

Teleconference

Dial-in Number: 209 647-1075

Access code: 1013004#

Webcast

Go to: <http://www.gatherplace.net>

Use the JOIN A SESSION button

Enter the Access Code: 8285433

LES for Managers

This webcast is for the management team of a supplier who is preparing to implement the SEA Roadmap. It delivers a “burning platform” message to the management team about why aerospace suppliers need to accelerate change and improvement. It also provides a high level overview of the SEA Roadmap. The duration is 1 hour.

This presentation may appear different on your computer than originally designed. If you do not have the fonts used to create the presentation, your computer will substitute others that will change the overall formatting and look of the slides.

Michael G. Beason - Chairman for the SEA Organization



“SEA is a strategy. Other suppliers will try to compete with us based on tactics - reacting to situations as they arise.

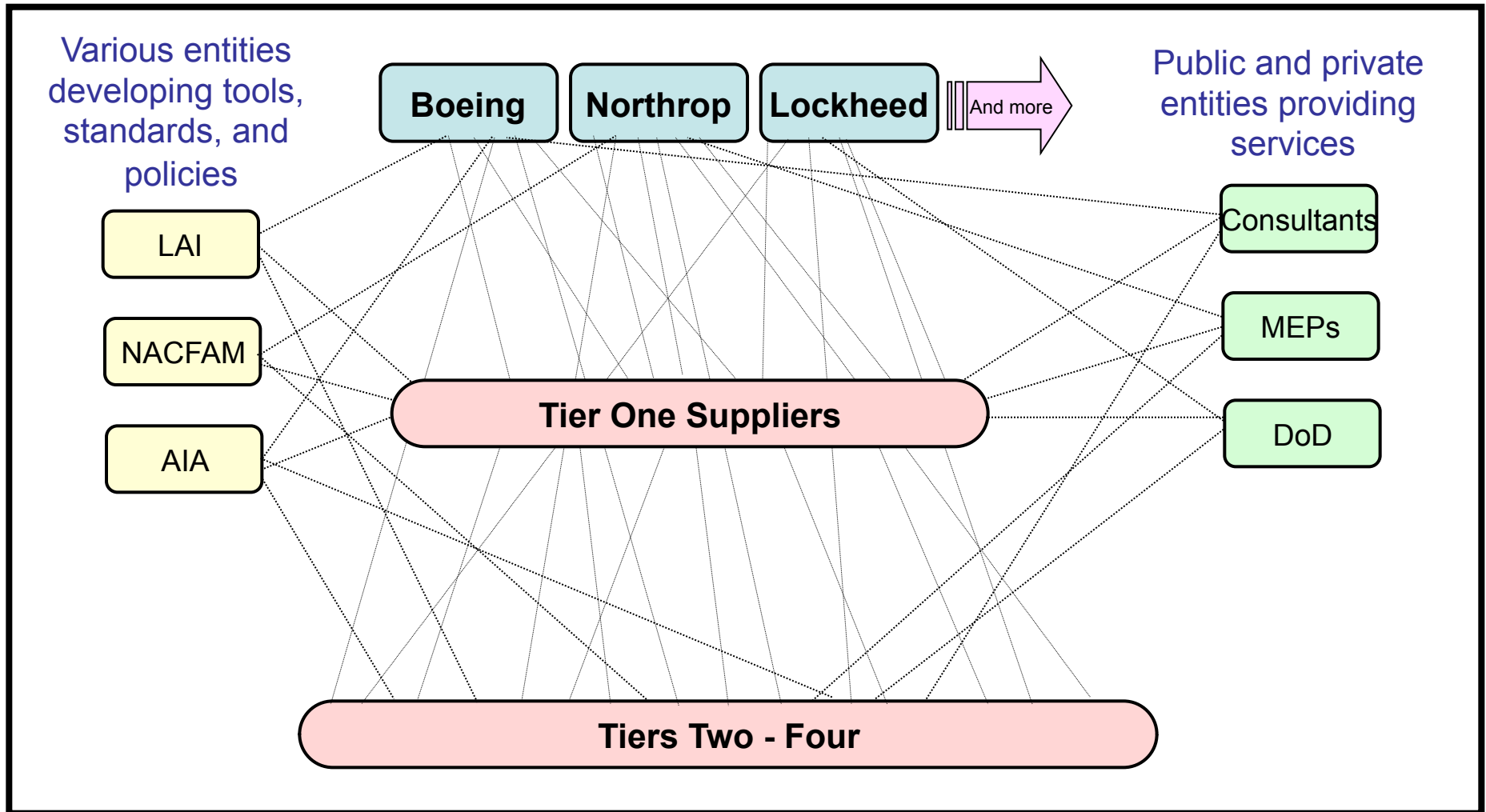
SEA’s strategy is to establish our reputation as the best suppliers in the industry. No tactic will be effective against us.

As the industry consolidates and speeds up, we’ll be the ones our customers see as those who ‘get it’ and are busy solving their problems. ”

Objectives

- ➔ Provide information about SEA and the reasons for the industry conversion effort
- ➔ Provide an executive overview of the implementation process for the Lean Enterprise System
- ➔ Prepare the manager for the implementation of SEA LES models and methodologies with some “Lessons Learned”

Our Industry Lean Effort



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SEA

- ➔ SEA was founded by Boeing, Northrop, Lockheed Martin, Raytheon, United Technologies, Parker Aerospace, Honeywell, and more.
- ➔ SEA was established in 2003 as a non-profit alliance directed by sub-tier suppliers with the mission of accelerating supply chain performance for the aerospace and defense industries.
- ➔ Customers participate in SEA at no cost and gain the resources of a world-class supplier development system.
- ➔ Suppliers participate in SEA paying the annual membership fee and follow a step-by-step process that improves performance and visibility.

