The AFIT of Today is the Air Force of Tomorrow.
SCM Processes

Information Flow

Tier 2 Supplier
Tier 1 Supplier
Manufacturer
Customer
Consumer/End user

PRODUCT FLOW

Purchasing
Logistics
Marketing
Production
R&D
Finance

CUSTOMER RELATIONSHIP MANAGEMENT
SUPPLIER RELATIONSHIP MANAGEMENT
CUSTOMER SERVICE MANAGEMENT
DEMAND MANAGEMENT
ORDER FULFILLMENT
MANUFACTURING FLOW MANAGEMENT
PRODUCT DEVELOPMENT AND COMMERCIALIZATION
RETURNS MANAGEMENT

Supply Chain Management Processes

Why Is It Important?

• Strong influence on customer perceptions of service quality

• It can have a significant impact on the bottom-line through:
  • Increased sales
  • Reduced inventories
  • Reduced logistics costs
  • Reduced order-to-cash cycle
Order Fulfillment

Strategic Sub-Processes
- Review Marketing Strategy, Supply Chain Structure & Customer Service Goals
- Define Requirements for Order Fulfillment
- Evaluate Logistics Network
- Define Plan for Order Fulfillment
- Develop Framework of Metrics

Operational Sub-processes
- Communicate and Generate Order
- Enter Order
- Process Order
- Handle Documentation
- Fill Order
- Deliver Order
- Perform Post Delivery & Measure Performance

Processes Interfaces
- Customer Relationship Management
- Supplier Relationship Management
- Customer Service Management
- Demand Management
- Manufacturing Flow Management
- Product Development & Commercialization
- Returns Management

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Strategic Sub-Process

Process Interfaces

- Customer Relationship Management
- Supplier Relationship Management
- Customer Service Management
- Demand Management
- Manufacturing Flow Management
- Product Development & Commercialization
- Returns Management

Strategic Sub-Processes

- Review Marketing Strategy, Supply Chain Structure & Customer Service Goals
- Define Requirements for Order Fulfillment
- Evaluate Logistics Network
- Define Plan for Order Fulfillment
- Develop Framework of Metrics

Activities

- Review firm’s strategies
- Understand customer requirements
- Determine capabilities of the supply chain
- Determine the order fulfillment budget
- Review order-to-cash cycle and supply capabilities
- Define lead-time and customer service requirements for each customer segment
- Define operational requirements
- Evaluate core competencies
- Determine if current network can support the requirements within the financial constraints.
- Determine
  - which plants produce which products
  - warehouse, plant and supplier locations
  - transportation modes
- Determine how to fill the orders of the various customer segments.
- Make decisions about payment terms, order sizes, and packing requirements.
- Determine allocation rules.
- Determine how operational steps will be executed.
- Assess the role of technology.
- Link order fulfillment performance to EVA
- Determine appropriate metrics and set goals

Strategic Sub-Process #1

Review Marketing Strategy, Supply Chain Structure and Customer Service Goals

• Review firm’s strategies
• Understand customer requirements
• Determine capabilities of the supply chain
• Determine the order fulfillment budget

Strategic Sub-Process #2

Define Requirements for Order Fulfillment

• Review order-to-cash cycle and supply capabilities

• Define lead-time and customer service requirements for each customer segment

• Define operational requirements

• Evaluate core competencies
Strategic Sub-Process #3

Evaluate Logistics Network

• Determine if current network can support the requirements within the financial constraints.

• Determine
  • Which plants produce which products
  • Warehouse, plant and supplier locations
  • Transportation modes

• Sometimes this will require using network design software to help determine a suitable network that balances cost with service.
Strategic Sub-Process #4

Define Plan for Order Fulfillment

- Determine how to fill the orders of the various customer segments.
- Make decisions about payment terms, order sizes, and packing requirements.
- Determine allocation rules.
- Determine how operational steps will be executed.
- Assess the role of technology.
## Sample Segmentation with Service Options

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<table>
<thead>
<tr>
<th>Order Fulfillment</th>
<th>Platinum</th>
<th>Gold</th>
<th>Silver</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Mixed pallets</td>
<td>Yes</td>
<td>For fee</td>
<td>No</td>
</tr>
<tr>
<td>- Mixed loads</td>
<td>Yes</td>
<td>Full pallets only</td>
<td>Full pallets only</td>
</tr>
<tr>
<td>- Order acquisition</td>
<td>EDI</td>
<td>Fax</td>
<td>Fax</td>
</tr>
<tr>
<td>- Lead time</td>
<td>3 days</td>
<td>5 days</td>
<td>7 days</td>
</tr>
<tr>
<td>- Transmit ASN</td>
<td>Yes</td>
<td>Negotiable</td>
<td>No</td>
</tr>
<tr>
<td>- Minimum order size</td>
<td>None</td>
<td>10 pallets</td>
<td>FTL</td>
</tr>
</tbody>
</table>

