SUPPLY CHAIN ASSESSMENT – APPLICATION GUIDE

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Objective

The SCM Assessment and Evaluation program is designed for manufacturing industry with single or multiple facilities in mind.

The program helps assess the SCM capability of each location, then evaluates “as is” against the desire “to be” while comparing with “best of class” practices.

The evaluation is based on the degree of SCM capability that exist in each facility and is also considered along with their expected SCM requirements.
The result of the evaluation is the gap and agreed upon roadmap to improve SCM operations. Results are shared and presented.

Deployment of the roadmap would be the next step to consider. Deployment includes re-engineered process mapping and flow.
Executive View - 1

• Methodology
  ✓ Define SCM categories and processes
  ✓ Develop the assessment program for individual sites
  ✓ Establish best practices and reference platform
  ✓ Conduct “as is” vs. “to be” and gap analysis
  ✓ Establish the roadmap to close the gap
Executive View - 2

• Scope

✓ This program applies to any corporate with single/multiple sites

✓ The processes are evaluated for own “internal” SCM practices

✓ Some engineering, development, sourcing and life-cycle activities may be managed at corporate level. They are left out of scope at this time

✓ Assessed ratings with roadmap is the deliverable

✓ Summary is presented to top management
Executive View – 3

• Assessment Process at “Site”
  - Develop, test, fine tune to conduct the assessment
  - Kick-off meeting with management
  - Evaluate the site and perform “as is” analysis
  - Generate color coded gap analysis against current capability
  - Establish a road map of SCM improvement processes with management input
  - Present the findings to site management
SCM Alignment!

Strategic
Tactical
Operational

Strategic
Tactical
Operational
SCM Alignment Requirements

Business Processes: Shift from “As Is” to “To be”

Programs and Tools: Competitive necessity

People: Competitive advantage, appreciates over time
Emerging Challenges – Why?

Business functions are effected by:

- Business Processes
- Technology Programs and Tools
- Organization of People and Skills

Companies need to view processes, technology, program know how and human capital as assets.
Process Challenges – HOW?

SCM processes are evaluated by:

- Current business process and known issues around this practice
- Performance of the practice
- Best practices of the process
- Gap between current and best practice
- Roadmap from current “as-is” to the best “to be”
End goals of INTEGREATION:

- World Class Business processes alignment
- A learning culture with continuous improvement
- Application of appropriate technology, programs and tools
- Maximized benefits of company moving as a whole unit
Closing the gaps has its advantage……

• SCM process alignment across the corporate
• Building consistency and synergy
• Establishing a reference platform, best practices
• Each site:
  ✓ Identify the needs, weaknesses, strengths, risks and exposure
  ✓ Analyze the gap and gap closing requirements
  ✓ Establish an achievable road map with each site
  ✓ Facilitate resources needed to achieve desired improvement - Deployment
Typical Enterprise Model

Corporate

Supplier 1

Distribution Centre

Consumer

Customer

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SCM Assessment Objects

- Use of People & Skills
- Use of Business Processes
- Use of Programs & Tools
SUPPLY-CHAIN OPERATIONS REFERENCE (SCOR) MODEL
SCM Processes - Plan

- Customer orders, forecast management
- SOP, MPS, MRP, inventory management
- Capacity planning, demand planning
- Transportation & Logistics planning
- SCM metrics, performance, staffing
- Tools
SCM Processes - Source

- Supplier setup, supplier scheduling
- Supplier delivery, EDI capability
- Sourcing, MTS, JIT, ETO, etc.
- Acquisition, local procurement
- NCM and RMA process
- Receiving, inspection, warehousing
- Supplier delivery performance, quality
- Tools
SCM Processes - Make

- Item Master, BOM, work centers, routings
- Shop orders, line scheduling, capacity calc.
- Material pull and manufacturing processes
- QA, MRB and ECO management
- WIP management
- Volume change flexibility
- Production performance
- Tools
SCM Processes - Deliver

- Packaging, Delivery, Invoicing
- Carriers
- Warehouses & Distribution
- Returns management
- Order fulfillment performance
- Tools
SCM Processes - Product Design and Development

- Research & Development
- New Product Introduction (NPI)
- Engineering and Product Data Management
- Customer and Supplier Interface
- SCM metrics, performance, staffing
- Tools used

This area is not considered for the current SCM Assessment and Evaluation at this point.
SCM Processes - Product End of Life Management

- Product phase out
- Product warranty and service
- Regulatory product obligations
- Shelf life, excess, obsolete management
- SCM metrics, performance, staffing
- Tools

