STREAM
Dr John Gattorna

TITLE
Designing *Dynamic* Supply Chains for volatile market conditions

PRESENTED BY
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Gattorna Alignment
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Evolution of ‘Design Thinking’ in Enterprise Supply Chains

1. From Logistics Operations to Supply Chain networks
2. From Static ‘set-and-forget’ to Dynamic capabilities
3. From ‘inside-out’ to ‘outside-in’
4. From ‘one-size-fits-all’ to Multi-Supply Chains
5. From a stable operating environment to Volatile conditions
6. From Functional specialisms to Fully interactive business models
Reconfiguration of enterprise supply chains – from ‘Static’ design, to tomorrow’s ‘Dynamic’ design

**Static Configuration – ‘one-size-fits-all’ (push)**

**Dynamic Configuration – multiple alignment (push + pull)**
The Australian 4,000 meter men's Pursuit Cycling Team Competing in the 2008 Beijing Olympics

Source: Photograph from Getty Images by Mike Hewitt
**Dynamic Alignment Business Model**

![Diagram of Dynamic Alignment Business Model]

**Underlying Logic**
An organisation must be aligned with its operating environment.

**Usefulness**
Shows the interaction between customers’ needs, the formulation of appropriate strategic responses, and the successful execution of these strategies by shaping the necessary internal capabilities and corresponding leadership styles.

**Prerequisite**
Understanding of the customers’ fundamental needs and buying behaviours that ultimately drive sales, revenues, and profit.

*Figure 1.2: Elements of the ‘dynamic alignment’ framework*

**Source:** Adapted from Figure I.2 in Gattorna (2003), p. xiii; also Gattorna (1998), p. 5; and Gattorna (2006), p.16.
**Dynamic Alignment Business model – from a supply chain perspective**

What is needed is an ‘outside – in’ approach, to align the **business** with its customers.

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**Dynamic Alignment**

- **Leadership Style**
- **Culture**
- **Strategy**
- **Market Place**
- **Technology + Infrastructure**

**Business Enterprise**

**Strategy** = The ‘bridge’ between the market and the enterprise

**Source:** Adapted from Figure 1.2 in Gattorna (2003), p. xiii; also Gattorna (1998), p. 5; and Gattorna (2006), p. 16.

**Figure 1.2:** Elements of the ‘dynamic alignment’ framework
The corresponding 4 supply chain configurations equates to multiple supply chain ‘alignment’-behavioral segmentation.

Finding the *linkages* is key to SC design

Leadership styles  
Cultural capability  
Strategy  
Buying Behaviours

**FIGURE 2.2** Multiple supply chain alignment on the customer side

*Source:* Adapted from Figure 4.3.2 in Gattorna (2003), p. 459; see also Gattorna (2006) Figure 2.1, p.40
Behavioral forces at play in any business

Figure 1.3: General characteristics of the four dominant behavioral forces or logics

Source: Adapted from Figure 29.1 in Gattorna (1998), p. 474; see also Gattorna (2006), p. 17.
Figure 1.4: Typical spread of attributes that define customers’ buying behaviors; in this case ‘P’ is the dominant logic and ‘a’ is the secondary logic, making a composite ‘Pa’
‘Best-of-both-Worlds’ Strategy

Figure 1.9: Paradigm shift to a best-of-both-worlds strategy

Source: Developed in discussion with Deborah Ellis, Carpenter Ellis, 2009
Four (4) primary behavioral forces

**I**
- Integration
- Mature – imminent change??
- Loyalty and long-term relationships
- Brand loyalty
- “Joint Venture” mentality
- “Quality” emphasis
- Teamwork
- Consensus

**A**
- Stable market, patterns are established
- Commodity
- Drive for efficiency – “experience” culture
- Value for money
- High price sensitivity
- Procedural
- Standards
- Structure

Customer Service = Empathy, Understanding, Relationship

**D**
- Early / young market
- No clear patterns / traditions yet to be established
- New product / technology
- High level R&D (eg. CDs)
- Supplier-led risk
- Entrepreneurial
- Lower price sensitivity

Customer Service = Innovative, Creative response to unique needs

**P**
- Patterns emerge - growth
- Customer led demand
- Sales, promotion, distribution important
- Strong commercial attitude – anti-relationship (eg. price sensitive); opposite to loyalty
- “Hollywood” syndrome – only as good as your last performance
- Product differentiation

Customer Service = Responsiveness in a commercial way

**Figure 1.10: Primary customer service logics**
Source: Adapted from Figure 2.4 in Gattorna and Walters (1996), p. 31; see also Figure 1.10 in Gattorna (2006), p.27.
The sixteen (16) possible dominant behavioral segments

- 'EFFICIENT'
- 'COMMERCIAL'
- 'INNOVATIVE SOLUTIONS'
- 'COLLABORATIVE'
- 'DYNAMIC'