### Customer Service

| - Order changes | Unlimited number | With approval | No |
| - Resources / excalation | Dedicated team | Key contacts | Standard process |

### Performance metrics

| - On-time delivery | 98% | 96% | 94% |
| - Order fill rate  | 95% | 95% | 95% |
| - Performance reporting | Monthly | Semi-annual | None |
Strategic Sub-Process #5

Develop Framework of Metrics

• Understand the effects of order fulfillment on EVA

• Determine appropriate performance metrics

• Determine how metrics will be tracked and communicated
Order Fulfillment Affects EVA®

Obtain repeat business
Increase share of market and/or customer
Retain and strengthen relationships with profitable customers

Impact component cost through efficient network design
Increase orders shipped complete
Reduce damage and tracing
Reduce services provided to less profitable customers
Reduce handling costs
Reduce general overhead/ mgmt. / admin. costs
Reduce outbound freight
Optimize physical network/facilities
Leverage new and/or alternative dist. channels
Reduce errors, claims and customer returns
Reduce order cycle time
Reduce HR costs/improve effectiveness

Reduce finished goods inventory
Reduce obsolete inventory

Reduce accounts receivable through faster payment
Improve asset utilization and rationalization

Typical Order Fulfillment Metrics

• Order-to-cash cycle
• Number of touches
• On-time delivery
• Order fill rate
• Order completeness
• Perfect orders
Operational Sub-Process

Process Interfaces

- Customer Relationship Management
- Supplier Relationship Management
- Customer Service Management
- Demand Management
- Manufacturing Flow Management
- Product Development & Commercialization
- Returns Management

Operational Sub-Processes

1. Communicate and Generate Order
2. Enter Order
3. Process Order
4. Handle Documentation
5. Fill Order
6. Deliver Order
7. Perform Post Delivery & Measure Performance

Activities

- Generate order
- Transmit order
- Receive order
- Enter order
- Edit order
- Check credit
- Check inventory
- Plan order flow and transportation
- Acknowledge order
- Prepare bill of lading, picking instructions and packing slips
- Generate invoice
- Pick merchandise
- Pack merchandise
- Stage for loading
- Prepare load confirmation
- Prepare shipping documents
- Transmit delivery confirmation
- Audit and pay freight bill
- Receive and post payment
- Record bad debt expense
- Measure process performance

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Role of Technology

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- Technology can help throughout the operational process.
  1. Streamlining the process
     - Takes days out of the order-to-cash cycle, improving cash flow
     - Improves customer service
     - Allows for inventory reductions
  2. Allows companies in the supply chain to integrate effectively
     - Reduces labor requirements
     - Improves customer service
     - Reduces error rates

- The value from the technology has to be measured against the cost.

- The people and the processes are ALWAYS critical.
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Types of Technology

- ATP (available to promise)
- TMS (transportation management system)
- WMS (warehouse management system)
- ERP / APS (enterprise resource planning, advanced planning and scheduling)
- EDI (electronic data interchange)
- RFID
- Internet

Air University: The Intellectual and Leadership Center of the Air Force

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Operational Sub-Process #1

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Generate and Communicate Order

- Generate order
- Transmit order
Operational Sub-Process #2

Enter Order

- Receive Order
- Enter order
- Edit order
Operational Sub-Process #3

Process Order

- Check credit
- Check inventory
- Plan order flow and transportation
Operational Sub-Process #4

Handle Documentation

- Acknowledge order
- Prepare
  - Bill of lading
  - Picking instructions
  - Packing slips
- Generate invoice
Operational Sub-Process #5

Fill Order

- Pick merchandise
- Pack merchandise
- Stage for loading
- Prepare load confirmation

Operational Sub-Process #6

Deliver Order

- Prepare shipping documents
- Transmit delivery confirmation
- Audit and pay freight bill

Operational Sub-Process #7

Perform Post Delivery Activity & Measure Performance

• Receive and post payment.

• Record bad debt expense.

• Calculate process metrics.

• Link metrics to EVA.
Conclusions

The AFIT of Today is the Air Force of Tomorrow.

• Order fulfillment is about designing a process and a network that permits a firm to meet customer requests while minimizing the delivered cost.

• While the operational process is carried out primarily by the logistics function, it is critical that other key functions are involved in the strategic process.

• It is critical for a firm to determine the role of technology that is appropriate.

• It can have significant impacts on the profitability of the firm and its customers and suppliers.