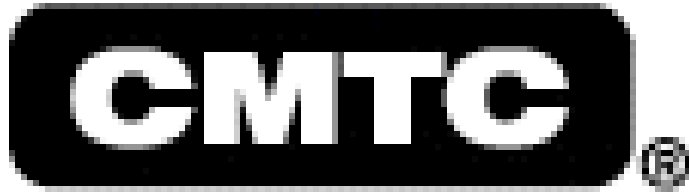




**This workforce solution was funded by a grant awarded under Workforce Innovation in Regional Economic Development (WIRED) as implemented by the U.S. Department of Labor's Employment and Training Administration. The solution was created by the grantee and does not necessarily reflect the official position of the U.S. Department of Labor. The Department of Labor makes no guarantees, warranties, or assurances of any kind, express or implied, with respect to such information, including any information on linked sites and including, but not limited to, accuracy of the information or its completeness, timeliness, usefulness, adequacy, continued availability, or ownership. This solution is copyrighted by the institution that created it. Internal use by an organization and/or personal use by an individual for non-commercial purposes is permissible. All other uses require the prior authorization of the copyright owner.**



# California Manufacturing Technology Consulting™

High Performance Results  
- Improving Processes,  
People, and Profits



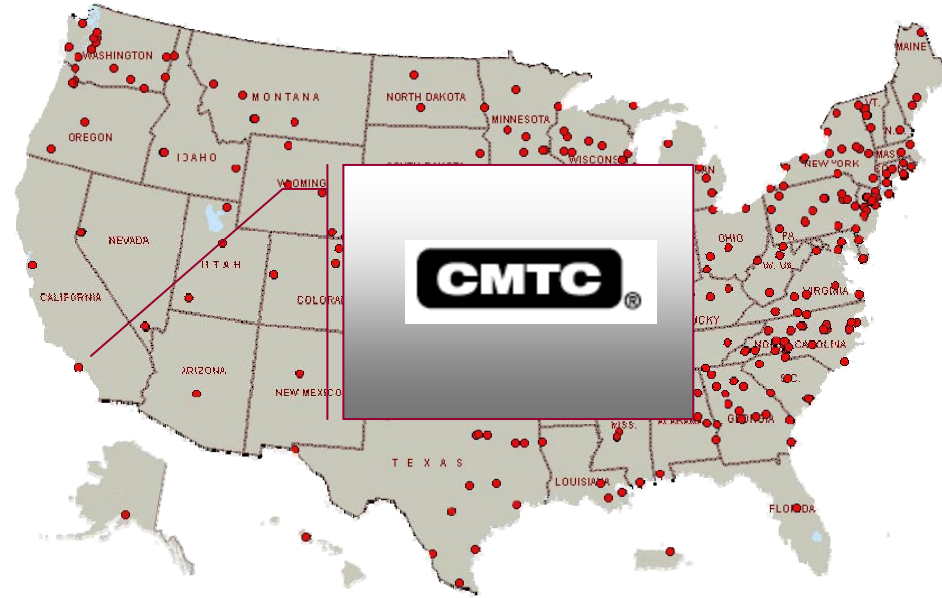
a NIST | Network  
MEP | Affiliate





# About CMTC & MEP

CMTC is the largest affiliate of the Manufacturing Extension Partnership (MEP), a program of the National Institute of Standards and Technology (NIST). NIST is an agency of the U.S. Department of Commerce Technology Administration.



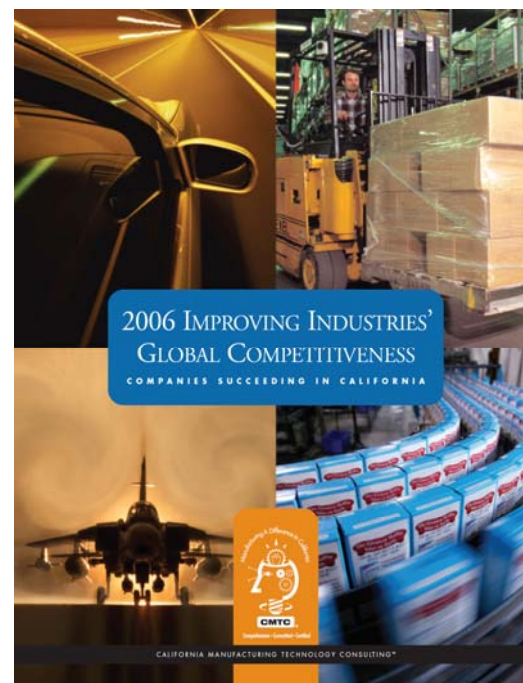
The MEP is a national network of affiliated centers and field offices staffed by experienced specialists serving all 50 states and Puerto Rico. Each provides expertise and services in transforming clients served to compete globally, supporting greater supply chain integration, and providing access to technology for improved productivity.