FIGURE 2.1 ◆ The sixteen (16) possible dominant behavioral segments
Behavioral segmentation: the 4 most commonly observed ‘dominant’ buying behaviors

<table>
<thead>
<tr>
<th>Collaborative</th>
<th>Efficient</th>
<th>Dynamic</th>
<th>Innovative solutions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close working relationships for mutual gain</td>
<td>Consistent low cost response to largely predictable demands</td>
<td>Rapid response to unpredictable supply and demand conditions</td>
<td>Supplier-led development and delivery of new ideas</td>
</tr>
</tbody>
</table>

- Mostly predictable
- Regular delivery
- Mature or augmented products
- Primary source of supply
- Trusting relationship
- Teamwork/partnership
- Information sharing
- Joint development
- Forgiving
- Price not an issue

- Predictable demand within contract
- Regular delivery
- Efficiency low cost focus
- Multiple sources of supply
- Little sharing of information
- More adversarial
- Standard processes
- Power imposed
- Transactional
- Very price sensitive

- Unpredictable demand
- Commodity relationship
- Time priority/urgency
- Opportunity focus
- Ad hoc source of supply
- Low loyalty, impersonal
- Fewer processes
- Outcome oriented
- Commercial deals based on pragmatism
- Price aware

- Very unpredictable demand
- Higher risk
- Flexible delivery response
- Innovation focus
- Rapid change
- Individual decision making
- Solutions oriented
- Management of IP
- Incentives/ego
- No price sensitivity

**FIGURE 2.3** The four most commonly observed dominant buying behaviors

**Source:** Adapted from Table 1.3.1 in Gattorna (2003), p. 32; see also Gattorna (2006), p.41
Intersection of ‘Institutional’ and ‘Behavioral’ Segments, and corresponding supply chain types and process capabilities.
An example of ‘Behavioural’ segmentation cutting across ‘Institutional’ segments

**FIGURE 2.7** Foster’s new behavioral-based segmentation in the Australian alcoholic beverage industry

Source: Adapted from Figure 2.6 in Gattorna (2006), p.51

* Segment names selected by Foster’s
The corresponding 4 supply chain configurations equates to multiple supply chain ‘alignment’ - strategy

Finding the *linkages* is key to SC design

**FIGURE 2.2** Multiple supply chain alignment on the customer side

*Source:* Adapted from Figure 4.3.2 in Gattorna (2003), p. 459; see also Gattorna (2006) Figure 2.1, p.40
## Operational strategy dimensions - holistic approach

<table>
<thead>
<tr>
<th></th>
<th>Strategic dimensions for formulating supply chain strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Product mix</td>
</tr>
<tr>
<td>2.</td>
<td>Innovation emphasis</td>
</tr>
<tr>
<td>3.</td>
<td>Marketing emphasis</td>
</tr>
<tr>
<td>4.</td>
<td>Channels of distribution</td>
</tr>
<tr>
<td>5.</td>
<td>Pricing regime</td>
</tr>
<tr>
<td>6.</td>
<td>Promotional activity</td>
</tr>
<tr>
<td>7.</td>
<td>Service emphasis</td>
</tr>
<tr>
<td>8.</td>
<td>Procurement/sourcing approach</td>
</tr>
<tr>
<td>9.</td>
<td>Production</td>
</tr>
<tr>
<td>10.</td>
<td>Capacity considerations</td>
</tr>
<tr>
<td>11.</td>
<td>Fulfilment emphasis</td>
</tr>
<tr>
<td>12.</td>
<td>Relationship intensity</td>
</tr>
<tr>
<td>13.</td>
<td>Systems/IT support</td>
</tr>
<tr>
<td>14.</td>
<td>Resource allocation priorities</td>
</tr>
<tr>
<td>15.</td>
<td>Strategic risk profile</td>
</tr>
</tbody>
</table>
## Strategic dimensions - Continuous Replenishment Supply Chain SC