This area is not considered for the SCM Assessment and Evaluation at this point
Evaluation & Grading

Individual Assessment Point and Colour System:

- Red (R): 1. No process exists for this item and one is required, or existing one is unacceptable, colour red

- Yellow (Y): 0. Process does not apply, colour white

- Blue (B): 1. Some process exists, not in correct/complete use, colour yellow

- Green (G): 2. Correct process is in place, needs improvement, colour blue

- Green (G): 3. Process is working well, performance is tracked, colour green
Evaluation Summary

Process Summary Grading:
Red → Less than 20% of possible points
Yellow → Less than 60% of possible points
Blue → Less than 80% of possible points
Green → More than 80% of possible points
## Assessment: Each Process has many questions to be evaluated

### Process = MPS, Individual Questions

<table>
<thead>
<tr>
<th>No</th>
<th>Question</th>
<th>Current Overall Status</th>
<th>Gap Analysis Summary</th>
<th>Actions Defined</th>
<th>Points Code</th>
<th>Points Possible</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Is the MPS part of (or driven by) the Sales and Operations Plan?</td>
<td>They have a yearly S&amp;OP which is driven by customer forecast and corporate goals. This is broken down monthly but not tracked against the MPS. MPS is loaded by current customer forecast and orders.</td>
<td>A closer synchronization of MPS and S&amp;OP should be established. At the least, a monthly comparison and evaluation of differences will yield how corporate goals are tracking at operational level. A closer match between two levels of planning should be esta</td>
<td>Financial community, SCM and operations are meeting to coordinate data integrity in March 03. Then an action plan will be developed.</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>2</td>
<td>Are there time fences and similar parameters established to run MPS? Are there sufficient evidence that they are enforced?</td>
<td>MPS time fences (2wks for DTF and 4 wks for PTF) are in system and applied correctly. There are strict procedures that any deviation within DTF requires GM approval. Some changes get charged back to customer with</td>
<td>Process seems to be working fine, it may need to be tracked over time to see the affect of premium charges.</td>
<td>To be reviewed again with company after other processes in place.</td>
<td>3</td>
<td>3</td>
</tr>
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<td>3</td>
<td>Is the MPS loading done regularly, e.g., weekly basis?</td>
<td>MPS is established on a monthly basis and loaded in the system accordingly. Loading is performed monthly and operations performed on daily basis using current production and shipment requirements. There are no regularity in terms of loading and reviewing.</td>
<td>MPS loading monthly or weekly is not a major issue. The real problem is that there is no regular review of the MPS load vs. actual vs. customer requirements vs. shipments. A critical resource and capacity (bottlenecks) are not checked except for intuitive</td>
<td>To be reviewed with company. A one day seminar on SOP and MPS needed to get the message across.</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>4</td>
<td>Are major critical capacity and major material constraints considered in the MPS process?</td>
<td>Almost all orders are accepted without any consideration for capacity or resource availability. Restricting orders is consider an impediment against growth.</td>
<td>There must be at least gross requirement level checks at critical resources such as bottleneck operations, e.g., paintline. Customer promised days can be back scheduled according to the available capacity. There are some simple solutions or checks that ca</td>
<td>This is a major issue to be addressed at top management level. AB will present some solutions during management meeting.</td>
<td>-1</td>
<td>3</td>
</tr>
</tbody>
</table>

### Section Total Points

| Section Total Points | 4 | 12 |

### Section Summary Result

Total Score/Total Possible is green=85% or above, blue=60-84%, yellow=30-59%, red=below 30%

| Section Summary Result | 33.3% |
### Assessment: Sample question

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<td>Are there time fences and similar parameters established to run MPS? Are there sufficient evidence that they are enforced?</td>
<td>MPS time fences (2wks for DTF and 4 wks for PTF) are in system and applied correctly. There are strict procedures that any deviation within DTF requires GM approval. Some changes get charged back to customer with premium pricing.</td>
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## Assessment Summary: Value is provided by the experienced assessor