Affiliates leverage resources across the network to provide national support to clients.



# About CMTC

- Process Improvement training and consulting - specializing in optimizing the people side of quality
- Private, nonprofit; approximately 100 full-time employees and 150+ qualified associates
- Established in 1992 as a charter affiliate of the national MEP program with a mission to strengthen U.S. commerce and improve U.S. global competitiveness
- Certified staff average 25 years of industry experience





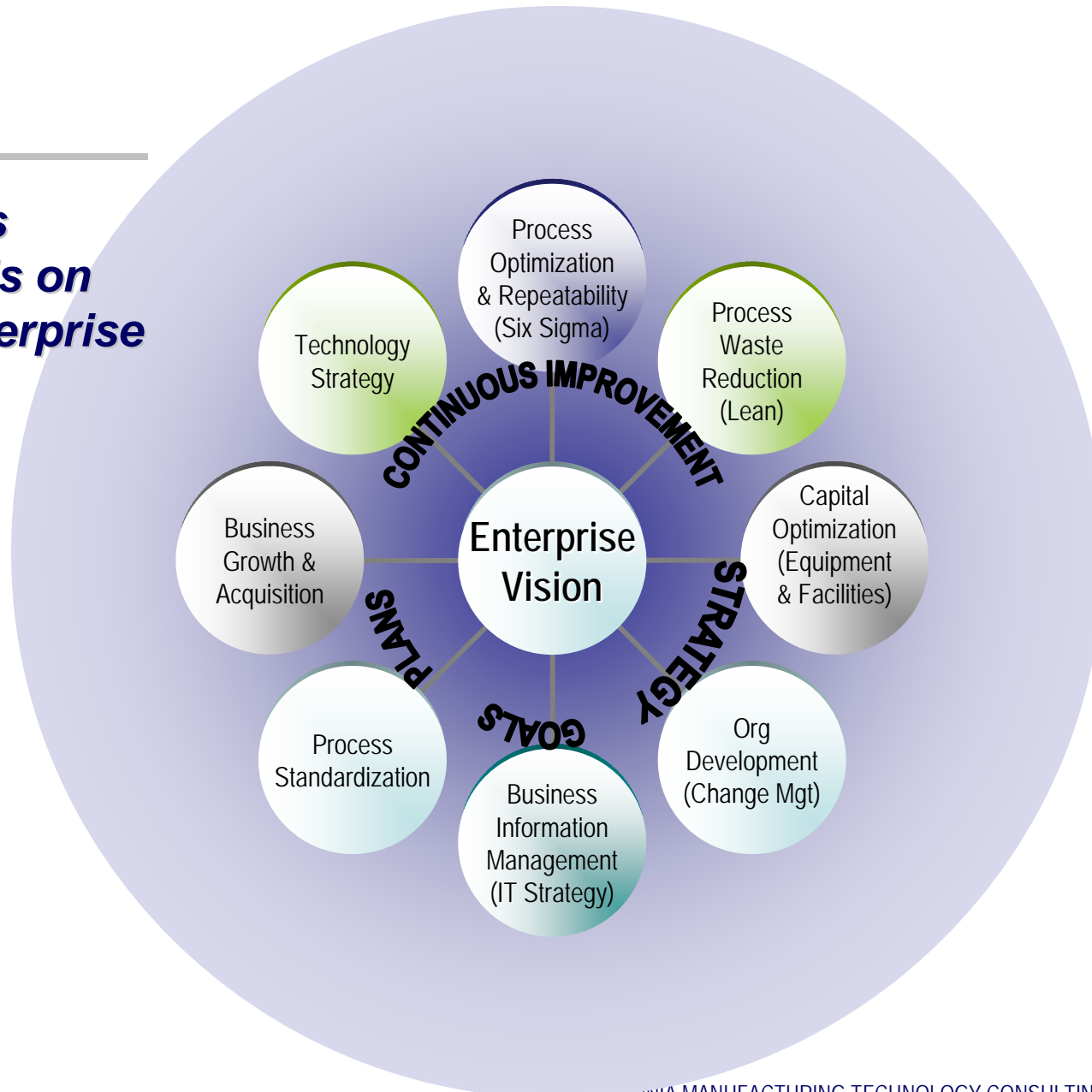
# About CMTC's Aerospace & Defense Group