<table>
<thead>
<tr>
<th>STRATEGIC DIMENSION</th>
<th>IDEAL STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Product mix</td>
<td>Emphasis on mature, branded, and augmented products</td>
</tr>
<tr>
<td>2 Innovation emphasis</td>
<td>Big emphasis on product quality; joint product development. Innovate to improve relationship</td>
</tr>
<tr>
<td>3 Marketing emphasis</td>
<td>Build brand loyalty</td>
</tr>
<tr>
<td>4 Channels of distribution</td>
<td>Either direct or via trusted outlets</td>
</tr>
<tr>
<td>5 Pricing regime</td>
<td>Price according to strength of brand; moderate price sensitivity</td>
</tr>
<tr>
<td>6 Promotional activity</td>
<td>Low promotional activity - not needed</td>
</tr>
<tr>
<td>7 Service emphasis</td>
<td>Empathy with loyal customers; consistency of service; trust</td>
</tr>
<tr>
<td>8 Procurement/sourcing approach</td>
<td>Select suppliers on basis of relationships</td>
</tr>
<tr>
<td>9 Production</td>
<td>Low volume – high value add. Collaborate to reduce costs</td>
</tr>
<tr>
<td>10 Capacity considerations</td>
<td>Maximum utilization achievable consistent with serving customers</td>
</tr>
<tr>
<td>11 Fulfilment approach</td>
<td>Reliable/scheduled delivery; shared forecasts</td>
</tr>
<tr>
<td>12 Relationship intensity</td>
<td>Mutual dependence between customer and supplier</td>
</tr>
<tr>
<td>13 Systems/ IT support</td>
<td>Emphasis on customer management, CRM essential</td>
</tr>
<tr>
<td>14 Resource allocation priorities</td>
<td>Focus on supporting the relationship to retain customer</td>
</tr>
<tr>
<td>15 Strategic risk profile</td>
<td>Low</td>
</tr>
</tbody>
</table>

**FIGURE 7.1** Continuous replenishment supply chain strategy - protective
<table>
<thead>
<tr>
<th>STRATEGIC DIMENSION</th>
<th>IDEAL STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Product mix</td>
<td>Stable product line; minimal variants</td>
</tr>
<tr>
<td>2 Innovation emphasis</td>
<td>Focus on ways to reduce cost of inputs and processes</td>
</tr>
<tr>
<td>3 Marketing emphasis</td>
<td>Lowest price; reliability</td>
</tr>
<tr>
<td>4 Channels of distribution</td>
<td>Wide distribution through multiple channels</td>
</tr>
<tr>
<td>5 Pricing regime</td>
<td>Lowest price. EDLP</td>
</tr>
<tr>
<td>6 Promotional activity</td>
<td>Low</td>
</tr>
<tr>
<td>7 Service emphasis</td>
<td>Efficiency and process engineering</td>
</tr>
<tr>
<td>8 Procurement/Sourcing approach</td>
<td>Outsource standard products to gain lowest cost production.</td>
</tr>
<tr>
<td>9 Production</td>
<td>High volume – low cost; commodity</td>
</tr>
<tr>
<td>10 Capacity considerations</td>
<td>High utilization</td>
</tr>
<tr>
<td>11 Fulfilment approach</td>
<td>High reliability; predictable service and availability</td>
</tr>
<tr>
<td>12 Relationship Intensity</td>
<td>Low</td>
</tr>
<tr>
<td>13 Systems/ IT support</td>
<td>Emphasis on transactional systems</td>
</tr>
<tr>
<td>14 Resource allocation priorities</td>
<td>Focus on cost reduction</td>
</tr>
<tr>
<td>15 Strategic risk profile</td>
<td>Low</td>
</tr>
</tbody>
</table>

FIGURE 8.1  ◆ Lean supply chain strategy - incremental
### Strategic Dimensions - Agile SCs

<table>
<thead>
<tr>
<th>Strategic Dimension</th>
<th>Ideal Strategy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product mix</td>
<td>Larger range; choice important</td>
</tr>
<tr>
<td>Innovation emphasis</td>
<td>Seek product differentiation</td>
</tr>
<tr>
<td>Marketing emphasis</td>
<td>Quick response to changing customer requirements</td>
</tr>
<tr>
<td>Channels of distribution</td>
<td>Provide easy access to consumers; convenience</td>
</tr>
<tr>
<td>Pricing regime</td>
<td>Competitive; moderate price sensitivity</td>
</tr>
<tr>
<td>Promotional activity</td>
<td>High; fashion-style approaches</td>
</tr>
<tr>
<td>Service emphasis</td>
<td>Performance to specifications</td>
</tr>
<tr>
<td>Procurement/sourcing</td>
<td>Market knowledge and distribution</td>
</tr>
<tr>
<td>Production</td>
<td>Shorter runs; flexible scheduling; make-to-order</td>
</tr>
<tr>
<td>Capacity considerations</td>
<td>Lower utilisation because of “buffers” in the system</td>
</tr>
<tr>
<td>Fulfillment</td>
<td>Short lead times; use postponement</td>
</tr>
<tr>
<td>Relationship intensity</td>
<td>Low</td>
</tr>
<tr>
<td>Systems/ IT support</td>
<td>Use modelling and analysis</td>
</tr>
<tr>
<td>Resource allocation priorities</td>
<td>Build spare capacity to cater for volatile demand</td>
</tr>
<tr>
<td>Strategic risk profile</td>
<td>Higher risk</td>
</tr>
</tbody>
</table>