Automotive

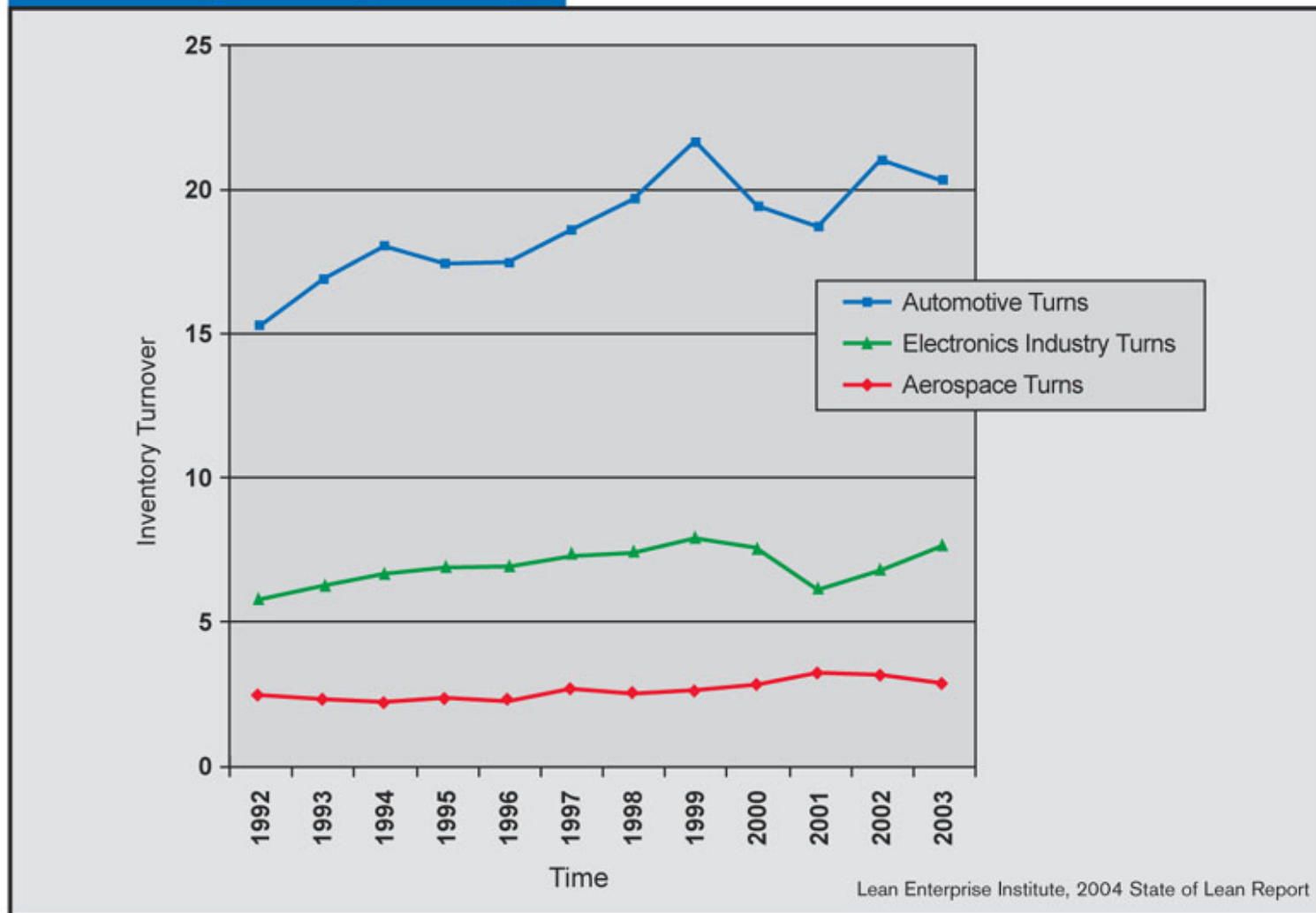
- ➔ According to A.T. Kearney, there is a case to be made for the comparison of what happened in the automotive supply chain to what is happening now in the Aerospace supply chain
- ➔ What happened in the automotive industry?
- ➔ They've already done this for the past 15 years - what can we learn?

Four Major Trends

- Globalization
- Consolidation
- Supply Chain Integration
- Lean Manufacturing

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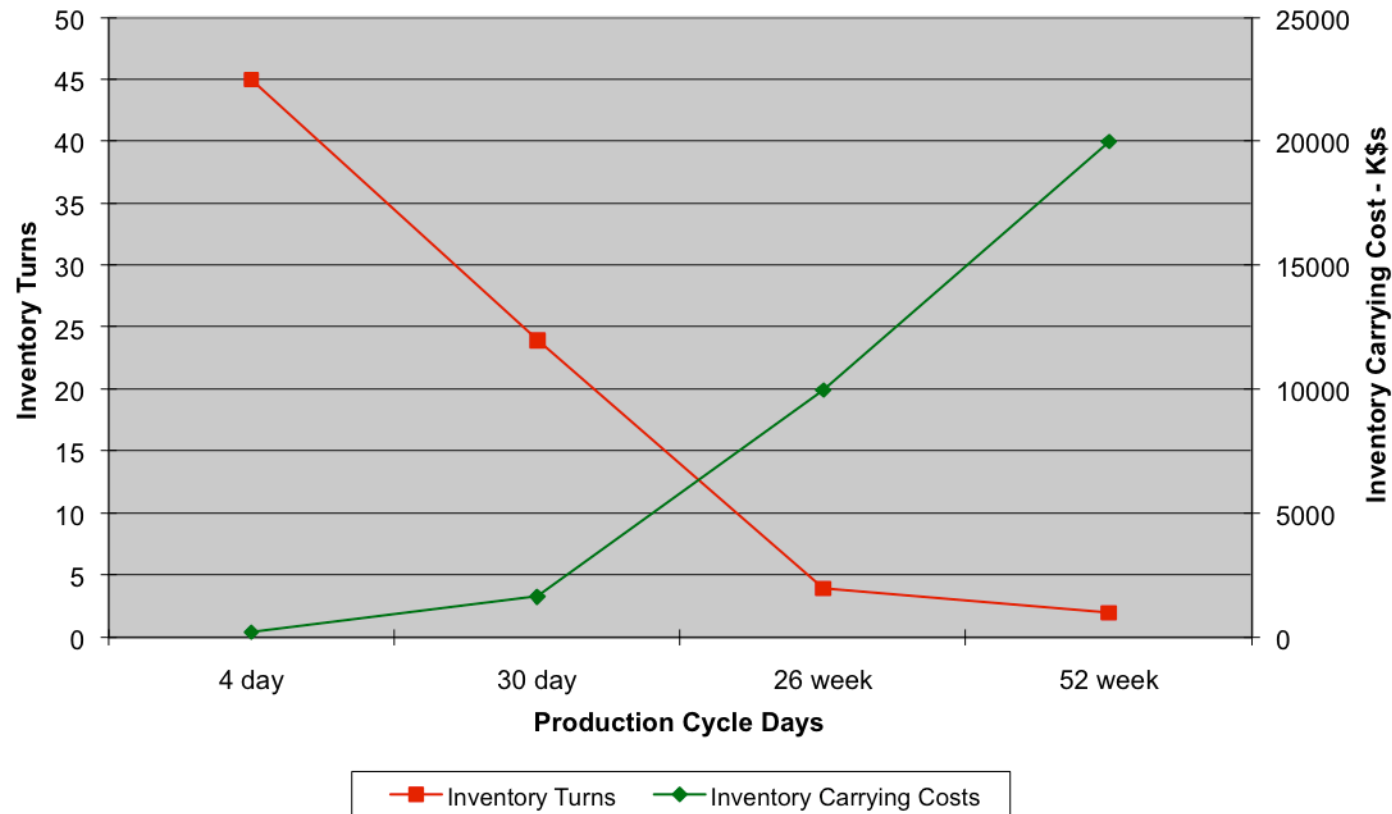
► Inventory Turns by Industry