- Delivered services to over 800 A&D suppliers & OEMs since 1992 – more than any other consulting group. Over 5,200 employees trained.
- Aerospace Industries Association (AIA) Lead Organization / Chair of the Supplier Management Council
- Lean Aerospace Initiative (LAI) Supplier Networks Working Group
- California Space Authority (CSA) WIRED Grant, Funded Partner – SMART Supplier Requirements Development
- NASA Supplier Outreach Process Control (SOPC) Resource
- Approved subcontractor for Boeing Mentor-Protégé contracts through the U.S. Air Force





**CMTC's  
Focus is on  
the Enterprise  
Vision**



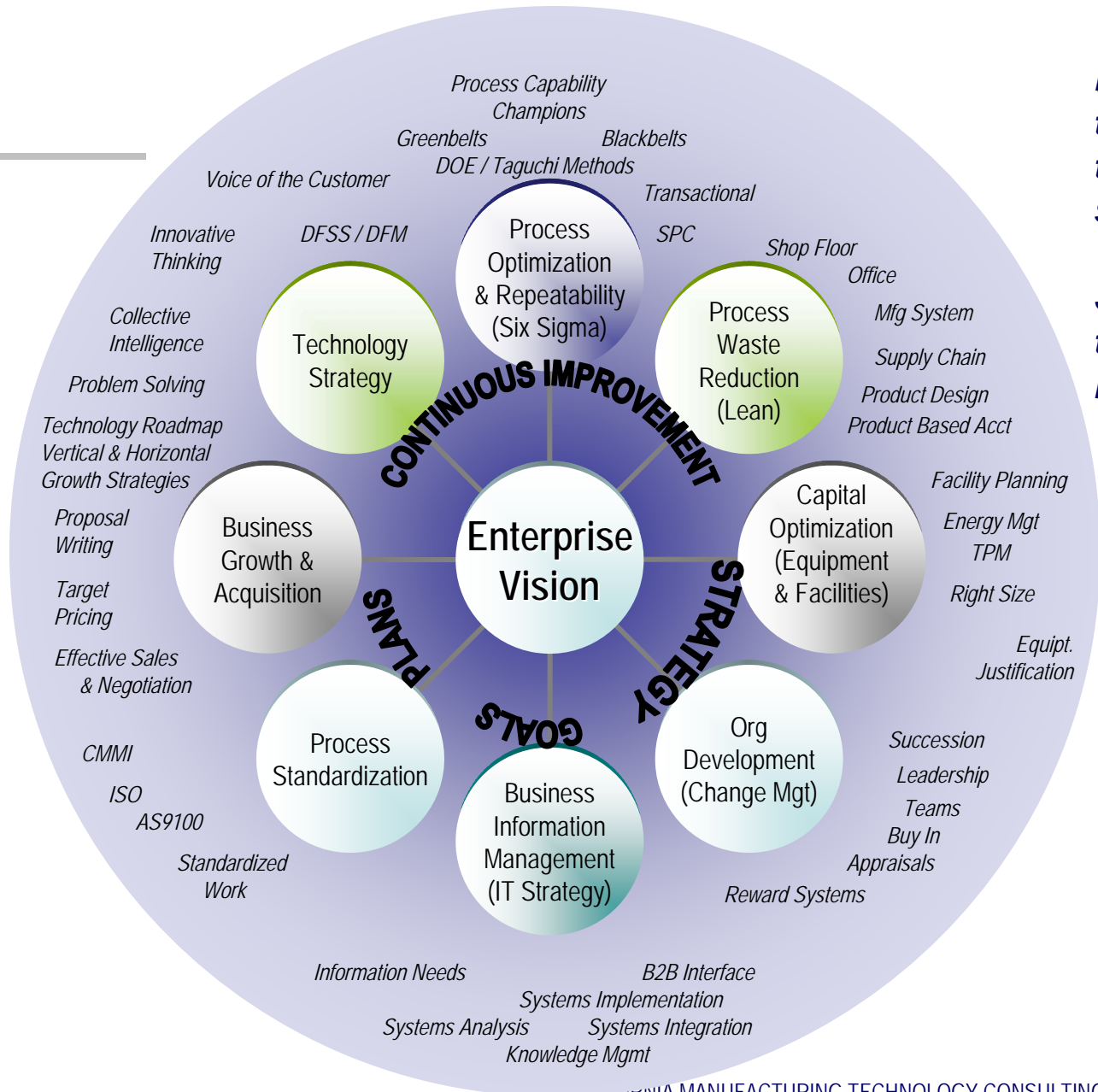
*Align Strategy,  
Goals,  
Planning, and  
Continuous  
Improvement  
with the  
Enterprise  
Vision.*



