## 1.0 Leadership & Culture

1.1.1 Strategic Planning Process – How do your senior leaders accomplish strategic planning? What are the key process steps and who are the participants? How do you ensure that the process addresses strengths, weaknesses, opportunities, and threats; major shifts in technology, markets, and competition? What are your key strategic goals, measureable targets, and timetables? How are goals and metrics deployed throughout the organization?

1.1.2 Leadership Communication Process – How do senior leaders communicate and reinforce company direction and expectations (vision, goals, mission, and values) to all employees, customers, and key suppliers/partners? What are the key process steps and who are the participants? How do senior leaders encourage frank, two-way communication throughout the organization? How do senior leaders create and re-enforce a high-performance work culture that embraces standard work, process maturity, and lean production techniques? How do senior leaders involve themselves in reward and recognition that re-enforces a high-performance work culture?

1.1.3 Organizational Performance Review Process - How do senior leaders review organizational performance to assess organizational success, competitive performance, and progress relative to strategic goals and action plans? How do senior leaders select, organize, and assess key performance metrics and measureable goals? How do senior leaders translate organizational performance review findings into priorities for continuous improvement?

1.1.4 Continuous Improvement Management Process – How does your organization select improvement priorities and review progress on improvement initiatives? How are process owners, master trainers, and strategic champions included in this process? How are improvement projects and teams selected and given direction? How is a standard problem-solving model deployed throughout the organization? How are recognition and sharing of key learning accomplished? How are process improvement ideas solicited, reviewed, approved, and implemented? How is a high level of workforce participation ensured? How are improvement suggestions recognized? How are suggestions made visible in work areas?

1.1.5 Workforce Development Process – How do senior leaders evaluate the need for workforce development and select topics for each level and function? How does the selection of training topics integrate with strategic goals and process improvement needs? How is the workforce-training plan prepared and monitored? How does your organization ensure continuous learning from improvement projects, customers, and suppliers? How does your organization integrate benchmarking into the learning process? How does your organization integrate such learning into on-going employee education, training, and development?

1.2.1 Supply Chain Integration Process – How do senior leaders select supply chain improvement projects? How does your organization integrate its customers and suppliers into its improvement strategies? How do you qualify suppliers in quality, delivery and ability to respond to pull signals? How do you integrate suppliers into your lean strategies such as in supplier-managed inventory, min-max, consumption-based ordering, pull signals? How does your organization make use of teaming agreements to drive alliances that improvement supply chain performance?

1.3.1 New Product Startup Process – How does your organization contribute to the immediate success of customer startup operations including first article and early production efforts? How are processes like Advanced Product Quality Planning "APQP" and Production Preparation Process "3P" used to pro-actively ensure value for customers? How are customers needs for reduced lead time and high levels of initial quality considered in the startup process?

## 2.0 Workforce Development

2.1.1 Job Skills & Cross-Training Certification Process - How is job skills training and certification accomplished? How does your organization ensure that processes selected are linked to key priorities for improvement? How is cross-training accomplished? How is the team of master trainers maintained and expanded? How is the training and cross-training program reviewed?

2.2.1 Work Area Continuous Improvement Process – How is continuous improvement supported in all work areas? How are improvement projects linked to work area goals? How does the work area integrate continuous improvement into their daily operations? How are problem-solving and corrective action methods standardized in all workgroup processes? How are work areas and cells reviewed by senior management? How are statistical methods integrated into the standard work for appropriate managed processes? How are process control plans developed and implemented? How are statistical methods reviewed and their application improved?

## 3.0 Operational Excellence

3.1.1 Kaizen Process – How does your organization set and review priorities for Kaizen events? How are Kaizen events conducted? How is recognition for team members provided and are senior managers and the workforce involved? How are lessons learned shared with others who can benefit? How are process improvements documented and deployed to others using the same or similar processes? How are internal Kaizen leaders developed and deployed? How are goals set for Kaizen leadership and how is progress monitored?

3.1.2 6S Visual Workplace Process – How does your organization ensure effective deployment of 6S Visual Workplace strategies for workplace organization? How are the 6S status, process flow, production status, employee training status, and continuous improvement effort clearly displayed and visible in the office and factory floor? How does your organization ensure that work areas are kept consistently free of dirt and clutter? How are improvements reviewed and recognized?

3.1.3 Quick Changeover/SMED Process – How does your organization continually reduce changeover and setup times? How are changeover and setup times tracked and displayed on the factory floor? Have machine operators been formally trained in SMED methods? How is progress reviewed and recognized? What metrics are monitored?

3.2.1 Material Management Process – How does your organization ensure the effectiveness of material management processes in support of its lean and flow manufacturing objectives? How does your organization maintain a high level of inventory accuracy? How do you maintain a high level of 6S in material storage areas? How are levels of obsolete, slow-moving and expedited material maintained at a minimum? How are material handlers, material planners and supervisors formally trained in material management methods? How does your organization integrate the requirements of a flow-based material process? How are "pull" methods such as material Kanbans, consumption-based ordering and min-max utilized? How are Kanban supermarkets integrated into factory floor operations?