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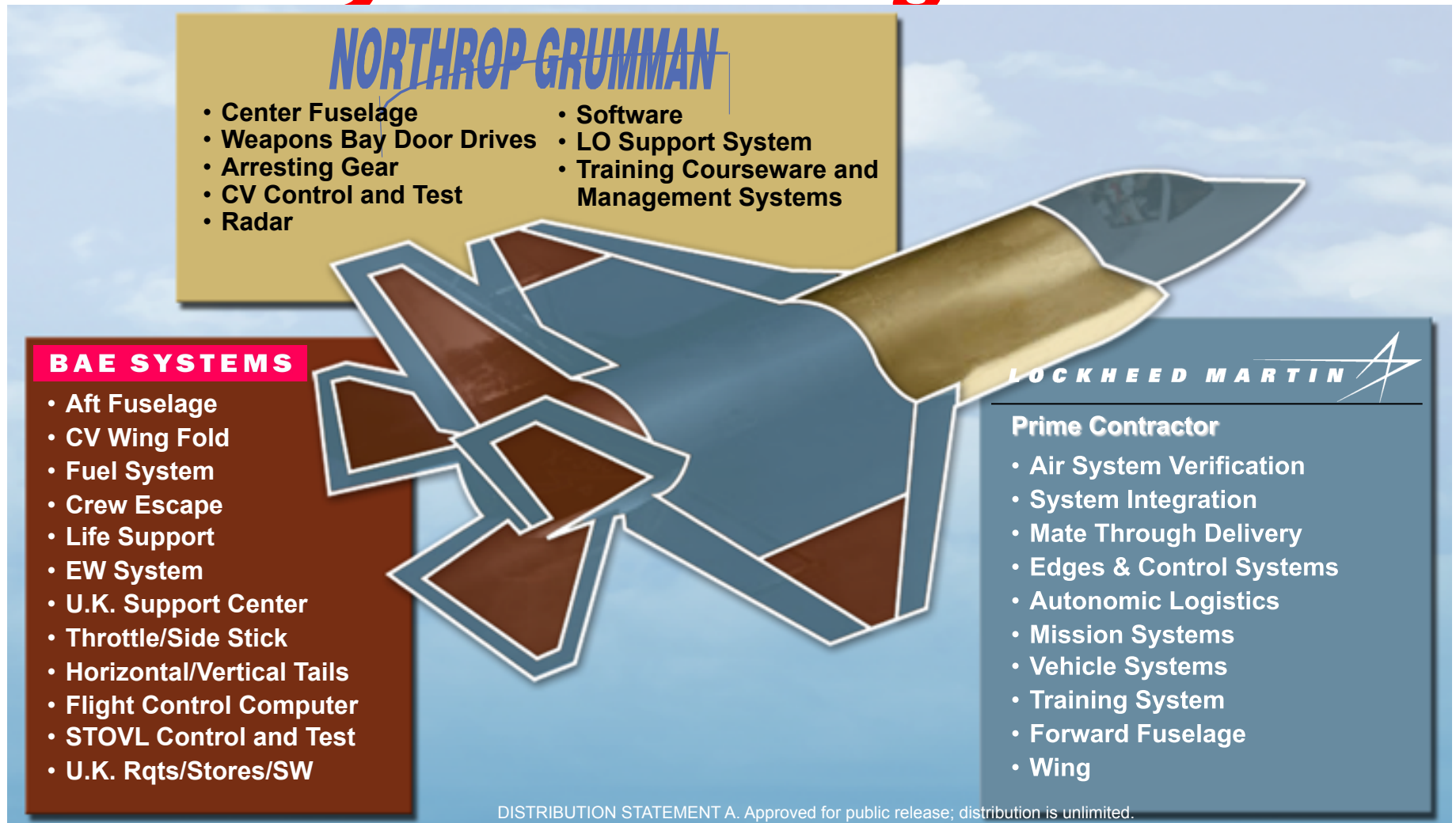
Inventory Turns & Lean