Voice Of The Customer

Strategies and Goals Target Satisfying the Voice of the Customer (Internal/ External)





**Knowledge,  
tools, &  
technologies  
support the  
Value  
Streams &  
the  
Enterprise  
Vision**



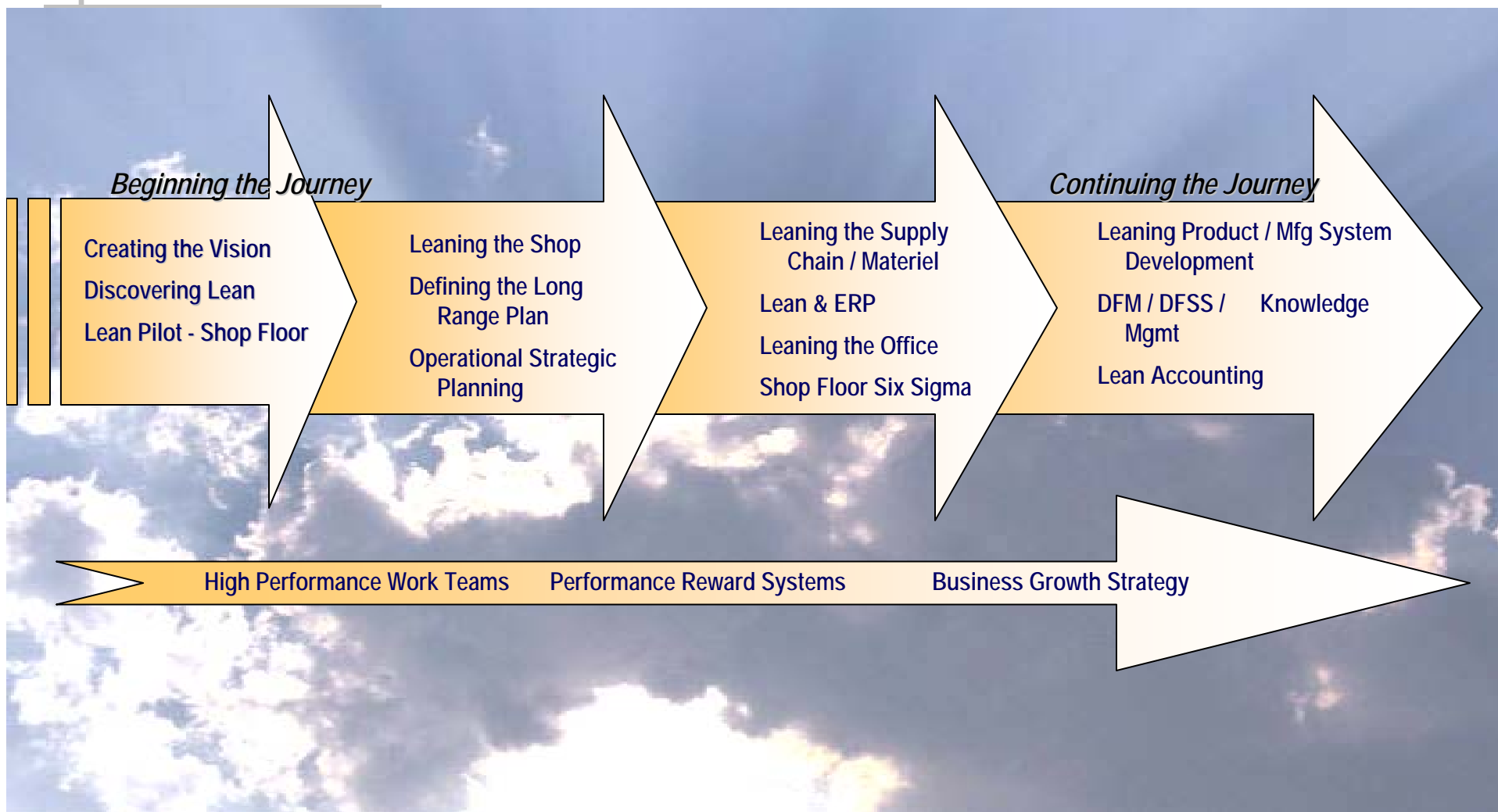
# ***CMTC's Enterprise Capabilities***

- **Lean Enterprise**
  - Transformation Management - Strategic Planning & Policy Deployment
  - Lean Office
  - Lean Product Development
  - Lean Manufacturing
  - Lean Supply Chain Management
- **Quality Management**
  - Repeatable Best Practices
  - ISO 9001; AS9100
  - EHS, ISO 14001
  - SPC
  - Six Sigma
- **High Performance Management**
  - Teams & Team Building
  - Problem Solving
  - Communications Skills
  - Leading Change
  - Management / Supervisory Skills
- **Information Technology**
  - Systems Selection, Implementation, & Optimization
- **Distribution & Logistics**
- **Energy Management**





# CMTC Lean Enterprise Implementation Process Roadmap to World Class™





# ***CMTC Client Impacts***

## ***Case Study 1***

### ***Aluminum Precision Products (APP)***

- Located in Santa Ana, CA manufacturers of aluminum products for aerospace & other industries.
- Processes include: Forging, CNC Machining, Deburring, Washing
- Applied the following lean tools and techniques:
  - Lean Teams
  - Kaizen Events
  - Value Stream Mapping
  - Lean Cells
  - Continuous Flow
  - Batch Size Reduction
  - Set-up Reduction
  - 5S
  - Total Productive Maintenance
  - Transactional Lean (Lean in the office)



# ***CMTC Client Impacts***

## ***Case Study 1 (Continued)***

### ***Aluminum Precision Products (APP)***

- Results from implementation of Lean:
  - **Cell Implementation, Continuous Flow, Lot Size Reduction**