**FIGURE 9.1** ◆ *Agile supply chain strategy - operational*
<table>
<thead>
<tr>
<th>STRATEGIC DIMENSION</th>
<th>IDEAL STRATEGY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Product mix</td>
<td>Broad changing product line</td>
</tr>
<tr>
<td>2. Innovation emphasis</td>
<td>Extensive R &amp; D; aim to be first to market</td>
</tr>
<tr>
<td>3. Marketing emphasis</td>
<td>Creative problem solving</td>
</tr>
<tr>
<td>4. Channels of distribution</td>
<td>Limited</td>
</tr>
<tr>
<td>5. Pricing regime</td>
<td>Price appropriately for a creative solution; no price sensitivity</td>
</tr>
<tr>
<td>6. Promotional activity</td>
<td>Target early adopters</td>
</tr>
<tr>
<td>7. Service emphasis</td>
<td>Novel solutions</td>
</tr>
<tr>
<td>8. Procurement/sourcing arrangements</td>
<td>Product; technology; innovation</td>
</tr>
<tr>
<td>9. Production</td>
<td>Prototypes; customisation</td>
</tr>
<tr>
<td>10. Capacity considerations</td>
<td>Low. Hedge and deploy resources</td>
</tr>
<tr>
<td>11. Fulfillment approach</td>
<td>Speed is vital</td>
</tr>
<tr>
<td>12. Relationship intensity</td>
<td>Intense but short term while problem exists</td>
</tr>
<tr>
<td>13. Systems/ IT support</td>
<td>Whatever is required to solve the problem</td>
</tr>
<tr>
<td>14. Resource allocation priorities</td>
<td>Hedge and deploy resources; sometimes ineffectively</td>
</tr>
<tr>
<td>15. Strategic risk profile</td>
<td>High</td>
</tr>
</tbody>
</table>

FIGURE 10.3 ◆ “Business event” fully flexible supply chain strategy - Entrepreneurial
The corresponding 4 supply chain configurations equates to multiple supply chain ‘alignment’-cultural capability

Finding the *linkages* is key to SC design

**FIGURE 2.2** Multiple supply chain alignment on the customer side

Source: Adapted from Figure 4.3.2 in Gattorna (2003), p. 459; see also Gattorna (2006) Figure 2.1, p.40
Implementation – the invisible unconscious world of cultural values

Visible Patterns of Behavior
• Structure
• Strategy
• Systems

VALUES AND BELIEFS
• Goals of the enterprise
• Means used to accomplish these goals

UNDERLYING ASSUMPTIONS
• Taken for granted assumptions about the organizational reality

Source Adapted from Figure 4.3.3 in Gattorna (2003), p. 460
The four (4) major sub-cultures

**Means:** Synergy, teamwork, cooperation

**Ends:** Cohesion

**Means:** Innovation, flexibility, readiness

**Ends:** Growth

**Means:** Systems, measurements, controls

**Ends:** Order

**Means:** Action, objectives, energy

**Ends:** Results

*FIGURE 4.3  The four generic enterprise subcultures*

*Source:* Adapted from Figure 4.3.5 in Gattorna (2003), p. 461
### Group Culture

**Emphasis on cohesion, teamwork, synergy and consensus.**
- Closed, informal communication shared through groups and teams
- Control achieved by commitment to common Values
- Management support emphasizes the *internal* climate, particularly co-operation, personal development and recognition
- Individual’s tasks are negotiated by consensus
- Rewards are based on informal standards and the ability to maintain internal cohesion – good team players
- Deviant behavior is tolerated – provided it adheres to consensus values

### Entrepreneurial Culture

**Emphasis on creativity, innovation and flexibility.**
- Open, informal communication which is shared with whoever happens to be around at the time
- Control achieved by commitment to a common vision
- Management support emphasizes leading, inspiring, flexibility and initiating behaviors
- Individuals are empowered to perform their roles
- Rewards are based on creativity and entrepreneurial behavior
- Deviant behavior is tolerated – provided it is goal directed

### Hierarchical Culture

**Emphasis on stability, order, systems and control.**
- Closed, formal communication which is shared only on a “need to know basis”
- Control achieved by focus on processes
- Management support emphasizes procedures
- Individual’s tasks are established by precedence
- Rewards are based on formal standards and the ability to maintain internal control – good administration
- No deviation from approved processes

### Rational Culture

**Emphasis on results, urgency and high levels of activity.**
- Open, formal communication by way of concise, timely updates using the most appropriate media for speed
- Control achieved by focus on results
- Management support emphasizes planning
- Individuals are given structural authority to perform their roles
- Rewards are based on formal standards and relevant results – analysis and action
- No deviation from plans or performance standards

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*Source:* Adapted from Figure 3.3 in Gattorna (2006), p. 74

*Figure 4.4:* Details of each generic sub-culture
The eight (8) possible ‘transformation’ pathways