For a \$200M Aircraft



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Joint Strike Fighter



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JSF Assembly



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Dreamliner Assembly



Boeing 737



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Pratt & Whitney

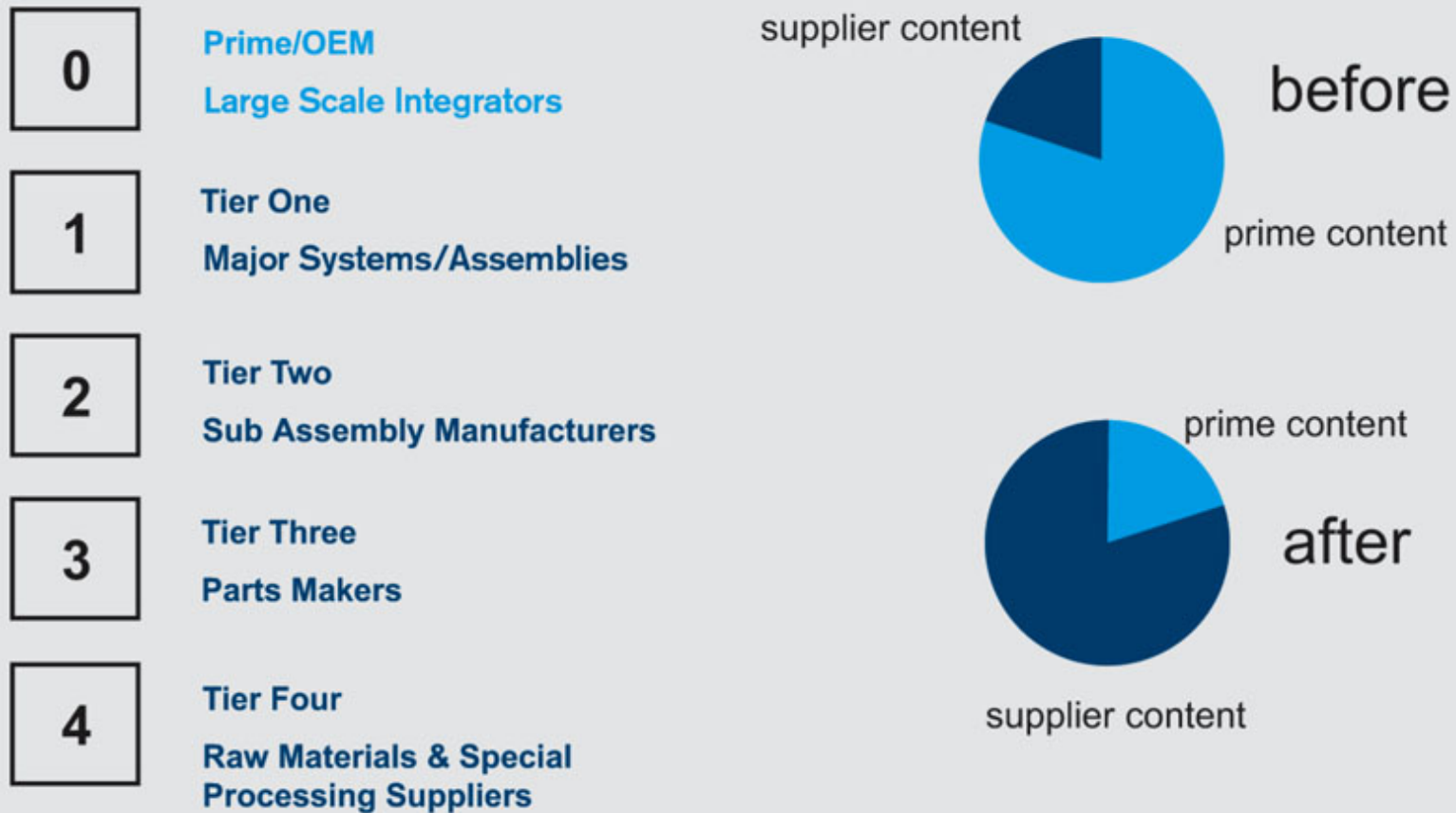
“To capitalize on an emerging market that will be booming in a few years, Pratt & Whitney Canada needs to deliver a jet engine every four hours—a feat that would be impossible without the input of its supply base.”

"We have to drive a pulse or drum beat that triggers the supply chain to deliver to a takt time (customer demand rate) of every four hours," says DiPerna.

Purchasing.com



► Aligning the Supply Chain



Supplier Ratings

Customer Rating

- Grow, Center of Excellence, Gold
- Maintain, Monitor, Retain, Silver
- Phase Out, Exit, Bronze

Supplier Tactics

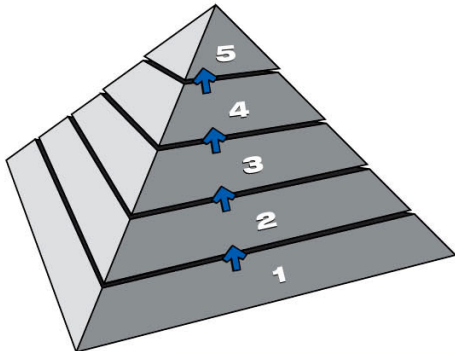
- Expedite, Over-Inspect, Inventory, Over-Hiring
- Expedite, Over-Inspect, Inventory, Over-Hiring
- Business as Usual, Ignore, Lock the Door

SEA Supplier Strategies

- Maintain Process Capability, Emphasize Continuous Improvement
- Accelerate Process Improvement, Build Leadership, Workforce, and Operational Capabilities

Process Maturity Model “PMM”

▼ Process Maturity Levels



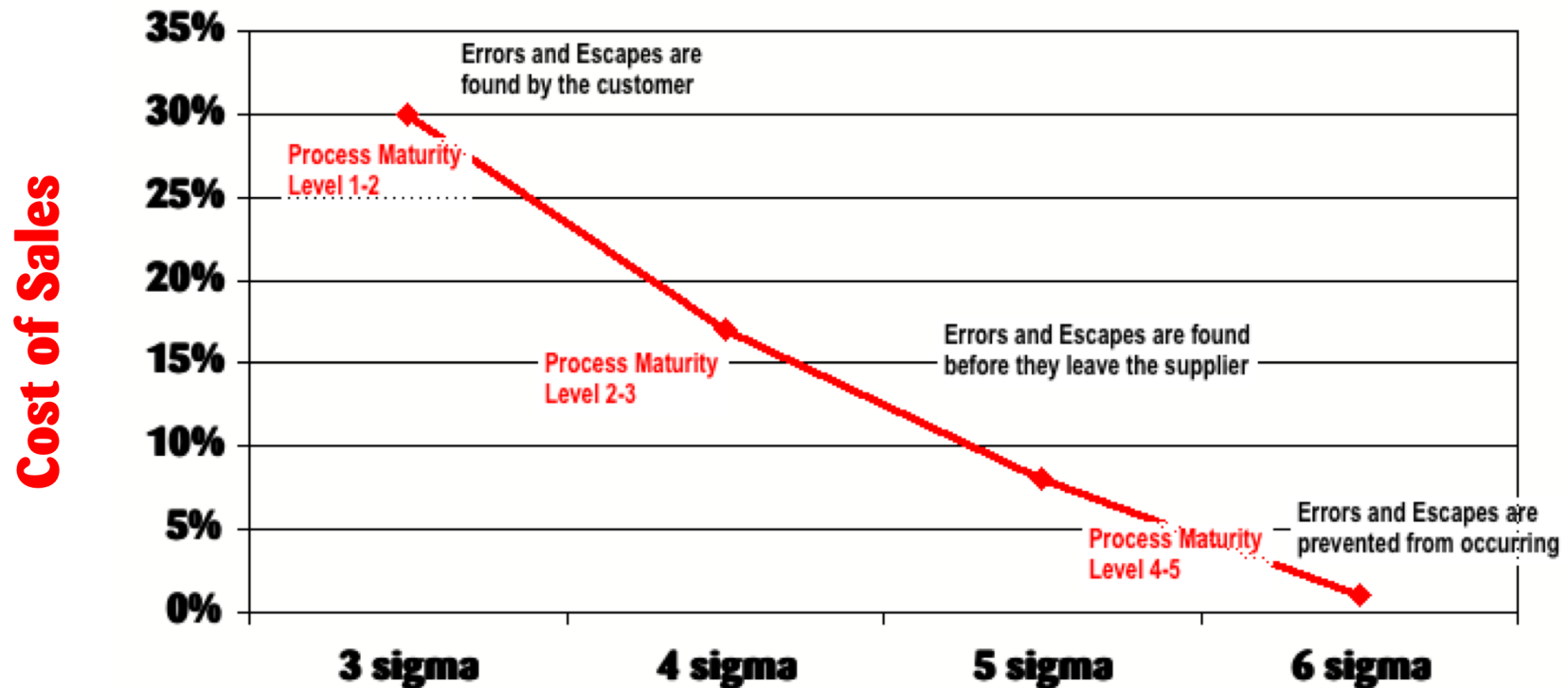
5 The process shows continuous positive trends and benchmarks world-class

