self-interest
Risk management	Eliminate risk by reducing unknowns (data and behavioral), sharing investments, providing off-balance sheet resources	Burden other party with risk and investments for your benefit
Relationship Management	Committed liaison with oversight of portfolio of relationships	Rotating short-term resources, decentralized or no overview
Dealing with tough issues	“Put the moose on the table,” “OK what happened and how do we fix it?”	“You get fined for failure,” “Who did that?”
Working arrangement	Contractual agreement with contingencies and incentives	No contract, transactions with penalties

Success Factors Laundry List

- KSFs
 - Involving operations team for problem solving
 - Orientation to learn from mistakes and failures with root cause analysis
 - Data-based dispassionate analysis in open and honest way
 - “Willing to put the moose on the table”
 - Advance notice of problem, realistic assessment to meet needs
 - Delivering on commitments
 - Advocate to get resources
 - Portfolio approach to relnp
 - Have contracts
 - “We hope they stay in the drawer”
 - Cultural fit helps but there seems to be limited correlation between great culture fits and success when that is the main stay of the connection
 - Quantifying the benefits clearly
 - But few have evidence that this has been done
 - System thinking

Failure Factors Laundry List

- KFF
 - Having commercial folks deal with problem solving
 - Penalties as first action
 - Multiple dimensions of relationships with other party, treated separately
 - Underestimate the entire value that a supplier provides
 - VA services are OK but they just ship us xxx

Obstacles

- “Our own company bureaucracy”
- Time
- High turnover of personnel
 - “People are viewed as interchangeable parts” but they’re not.
(P&G quote)
 - Limited time to develop trust
 - Limited time to ‘learn’ the customer’s systems
 - Took one resource 3-4 years on the job before the customer began to trust the resource
 - Advantage to continuity party
 - They become a resource for the other party, educating the other company (a hostage in Williamson’s terminology)

Issues

- Evidence of increased dependency on other party (customers and suppliers both)
 - For core supply network VA
 - For business and SC support
 - Data analysis
 - Technology development
 - Innovation
 - For non-core VA
 - Merchandising planning and analysis
 - Marketing and sales planning and execution
 - Learnings exchange on HR (HCWS), Legal, Environmental
 - Not clear that these dependencies have been analyzed for risks
 - C. Fine's methods

Key Success Factors per Respondents

- KSFs per respondents for successful collaborative relationships
 - Long list, some expected elements
 - A few core elements
 - Ability and willingness to execute, delivering on commitments
 - Trust
 - Common understanding, Common measures
 - Clear benefits defined
 - Awareness of respective objectives
 - Open and honest communication

Next Steps

Next Steps

- Finish data collection
- Join MIT-P&G collaboration study findings with Stanford-Intel collaboration study findings
- Consider extending study at another sponsor
- Develop experiential process
 - To share learnings with participants
 - To put research into practical application

Your Input?

- Observations and input welcome....