1. Evolutionary

Fig 4.9 a

Fig 4.9 b

2. Revolutionary

Fig 4.9 c

Fig 4.9 d

Source  Adapted from Figure 4.3.6 in Gattorna (2003), p. 463

Figure 4.10  ◆ Change pathways
### Continuous Replenishment supply chains: demand-side

#### where relationships matter most

<table>
<thead>
<tr>
<th>MARKET SEGMENT</th>
<th>COLLABORATIVE</th>
<th>CLOSE WORKING RELATIONSHIPS SOUGHT WITH SELECTED SUPPLIERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>FULFILMENT STRATEGY</td>
<td>VALUE PROPOSITION</td>
<td>STRATEGIES</td>
</tr>
<tr>
<td>INTERNAL CULTURAL CAPABILITY</td>
<td>CULTURAL LEVERS</td>
<td>▪ Share information</td>
</tr>
<tr>
<td></td>
<td>1. Org design</td>
<td>▪ Seek strategic partnerships</td>
</tr>
<tr>
<td></td>
<td>2. People positioning</td>
<td>▪ Seek long-term stability</td>
</tr>
<tr>
<td></td>
<td>3. Processes</td>
<td>▪ Build mutual trust</td>
</tr>
<tr>
<td></td>
<td>4. IT/systems</td>
<td>GROUP SUBCULTURE</td>
</tr>
<tr>
<td></td>
<td>5. S&amp;OP</td>
<td>▪ Relationship cluster</td>
</tr>
<tr>
<td></td>
<td>6. KPIs</td>
<td>▪ Ensure bias in cluster is towards personnel with “F” in their MBTI profile</td>
</tr>
<tr>
<td></td>
<td>8. Job design</td>
<td>▪ CRM; VMI; ECR; CDP; CPFR</td>
</tr>
<tr>
<td></td>
<td>9. Internal comms.</td>
<td>▪ S&amp;OP processes relatively simple in this collaborative environment</td>
</tr>
<tr>
<td></td>
<td>10. Training &amp; devel.</td>
<td>▪ Emphasis on loyalty and retention</td>
</tr>
<tr>
<td></td>
<td>11. Role modelling</td>
<td>▪ Encourage participative schemes</td>
</tr>
<tr>
<td></td>
<td>12. Recruitment</td>
<td>▪ Authority/autonomy negotiated by consensus</td>
</tr>
<tr>
<td>LEADERSHIP</td>
<td>13 LEADERSHIP STYLE</td>
<td>▪ Consultative; face-to-face</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Team building</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Managers with ESFP/MBTI profile are ideal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Recruit team players</td>
</tr>
<tr>
<td></td>
<td></td>
<td>COACH</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Conscientious</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Lead by teaching</td>
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<tr>
<td></td>
<td></td>
<td>▪ Concerned for others</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Loyal, committed, politically astute</td>
</tr>
<tr>
<td></td>
<td></td>
<td>▪ Seeks agreement by consensus</td>
</tr>
</tbody>
</table>

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*Source: Adapted from Figure 1.1 in Gattorna (2009), p. 48*
Organisation design for ‘Collaborative’ customers

Note 1: Account teams/clusters configured with a “relationship” mindset bias
Note 2: Individual team members return to their respective functions for specialist training

Source: Adapted from Figure 9.2 in Gattorna (2009), p.140.

Figure 6.4 Continuous replenishment supply chain clusters
Arranging technology to serve ‘Collaborative’ customers

Customer buyer behavior segments

“Collaborative”

“Efficiency”

“Demanding/unpredictable”

“Innovative solutions”

Different combinations of IT applications

Continuous replenishment supply chain

Lean supply chain

Agile supply chain

Fully flexible supply chain

- ASCP/CBO
- SIEBEL CRM
- DEMANTRA PTP
- OTM (G-LOG)

ERP transaction system and data base
(or can be SAP or legacy systems)

Source: Adapted from Figure 1.5 in Gattorna (2009), p.55

FIGURE 7.3 ◆ Requisite technology for continuous replenishment supply chains
**Lean supply chains: demand-side**

**Market Segment**

**Fulfilment Strategy**

**Value Proposition**

**Cultural Levers**
1. Orgnl design
2. People positioning
3. Processes
4. IT/Systems
5. S&OP
6. KPIs
7. Incentives
8. Job Design
9. Internal comms
10. T & D
11. Role modelling
12. Recruitment

**Leadership**

**Traditional**
- Leads by procedure; precedent
- Implements only proven business practices
- Cost controller; efficiency focus
- Uses information to control
- Seeks stability
- Is risk averse

**Hierarchical Subculture**
- Organize clusters around core processes
- Ensure bias towards personnel with “S” in their MBTI profile
- Standard processes; emphasis on cost
- Replace legacy systems with ERP system
- Effective decision framework in a relatively predictable operating environment
- DIFOTEF; forecast accuracy; productivity ratios
- Conformance to policies
- Centralized control – rules and regulations apply
- Regular; structured on ‘need to know’ basis
- Emphasis on analysis and measurement
- Managers with ISTJ (A) MBTI profile are ideal
- Recruit players with deep analytical skills