4 The process is under process control, is analyzed, and improved using data

3 The process has certified trainers and is standardized

2 The process has been documented to the work instruction level

1 The process has been identified, defined, and has an owner



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SEA Lean Enterprise System



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The SEA Roadmap

| | Stage One | Stage Two | Stage Three |
|------------------------|--|-----------------------------------|------------------------------|
| | Stabilization | Supply Chain Integration | Sustainability |
| Leadership & Culture | Establish high-performance leadership system | Focus on supply chain integration | Focus on new product startup |
| Workforce Development | Establish workforce development system | Implement process control | |
| Operational Excellence | Accelerate sustainable lean performance improvements | Accelerate flow production | |
| Business Results | Establish industry-standard performance metrics | Show measureable improvement | Demonstrate reduced risk |

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The SEA Roadmap

| | Stage One | Stage Two | Stage Three |
|---------------------------------|---|---|---|
| | Stabilization | Integration | Sustaining |
| Leadership & Culture | 1.1.1 Strategic Planning Process 1.1.2 Leadership Communication Process 1.1.3 Organizational Performance Review Process 1.1.4 Continuous Improvement Management Process 1.1.5 Workforce Development Integration Process | 1.2.1 Supply Chain Integration Process | 1.3.1 New Product Startup Process |
| Workforce Development | 2.1.1 Job Skills & Cross-Training Certification Process | 2.2.1 Continuous Improvement Process | |
| Operational Excellence | 3.1.1 Kaizen Process 3.1.2 6S Visual Workplace Process 3.1.3 Quick Changeover/SMED Process | 3.2.1 Material Management Process 3.2.2 Production Planning Process 3.2.3 Development Process | |
| Business Results | 4.1.1 Inventory Turns 4.1.2 Sales/Employee 4.1.3 On-Time Delivery 4.1.4 Parts per Million | | 4.3.1 Process Maturity 4.3.2 Quick Ratio |