    - 25% - 50% Lead time and inventory reduction\*
    - 50% Floor space reduction
    - 10% - 15% Productivity improvement\*
  - **Set Up Reduction (Press)**
    - 50% Set Up time reduction
  - **TPM**
    - 50% OEE (Overall Equipment Efficiency Effectiveness) Improvement
    - Reduced Downtime, Increased Productivity, Reduced Defects / Scrap
  - **Lean Office Cell Implementation**
    - 90% Lead Time Reduction (Quoting)
    - 85% Lead Time Reduction (Order Entry)
  
- \* Reflects a range of results from multiple Kaizens or improvements in more than one process/area.



## ***CMTC Client Impacts***

### ***Case Study 2***

### ***Ceradyne, Inc.***

- Located in Irvine, CA designers & manufacturers of advanced technical ceramics for defense, industrial, automotive, and commercial applications.
- Applied the following lean tools and techniques:
  - **5S + Safety (Workplace organization)**
  - **Standardized Work**
- Results from implementation of Lean:
  - 25% increase in productivity
  - 66% increase in sales
  - \$900K in cost savings, annually

*“CMTC’s hands-on expertise & deep commitment to our success made a real contribution to significant increases in sales & productivity immediately following their support.” – Al Gerk, Director of Operations*



# ***CMTC Client Impacts***

## ***Case Study 3***

### ***Dante Valve Company, Inc.***

- Located in Irvine, CA designers & manufacturers of advanced technical ceramics for defense, industrial, automotive, and commercial applications.
- Applied the following Lean tools and techniques:
  - **Value Stream Mapping**
  - **Lean Dashboard**
  - **5S + Safety (Workplace organization)**
  - **Set-up Reduction**
  - **Plant Layout**
  - **Kanban Implementation**
  - **Lean Scheduling System**