**Strategies**
- Seek economies of scale
- Low cost production and distribution
- Forecast demand; mature products; predictable-lead times

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*Source* Adapted from Figure 1.2 in Gattorna (2009), p.49

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*Figure 8.2* ◆ Lean supply chains – demand-side

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Organisation design for ‘Transactional’ customers

Note 1: Process teams configured with a cost improvement bias, led by a process manager
Note 2: Individual team members return to their respective functions for training and other specialist matters

Source: Adapted from Figure 9.3 in Gattorna (2009), p.140.
Arranging technology to serve ‘Transactional’ customers

**FIGURE 8.3**

**Requisite technology for lean supply chains**

Source: Adapted from Figure 1.5 in Gattorna (2009), p.55

**Customer buyer behavior segments**

- **“Collaborative”**
  - Continuous replenishment supply chain
  - ASCP/CBO
  - SIEBEL CRM
  - DEMANTRA PTP
  - OTM (G-LOG)

- **“Efficiency”**
  - Lean supply chain
  - ASCP/CBO
  - DEMANTRA PTP
  - SNO (NUMETRIX)
  - OTM (G-LOG)

- **“Demanding/unpredictable”**
  - Agile supply chain

- **“Innovative solutions”**
  - Fully flexible supply chain

**Different combinations of IT applications**

- J.D.Edwards
- Peoplesoft (HR)
- e-Business suite (EBS)

**ERP transaction system and data base**
(or can be SAP or legacy systems)
## Agile supply chain: demand-side

...where quick response is paramount

<table>
<thead>
<tr>
<th><strong>MARKET SEGMENT</strong></th>
<th><strong>“DEMANDING”</strong></th>
<th><strong>RESPONSE REQUIRED TO UNPLANNED OR UNFORESEEN DEMAND</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FULFILLMENT</strong></td>
<td><strong>VALUE</strong></td>
<td><strong>STRATEGIES</strong></td>
</tr>
<tr>
<td><strong>STRATEGY</strong></td>
<td><strong>PROPOSITION</strong></td>
<td>▪ Fast decision making</td>
</tr>
<tr>
<td><strong>INTERNAL</strong></td>
<td></td>
<td>▪ Fast delivery</td>
</tr>
<tr>
<td><strong>CULTURAL</strong></td>
<td></td>
<td>▪ Rapid response in unpredictable conditions</td>
</tr>
<tr>
<td><strong>CAPABILITY</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>LEADERSHIP</strong></th>
<th><strong>COMPANY BARON</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>▪ Leads by objectives (MBO)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Embraces change</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Goes for growth</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Focuses on what’s important</td>
<td></td>
</tr>
<tr>
<td></td>
<td>▪ Analytical; fact-based negotiations</td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE 9.2** ◆ Agile supply chains - demand-side

\[Source\] Adapted from Figure 1.3 in Gattorna (2009), p.50
Organisation design for ‘Dynamic’ customers

Note 1: Clusters are focused on different parts of the same segment but possibly different product categories

Note 2: Individual team members return to their respective functions for training and other specialist matters

Source: Adapted from Figure 9.4 in Gattorna (2009), p.141.
Picture: An Agile organisation in action
Arranging technology to serve ‘Dynamic’ customers

Customer buyer behavior segments

“Collaborative”

“Efficiency”

“Demanding/unpredictable”

“Innovative solutions”

Different combinations of IT applications

Continuous replenishment supply chain

Lean supply chain

Agile supply chain

Fully flexible supply chain

ERP transaction system and data base (or can be SAP or legacy systems)

Source: Adapted from Figure 1.5 in Gattorna (2009), p.55

FIGURE 9.3  ◆ Requisite technology for agile supply chains
## MARKET SEGMENT

### INTERNAL CULTURAL CAPABILITY

1. Orgnl design
2. People positioning
3. Processes
4. IT/systems
5. S & OP
6. KPIs
7. Incentives
8. Job design
9. Internal comms
10. Training & dev
11. Role modelling
12. Recruitment

### LEADERSHIP

13. LEADERSHIP STYLES

### “INNOVATIVE SOLUTIONS”

### VALUE PROPOSITION

### STRATEGIES

- Meet unplanned/unplannable demand
- Innovative solutions, delivered fast

### ENTREPRENEURIAL

- Small multi-disciplinary cluster, usually on standby, but can be full-time
- Ensure bias towards personnel with P in their MBTI profile [CHECK – MBTI?]
- No standard processes; use local initiative at the time
- Low systems requirements; event management applications
- Focus on aggregate capacity planning in the short-term
- Emphasis on finding creative solutions, very fast
- Reward individualism and risk-taking behaviour
- Autonomy through empowerment
- Spontaneous and informal
- Lateral thinking: brainstorming
- Managers with ENFP (MBTI profile) and D (P-A-D-I logic) are ideal
- Recruit enterprising, resourceful personnel