|   | Revenue Budget/Target Planning | Based on corporate business plan and budget commitments, the SCM community participates in establishing and achieving revenue targets. There is an integration process in place to synchronize the financial performance plans to operational plans. This sync | Revenue targets are established in connection with corporate targets each year. Site GM is committed to perform according to these targets. There is an initial process at the beginning of each fiscal year. When the financial targets are moved, inventory | There is an initial process where targets are established. An integration does not exist on an ongoing basis. Process is disconnected. A monthly S&OP is needed to synchronize plans with actual. Budget/Target replanning will be made quarterly and tracked | A monthly Sales and Operation Planning will be established to bring financial and operational targets together. This will be instituted in Q3. A training program will be conducted for management team. |
|---|---|---|---|---|
| 1 | Sales and Operations Planning | This is a monthly plan that brings business plan into the sales and operation field. In this plan, overall family of products, or groups, sales are estimated both in $ and Qty (wherever possible) and its relative production and inventory levels are estab | Not conducted. | A monthly reviewed S&OP is needed to bring sales and operational teams together. Result of the plan will establish the cash flow and budget all synchronized. S&OP will establish the general sales and operations level which then must be | A monthly Sales and Operation Planning will be established to bring financial and operational targets together. This will be instituted in Q3. A training program will be conducted for management team. |
| 2 | Resource/Capacity Planning | Customer demand changes is reviewed for capacity and other resource constraints. A decision process is in place to accept or reject demand. In case the change is accepted, the impact of this demand on inventory and capacity | Once a year SOP and MPS runs are established. Targets are set, planning is performed. Progressive planning and checking is performed irregularly. | Although capacity and resource checking is done from time to time, it is should be synchronized with SOP and MPS. | This item will be revisited once MPS is performed regularly and is in sync with SOP. |
| 3 | MPS | IMPS loading done regularly e.g., on a weekly basis. It breaks S&OP into executable production schedule. Customer and forecast commitments are managed along with actual production constraints. There are time fences and other parameters defined to increas | MPS is conducted once a month and executed in weekly fashion. It does break down SOP once at the beginning then disengaged. Customer orders are taken and scheduled into production without going through MPS. Order promising is made based on standard LT with no regards to capacity. | MPS and SOP synchronization must be accomplished. A weekly loading of MPS is necessary. The MPS should be checked against critical operations and LTs will be generated accordingly for deliveries. | A new procedure will be developed to process orders and forecast on a weekly basis using MPS. Master Scheduler and planners are to be trained. Master scheduler will establish time fences. |
| 4 |   |   |   |   |   |

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# Assessment Summary: MPS

| MPS | MPS loading done regularly e.g., on a weekly basis. It breaks S&OP into executable production schedule. Customer and forecast commitments are managed along with actual production constraints. There are time fences and other parameters defined to increase MPS loading. MPS is conducted once a month and executed in weekly fashion. It does break down SOP once at the beginning then disengaged. Customer orders are taken and scheduled into production without going through MPS. Order promising is made based on standard LT with no regards to capacity. | MPS and SOP synchronization must be accomplished. A weekly loading of MPS is necessary. The MPS should be checked against critical operations and LTs will be generated accordingly for deliveries. | A new procedure will be developed to process orders and forecast on a weekly basis using MPS. Master Scheduler and planners are to be trained. Master scheduler will establish time fences. | 4 | 5 |

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Process Evaluation Level

**Example – Sourcing: Receiving process:**
John Smith, receives material at a warehouse, checks PO, verifies quality, quantity, stores material, enters data into ERP software called ABC.

S0.1: Corporate level, inventory strategies, supplier contracts
S1.3: Division level, material acquisition steps and guidelines, supplier certification…

**S2.2: Site sourcing, purchasing and receiving process, steps to perform, supplier tracking, performance and quality, payment authorization …**

S3.12: Operational level, task execution steps: data entry, software application screen to use, count, move, etc.

**Process Levels:**

0: Corporate process, top level, strategic steps
1: Division or Site level, scope and content, tactical, major elements
2. Process element level, measurements, logic, flow, tools, roles
3. Operational activity level, execution, input, output, data gathering
Milestones

Phase 1

- Process Development & Kick-off
  - 2 weeks

Phase 2

- Assessment & Gap Analysis
  - 3 - 4 weeks

- Comprehensive Roadmap Plan for Gaps
  - 1 – 3 months

Phase 3

- SCM Process Deployment & Alignment
  - 3 months – 2 years

- Continuous Progress & Performance
  - 2+ years
Summary

Lessons learned:

• This is not a pass or fail grading nor a rally between sites, rather an improvement opportunity
• Self assessment did not yield desired results
• Cross-breeding of best practices provides excellent value
• Process flow diagrams with successive level of details are helpful but not always accurate
• Some processes require strict procedures attached to it
• Some process are very straightforward but still applied incorrectly
• Some very unique processes exist in each organization or site
• Experienced professional (consultant) provide great value for assessment and roadmap
• Deployment requires resources but benefits may be dramatic.