# **CMTC Client Impacts**

## **Case Study 3**

### **Dante Valve Company, Inc.**

- Results from implementation of Lean:
  - **Value Stream Mapping, Kanban Implementation:**
    - 50% Lead Time Reduction
    - 50% Set Up Time Reduction
    - 40% increase in productivity
    - 66% increase in sales
    - \$900K in cost savings, annually

*“We saw large cost savings, an increase in sales and productivity after working with CMTC to implement Lean techniques.”* – Lisa Dante-Papini VP of Operations



# **CMTC Client Impacts**

## **Case Study 4**

### **Sierracin / Sylmar Corporation**

- Sierracin / Sylmar Corp., located in Sylmar, manufactures aircraft transparencies for both military & commercial aircraft.
- Results from implementation of Lean:
  - **Cellular Manufacturing**
    - 37% decrease in processing time
    - \$93,600 annualized cost reduction for one product

*“We eliminated a bottleneck that caused the placement of an on-site customer representative. CMTC helped us get on schedule and we saved a lot more than CMTC cost us. The customer and the representative went home happy.” -- Khushroo Lakdavwala, Ph.D. VP Operations*



## **CMTC Client Impacts**

### **Case Study 6**

### **M.C. Gill Corporation**

- M.C. Gill, in El Monte, CA, is the world's largest manufacturer of original equipment and replacement baggage compartment liners & lightweight composite sandwich panels used for flooring in passenger & freighter aircraft.
- Results from implementation of Lean:
  - **Design of Experiments**
    - 50% reduction in consumable costs in production

*“We were able to see an annualized cost savings after working with CMTC.” - Paul Draghi, Director of Operations.*



# ***CMTC Engagements Partial Client List***

<b>Astro Aerospace/Northrop Grumman Space Technology</b>	<i>Quality Systems Audit Inventory Management</i>
<b>United Defense</b>	<i>Lean Office – Earned Value Reporting</i>
<b>General Atomics</b>	<i>Lean &amp; Workforce Development Services</i>
<b>Sierracin Corporation</b>	<i>Lean Enterprise Services</i>
<b>Ceradyne, Inc.</b>	<i>Lean Enterprise Services</i>
<b>Aluminum Precision Products</b>	<i>Energy Management Services Lean Enterprise – Office &amp; Production</i>
<b>Lockheed Martin - Palmdale</b>	<i>Composites Training</i>
<b>Dante Valve</b>	<i>Lean Enterprise &amp; IT Services</i>
<b>Q-Tech Corporation</b>	<i>Lean Enterprise Services – Lean Office</i>
<b>M C Gill Corporation</b>	<i>Lean Enterprise Services</i>
<b>Smiths Aerospace (GE Aviation)</b>	<i>Quality Management – ISO 14001</i>
<b>JPL</b>	<i>Information Technology Services</i>
<b>L-3 Communications Ocean Systems</b>	<i>Quality Management Services</i>



# ***CMTC's Innovative Programs Benefit Clients, Suppliers, and Sponsors***

- CMTC's Employment Training Panel (ETP) multiple-employer contract enables clients to access funding offsets for targeted projects and enterprise-wide programs. CMTC provides program management and administration on our \$2MM ETP contract.
- CMTC's award-winning VeSM© - Value Energy Stream Map – delivers energy efficiency for major energy users in California. Projects can be funded through California Public Utilities Commission grants through CMTC.
- California Enhanced Manufacturing Supply Chain (CEMSC) – Defense Logistical Agency (DLA) contract to support diminished manufactured parts for DoD.



# ***CMTC Differentiators***

- Scalable solutions
- Flexible engagement options
- Local, on-staff consultants
- 3<sup>rd</sup>-party verification of impacts & client satisfaction
- Funding offsets reduce clients' cost-shares for projects up-front
- Expertise in Lean Enterprise applications, Quality Management, Information Technology, Leadership / Organizational Development, Supply Chain Management, and Operator Skills (shop & office)
- Serving the Southern California market for 15 years with nationwide MEP collaborative support and deployment capacity