### VISIONARY

- Leads by inspiration; is authentic
- Informal
- Decisive
- Cares about ideas
- Values innovation

## CREATIVE SOLUTIONS REQUIRED, VERY FAST

---

**FIGURE 10.5**  
*Fully flexible supply chains - demand-side*
Organisation design for ‘Innovative Solutions’ customers

Note 1: This “innovation” cluster may be composed of part-time members who only convene in an emergency
Note 2: Individual team members return to their respective functions for training and other specialist matters

Source: Adapted from Figure 9.5 in Gattorna (2009), p.141

Figure 6.7 Fully flexible supply chain cluster
Arranging technology to serve ‘Innovative solutions’ customers

Customer buyer behavior segments

“Collaborative”

“Efficiency”

“Demanding/unpredictable”

“Innovative solutions”

Different combinations of IT applications

Continuous replenishment supply chain

Lean supply chain

Agile supply chain

Fully flexible supply chain

ERP transaction system and data base (or can be SAP or legacy systems)

• J.D.Edwards
• Peoplesoft (HR)
• e-Business suite (EBS)

Source: Adapted from Figure 1.5 in Gattorna (2009), p.55
The corresponding 4 supply chain configurations equates to multiple supply chain ‘alignment’-leadership style

Finding the *linkages* is key to SC design

*Leadership styles*  
*Cultural capability*  
*Strategy*  
*Buying Behaviours*

**FIGURE 2.2** Multiple supply chain alignment on the customer side

Source: Adapted from Figure 4.3.2 in Gattorna (2003), p. 459; see also Gattorna (2006) Figure 2.1, p. 40
The four (4) main leadership styles

**Coach**
- **Continue to:**
  - Lead by teaching
  - Make decisions by consensus
  - Get the best from people
- **Thinking**
- **Watch out for:**
  - Slow response to sudden environmental change
  - Market-related performance

**Visionary**
- **Continue to:**
  - Lead by inspiration
  - Respond to turbulence
  - Use information to create change
- **Watch out for:**
  - Tangential interests
  - Short on the detail
  - People policies
  - Inefficient response to opportunities

**Traditionalist**
- **Continue to:**
  - Lead by procedure
  - Use information to maintain control
  - Implement proven business tactics
- **Doing**
- **Watch out for:**
  - Inability to respond to environmental change
  - Efficiency at the expense of effectiveness

**Company Baron**
- **Continue to:**
  - Lead by objectives
  - Focus on what’s important
  - Plan for future profitability
- **Watch out for:**
  - Paralysis by analysis
  - Political in-fighting
  - Effectiveness before efficiency

**Source** Adapted from Figure 4.2 in Gattorna (2006), p. 99

FIGURE 5.2 ◆ Leadership styles
Translating from MBTI to PADI metrics

Source Adapted from Figure 29.6 in Gattorna (1998), p. 480

FIGURE 5.1 ◆ MBTI® overlay on P-A-D-I framework
Supply-side and demand-side alignments are the mirror image of each other

Supplier behaviors
- Trusted and reliable partners
- Planned creativity
- Process driven
- Opportunistic

Procurement strategies
- Continuous replenishment
- Lean
- Agile
- Fully flexible

Leadership styles
- Coach
- Traditional
- Company baron
- Visionary

Cultural capabilities
- Group
- Hierarchical
- Rational
- Entrepreneurial

Demand-side strategies
- Continuous replenishment
- Lean
- Agile
- Fully flexible

Buyer behaviors
- Collaborative
- Efficiency/consistency
- Demanding/quick response
- Innovative solutions

Source: Adapted from Figure 3.5.2 in Gattorna (2003), p.346
Conventional segmentation on the supply-side

<table>
<thead>
<tr>
<th>COMMODITY</th>
<th>STRATEGIC</th>
</tr>
</thead>
<tbody>
<tr>
<td>High Spend</td>
<td>High Spend</td>
</tr>
<tr>
<td>Low Switching Costs</td>
<td>High Switching Costs</td>
</tr>
<tr>
<td>Multiple Sources of Supply</td>
<td>Few Sources of Supply</td>
</tr>
<tr>
<td>Short-Lead Times</td>
<td>Typically Long Lead-Times</td>
</tr>
<tr>
<td>Low Complexity / Items on Shelf</td>
<td>Critical Performance Characteristics</td>
</tr>
<tr>
<td>Low Item Costs</td>
<td>High Item Costs</td>
</tr>
<tr>
<td>High Volume</td>
<td>Variable Volumes</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>STANDARDS</td>
<td>KEY</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Low Spend</td>
<td>Low/Medium Spend</td>
</tr>
<tr>
<td>Low Switching Costs</td>
<td>High Switching Costs</td>
</tr>
<tr>
<td>Multiple Sources of Supply</td>
<td>Few Sources of Supply</td>
</tr>
<tr>
<td>Short Lead-Times</td>
<td>Typically Long-Lead times</td>
</tr>
<tr>
<td>Standard, on Shelf Items</td>
<td>Critical Performance Characteristics</td>
</tr>
<tr>
<td>Low Item Costs</td>
<td>High Item Costs</td>
</tr>
<tr>
<td>Volumes Vary</td>
<td>Variable Volumes</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE 12.1** Supplier segmentation based on a combination of product and supplier characteristics