2011 Roadmap v2

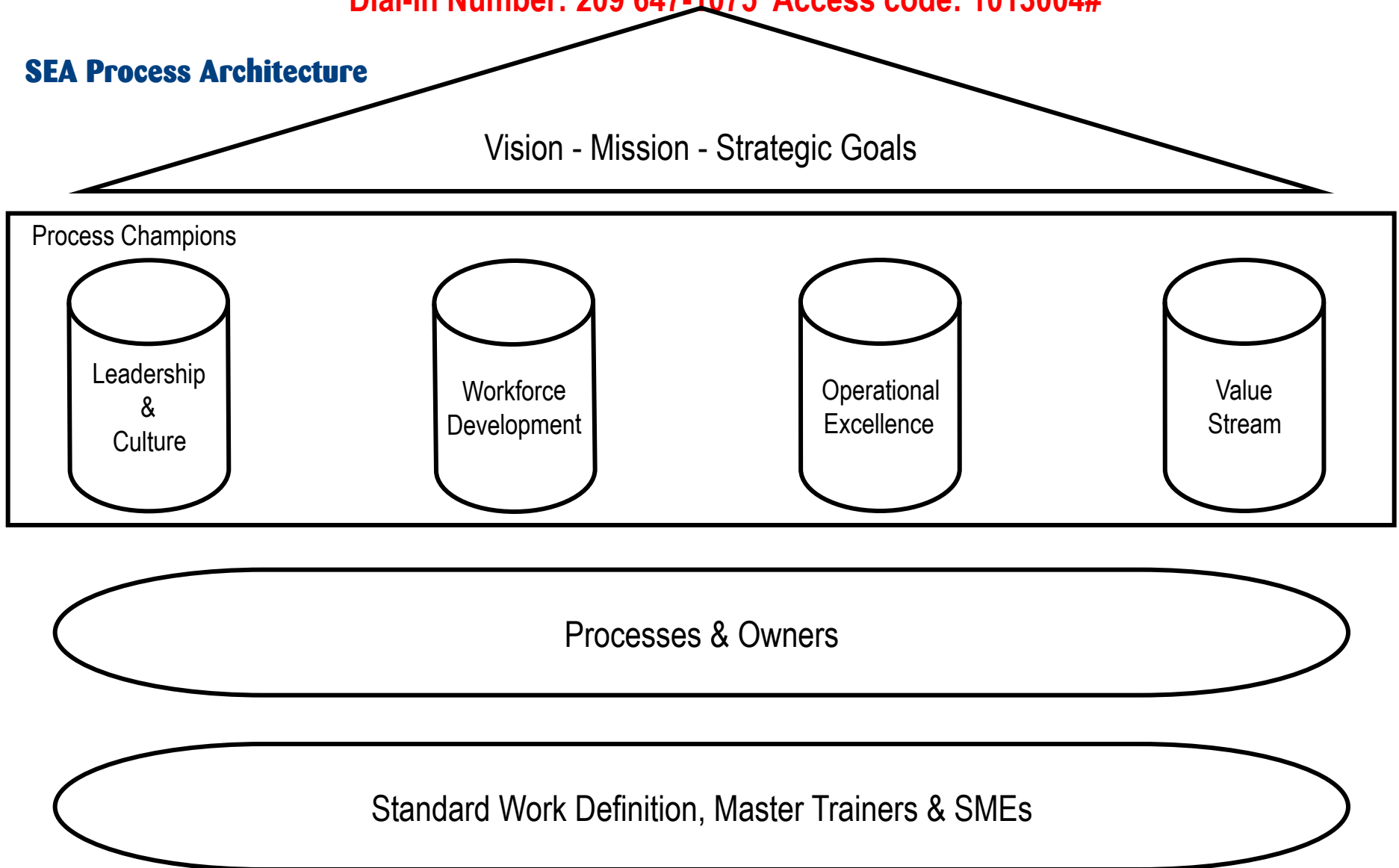
Certification Level

Bronze OTD 90-94.9%, PPM<15,000

Silver OTD 95-98.9%, PPM<10,000

Gold OTD 99-100%, PPM<2,500

SEA Process Architecture



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National Webcasts

NATIONAL WEBCASTS

[Introduction](#)[Feedback](#)[More Webcasts](#)[More Info](#)

| SEQ | TITLE | SERIES 1 | SERIES 2 | SERIES 3 | SERIES 4 | PRESENTATION | | TOOLS |
|-----|---|--------------------------|--------------------------|--------------------------|--------------------------|---------------------------|---------------------|---------------------|
| 0 | Getting Started with SEA | 9/08/11 | 02/01/12 | 11/01/11 | 01/05/12 | PDF | PPS | ZIP |
| 1 | LES for Managers | 9/15/11 | 02/08/12 | 11/08/11 | 01/12/12 | PDF | PPT | |
| 2 | Annual Improvement Plan | 9/22/11 | 02/15/12 | 11/22/11 | 01/19/12 | PDF | PPS | ZIP |
| 3 | Assign Process Owners | 9/29/11 | 02/22/12 | 11/29/11 | 01/26/12 | PDF | PPS | ZIP |
| 4 | Roadmap Process Owner | 10/06/11 | 02/29/12 | 12/06/11 | 02/02/12 | PDF | PPS | ZIP |
| 5 | Process Owner Forum | SCHEDULE | SCHEDULE | SCHEDULE | SCHEDULE | MORE INFO | | |
| 6 | How to Prepare the Quarterly Report | 10/13/11 | 03/07/12 | 12/13/11 | 02/09/12 | PDF | PPS | ZIP |
| 7 | Value Stream Mapping | 10/20/11 | 03/14/12 | 12/20/11 | 02/16/12 | PDF | PPS | ZIP |
| 8 | Managed Process Owner | 10/27/11 | 03/28/12 | 01/03/12 | 02/23/12 | PDF | PPS | ZIP |
| 9 | Master Trainer | 11/03/11 | 04/04/12 | 01/10/12 | 03/01/12 | PDF | PPS | |
| 10 | Kaizen Leader | 11/10/11 | 04/11/12 | 01/17/12 | 03/15/12 | PDF | PPS | |
| 11 | Supply Chain Integration | 12/01/11 | 04/18/12 | 01/24/12 | 03/22/12 | PDF | PPS | |
| 12 | Preparing for the SEA Site Visit | 12/08/11 | 04/25/12 | 01/31/12 | 03/29/12 | PDF | PPS | ZIP |

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What's Important to YOU?

- Improve my on-time, lead time, quality, and cost performance
- Gain more visibility and opportunities for new business
- Collaborate with and learn from other suppliers who are doing the right things

Click on the one that best describes what's important to your business right now

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Improving Performance Workflow

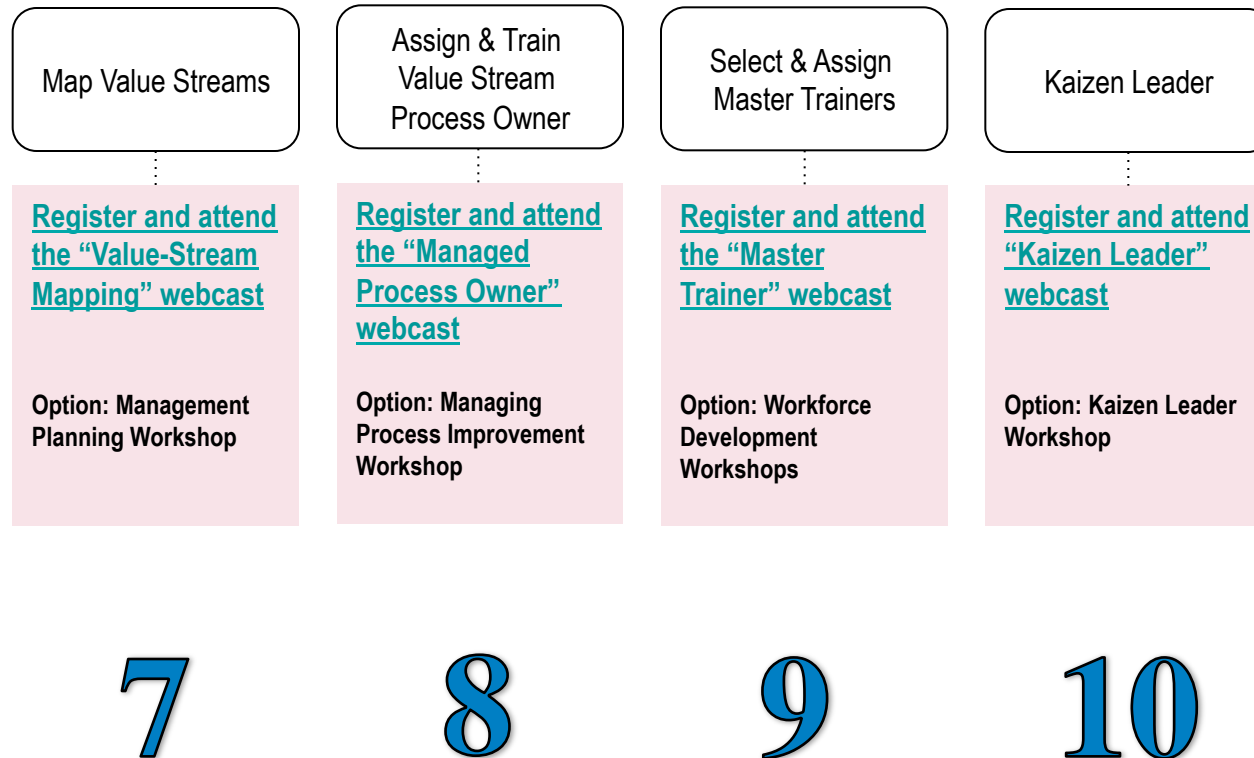
Click on the red box text to go and take the action suggested.