3.2.2 Production Planning Process – How does your organization ensure the effectiveness of production planning processes in support of its lean and flow manufacturing objectives? How often are production requirements updated and communicated to the factory floor? How are production schedules communicated to different work centers? How are pull methods such as FIFO lanes and supermarkets used to replace the need for detailed production schedules? How are production planners trained in production planning methods? How does your organization integrate mixed model cell/line design into its operations throughout the enterprise? How are production and industrial engineers, production managers and supervisors, and material management personnel trained in the lean mixed model line design methods? How are major processes linked and balanced into a continuous flow? How are pull methods such as In Process Kanbans, FIFO lanes and Kanban supermarkets integrated into the production flow? How are operators cross-trained for multiple workstations?

3.2.3 Development Process – How does your organization design and develop new products or services? How are advanced techniques such as Six Sigma, Design of Experiments, Design to Cost, Design for Manufacturability integrated into your operations? How are customers and suppliers integrated into your development process? How is the development process reviewed and improved?

## 4.0 Business Results

4.1.1 Inventory Turns - What is your organization's monthly history in inventory turns?

4.1.2 Sales/Employee - What is your organization's monthly history in sales per employee?

4.1.3 On-Time Delivery - What is your organization's monthly history in on-time delivery?

4.1.4 Parts per Million – What is the organization's monthly history in parts per million defects?

4.3.1 Process Maturity 3 and above – What is the organization's quarterly history in processes achieving Level 3 process maturity or above?

4.3.2 Quick Ratio - What is the organization's monthly history for quick ratio?

#### **Evaluation Criteria for Processes**

Each process in the Roadmap will be evaluated as to its maturity and responsiveness to criteria requirements using the following questions. The number at the beginning of each question corresponds to the maturity level. To pass Certification, all processes must be at Process Maturity Level 3.

- 0 = The process does not meet any of these requirements
- 1 = The process addresses most requirements and has a process owner and value stream map
- 2 = The process is documented to the work instruction level for all major steps in the value stream map
- 3 = The process is standardized and a certified trainer has trained and certified each appropriate person
- 4 = The process is under control and is measured and analyzed using data
- 5 = The process shows positive trends of improvement over time and compares favorably with world class benchmarks

#### **Evaluation Criteria for Business Results**

Each Business Result in the Roadmap will be evaluated on its improvement level using the following scale. The most recent 15 months of data for each result must be reported. Twelve months will be evaluated against the average in the baseline (oldest 3 months.) To pass Certification, all Business Results must be at or above 3.

- 0 = No results reported
- 1 = No results in last 12 months better than baseline (prior quarter average)
- 2 = Some results (<49%) in last 12 months better than baseline
- 3 = Most results (> 50%) in last 12 months better than baseline
- 4 = All results in last 12 months better than baseline

Business results for OTD and PPM that fall within the Gold certification level band are not required to meet the above evaluation criteria.

## **Certification Evaluation Criteria**

Overall company performance must meet the following requirements for a minimum of 3 months

Bronze Level On-time delivery 90-94.9% Parts per million <15,000

Silver Level On-time delivery 95-98.9% Parts per million <10,000

Gold Level On-time delivery 99-100% Parts per million <2,500

## Exceptions

Exceptions that are well-documented and accepted by SEA and the auditor may be removed from the calculation of metrics submitted for the certification. Documentation for exceptions must be received by SEA and the auditor at least 30 days in advance of an audit.

#### Metrics

Metrics for on-time delivery and parts per million must conform to the following definitions. Other SEA metrics may be defined by your company.

#### Inventory Turns

Annual Cost of Goods Sold (12 month rolling average) divided by Period-average inventory (average for the most recent month) Inventory includes raw, WIP, and finished goods.

#### Sales per Employee

Sales revenue for the quarter divided by total number of employees at the end of the quarter (direct and indirect) expressed in dollars.

<u>On-Time Delivery</u> - Number of on-time parts delivered divided by total parts delivered expressed as a %. Uses "promise date" defined as the date the supplier agreed to deliver.

<u>Parts Per Million (PPM)</u> - PPM refers to the number of defective parts shipped divided by the total number of parts shipped in a period normalized to 1,000,000 parts. This will be calculated using validated customer-reported defects.

#### Processes at Level 3 or above

Count the absolute number of processes at Level 3 or higher in process maturity, including processes on the SEA Roadmap and other processes that you have designated Managed Processes<sup>1</sup>.

Quick Ratio

Current Assets minus Inventories divided by Current Liabilities.

## **Certification Eligibility**

Certification audits are available only for SEA Members that have participated in the SEA Quarterly Performance Review process and have achieved Phase Four status.

<sup>&</sup>lt;sup>1</sup> See the SEA Definitions at http://www.seaonline.org/docs/SEADefinitions.pdf

## **Special Processor Exception**

#### Definition

Applies to special processors that provide processing services such as metal finishing, electroplating, powder coating, enameling, galvanizing, anodizing, plating on plastics, heat treating, carburizing, annealing, and tempering and related processes where customers provide parts that are returned after processing. Applies specifically to those special processors who process parts in batches as provided by the customer where it is highly likely that any processing problem that affects one part will effect all parts causing rejection rates to be much higher as a function of total parts processed.

## Certification

When calculating PPM, SEA will receive actual measurements from the special processor in accordance with the SEA definitions for PPM and will divide the PPM measures reported by two (2) in order to make a determination of certification level. For example, if the processor reports 10,000 PPM, SEA will receive that number and divide 10,000 by 2 = 5,000 this procedure will only apply to PPM determination and not to OTD