*Source: Adapted from Diane Bueler (May 2006)*
Typical expectations/ selling behaviours of suppliers

<table>
<thead>
<tr>
<th>Trusted &amp; Reliable Partners</th>
<th>Process Driven</th>
<th>Planned Creativity</th>
<th>Opportunistic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close working relationships for mutual gain</td>
<td>Consistent low cost response to largely predictable demands</td>
<td>Capability to provide rapid response in irregular demand situations</td>
<td>Capability to create innovative solutions, very fast</td>
</tr>
</tbody>
</table>

- Like predictability
- Prefer regular orders
- Prefer producing nature products
- Like to be treated as an exclusive source
- Seek trusting long-term relationship
- Enjoy partnership/teamwork
- Prepared to share information
- Engage in joint development
- Expect fair margin

- Prefer tight contracts
- Regular order/delivery schedule
- Offer lowest cost-to-serve
- Don't wish to share information
- Can be adversarial at times
- Adopt standard processes
- Impose power where possible
- Very transactional mindset
- Sensitive to low price demands

- Have capacity to meet volatile demand
- Prefer not to enter close relationships
- Can respond to urgent demands
- Use as few processes as possible
- Outcome oriented
- Very commercial
- Require price premium

- Have the capacity to cope with unexpected situations
- Can provide creative solutions as required
- Innovation mindset embedded
- Very solutions oriented
- Prefer to charge a significant premium

**FIGURE 12.3** Supply-side behavioral segmentation characteristics
Example of supplier/producer segments in the Brazilian cattle market

<table>
<thead>
<tr>
<th>TALKATIVE</th>
<th>TRADITIONALIST</th>
<th>SUSPICIOUS</th>
<th>e-RANCHERS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Partnership, intense relationship, and friendship</td>
<td>Interested in yield, and price is a pre-requisite to negotiate</td>
<td>Opportunistic. Sell to who pays the best</td>
<td>Interested in technology mixed with personal contact</td>
</tr>
<tr>
<td>• Partnerships</td>
<td>• Focus on yield</td>
<td>• Capable of fast response</td>
<td>• Interested in any new technologies</td>
</tr>
<tr>
<td>• Long term contracts</td>
<td>• Require assistance in reducing costs</td>
<td>• Will seek out best opportunity at a point in time</td>
<td>• Electronic communications</td>
</tr>
<tr>
<td>• Special treatment</td>
<td>• Require assistance to increase yield from animals</td>
<td>• Only interested if a premium price</td>
<td>• Computer savvy</td>
</tr>
<tr>
<td>• Transparency</td>
<td></td>
<td></td>
<td>• Seek market information</td>
</tr>
<tr>
<td>• Closeness</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>• Reliable</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**FIGURE 12.6** Cattle supplier (ranchers) segmentation in Brazil

*Source: Adapted from information supplied by Axia Consulting, Brazil (2008)*
The 16 possible ‘hybrid’ supply chains in a 4 x 4 segmentation regime

* See text for descriptions of each combination

FIGURE 13.2 ♦ The 16 possible combinations of hybrid supply chains – including the four main generic types
Multiple combinations of supply-side and demand-side elements of enterprise supply chains

**FIGURE 13.1** ◆ Different combinations of hybrid supply chains

- **Supplier “selling” logics**
  - Opportunistic
  - Planned Creative
  - Process Driven
  - Trusted & Reliable Partners

- **Supply-side**
  - Procurement strategy
  - Fully Flexible
  - Agile
  - Lean
  - Continuous Replenishment

- **Organizational “clusters”**
- **Demand-side**
  - Sales/Distributions strategy
  - Fully Flexible
  - Agile
  - Lean
  - Continuous Replenishment

- **Solutions to Innovative**
  - Innovative
  - Demanding
  - Efficiency
  - Collaborative

**Key:**
- P = Procurement
- MF = Manufacturing
- L = Logistics
- S = Sales
- MK = Marketing
- F = Finance
- HR = Human Resources
- I = IT

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**email:** john@johngattorna.com
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