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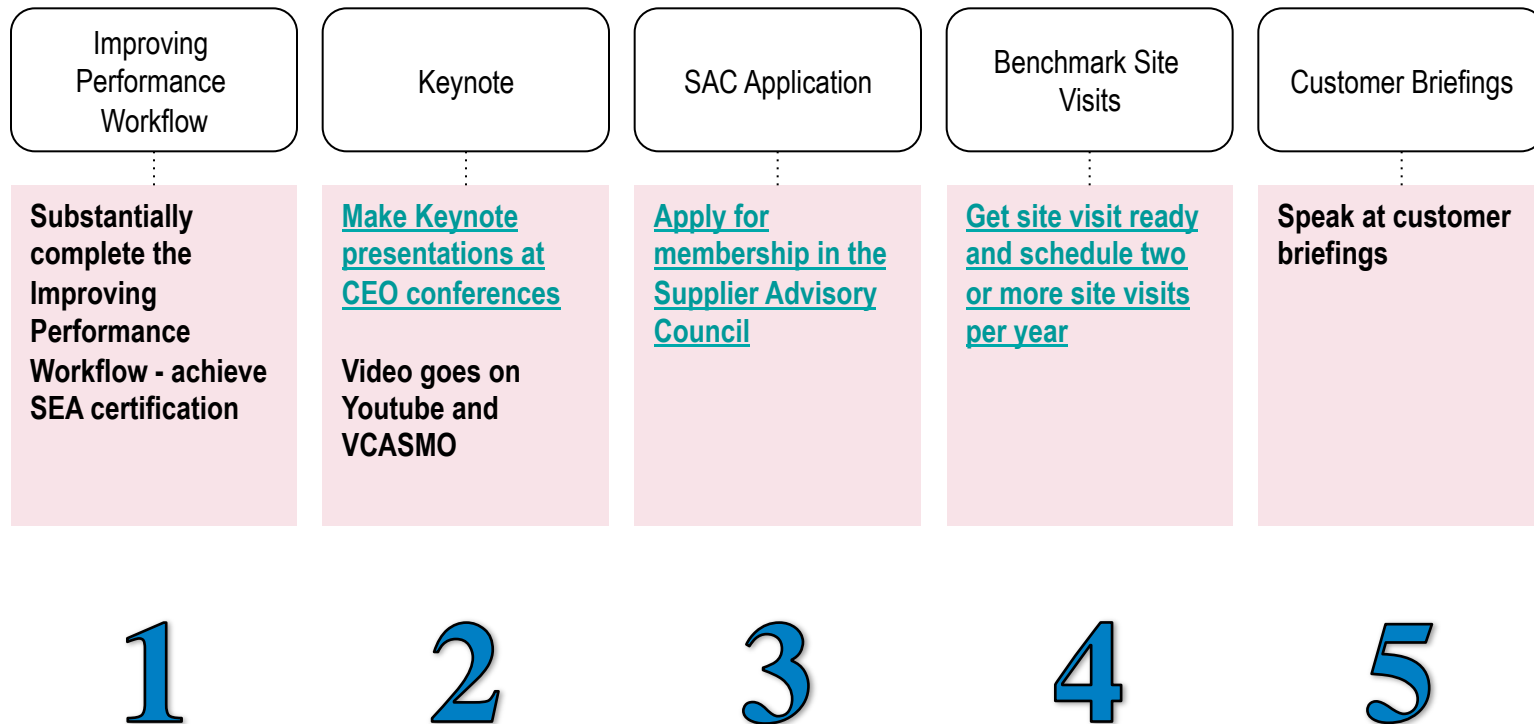
Improving Performance Workflow

Click on the red box text to go and take the action suggested.



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Gain More Visibility Workflow



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SUPPLIER REGISTRY





























[MORE INFO](#)

[CERTIFICATION CRITERIA](#)

[SEA ROADMAP](#)

[CERTIFICATION LEVEL](#)

[PERFORMING COMPANIES](#)

| Company Name | State | Primary Contact | Phone | Email | Video | Industry Type | OTD | PPM |
|---|-------|---------------------------------|-------------------------|---|---|---|---|---|
| CERTIFIED COMPANIES | | | | | | | | |
| GENTEX Corporation (Respiratory Systems) | CA | Robert McCay General Manager | (909) 481-7667 x3600 |  |  | Life Support Products - Military Commercial Markets | | |
| Hixson Metal Finishing | CA | Douglas C. Greene President | (949) 645-4800 |  |   | Special Processing - Anodizing, Plating, Brazing, Heat Treating, Finishes, Coating, Sealant |  |  |
| Midwest Metal Products | IA | Kevin Urban President | (800) 394-6474 x132 |  |  | Fabrication, Bending, Forming & Sheet Metal | | |
| National Technical Systems (NTS) - Fullerton | CA | Bill McGinis CEO | (866) 787-5746 |  |  | Engineering Services | |  |
| National Technical Systems (NTS) - Boxborough | MA | Bill McGinis CEO | (866) 787-5746 |  |  | Engineering Services | |  |
| TSI Plastics, Inc. | MN | Pat McCready President & CEO | (763) 784-0240 |  |   | Plastics - Parts & Assemblies |  |  |
| Vaupell Northwest Molding and Tooling | WA | Kelth Zeller General Manager | (206) 805-0006 |  |   | Plastics - Parts & Assemblies | |  |
| W Machine Works, Inc. | CA | Marzel Neckien President | (818) 890-8049 |  |    | Machining - Machined Assemblies | | |

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Supplier Registry

Phases Icons & Description



Phase 4: Pre-Certification

All stage one processes at level 3 or higher PMM
3 of 4 metrics improved from last quarter
3 or more managed processes at level 3 PMM



Phase 3: Advanced

6 to 10 stage one process at level 3 or higher PMM
2 of 4 metrics improved from last quarter
1 or 2 or more managed processes at level 3 PMM



Phase 2: Early

1-5 stage one processes at level 3 or higher PMM
1 of 4 metrics improved from last quarter



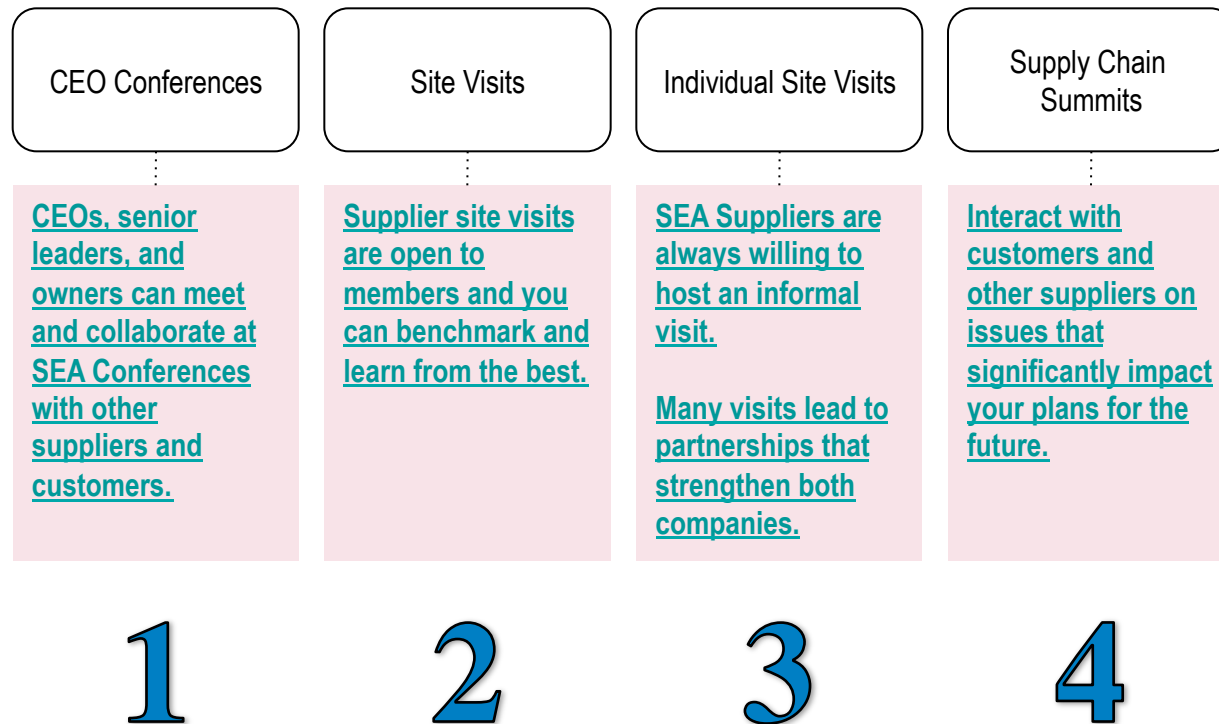
Phase 1: Start-Up

0 roadmap processes at level 3 or higher PMM
No metrics improved from last quarter or no previous baseline established yet

| PERFORMING COMPANIES | | | | | | | MORE INFO |
|--|----|---|------------------------|--|--|--|-----------|
| | IA | Kevin Urban President | (800) 394-6474 x132 | | | Fabrication, Bending, Forming & Sheet Metal | |
| | KS | Jason Cox Chief Technology Officer | (316) 943-1342 | | | Machining-Machined Assemblies | |
| | CA | John Yerger President | (858) 587-6900 | | | Electrical Systems & Subsystems | |
| | IL | Pat Bye President | (815) 877-1410 | | | Machining - Machined Assemblies | |
| | CT | Steven A. Fournier President & CEO | (203) 729-4900 x217 | | | Design and manufacture of hydraulic and pneumatic valves, actuators, braking devices and fuses | |
| | TX | Tim Holland CEO | (817) 535-3200 | | | Distributor - Production Supplies Distributor - Industrial Supplies | |
| | CA | Douglas C. Greene President | (949) 645-4800 | | | Special Processing - Anodizing, Plating, Brazing, Heat Treating, Finishes, Coating, Sealant | |
| | | Javier del Valle Castellanos General Manager | (52) 55-5569-1922 | | | Machining - Machined Assemblies | |
| | CA | Mike Morgan President | (951) 736-5390 | | | Machining - Machined Assemblies | |
| TSI Plastics, Inc. | MN | Pat McCready President & CEO | (763) 784-0240 | | | Plastics - Parts & Assemblies | |
| Vescio Threading Company, Inc. | CA | Greg Vescio CEO | (562) 802-1869 | | | Specializing in Threading & Precision CNC Machining | |
| W Machine Works, Inc. | CA | Marzel Necklen President | (818) 890-8049 | | | Machining - Machined Assemblies | |
| Clark Technology Systems, Inc. | PA | Faith D Clark President | (570) 523-0375 | | | Design/Package/Fabricate process consoles | |

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Collaborate Workflow



Resources

[About SEA](#)
[SEA Member](#)
[Annual Awards](#)
[SEA Certification](#)
[Case Studies](#)
[Sponsorships](#)
[Process Owner Forums](#)

EVENTS

| SEA Events (click on event below to see calendar) | Who? | What? |
|---|-------------|--|
| <u>CEO Conferences*</u> | Everyone | Suppliers share their success stories and collaborate on integrated supply chain projects |
| <u>Supplier Events</u> | Everyone | Benchmark Site Visits, Supplier Briefings, and Customer Briefings scheduled with Supplier Advisory Council members presentations |
| <u>Partner Events</u> | Everyone | Links and information to events held by SEA Partner Organizations |
| <u>Process Owner Forums**</u> | Member Only | Process Owners study best practices and compare notes on implementation of the SEA LES |
| <u>Webcasts</u> | Member Only | Members learn how to prepare a quarterly report, how to implement the roadmap, and how to prepare for SEA certification. |
| <u>Certification Workshops*</u> | Everyone | Members and Qualified Associates learn to implement the SEA Lean Enterprise System |

*fees apply

**subscription required



Lessons Learned

- ➔ Roles & Accountabilities
- ➔ Leadership, Leadership, Leadership
- ➔ Build the capabilities to lead and sustain improvement
- ➔ Lower the Waterline - Change Management

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SEA

→ SEA is a strategy - not a tactic

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Thank You

