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# 21<sup>st</sup> Century Supply Chain Transformation Survey

## Workforce Innovation in Regional Economic Development (WIRED)

**Project Code:**

(If you have not been given a code please leave blank)

\_\_\_\_\_

**How were you referred to this survey?**

- AVBOT Antelope Valley Board of Trade
- Economic Development Corporation
- CSA California Space Authority
- California Community Colleges
- AVC Antelope Valley College
- Workforce Investment Board
- Professional association
- One of our customers
- One of our suppliers
- InnovateCalifornia.net
- Web Search
- Other (please specify) \_\_\_\_\_

**What is your role in your company?**

- CEO/President
- Supply Chain/Procurement
- Manufacturing/Operations
- Human Resources
- Quality Assurance
- Communications
- Lean
- Other (please specify) \_\_\_\_\_

**Company Profile**

**1. What percentage of your company revenue is sales to the Aerospace industry annually?**

- 0%
- 25%
- 50%
- 75%
- 100%

**2. What other major industries besides Aerospace do you serve?**

- Automotive \_\_\_\_\_ %
- Electronics \_\_\_\_\_ %
- Consumer \_\_\_\_\_ %
- Other (please specify) \_\_\_\_\_ %

**3. What percent of time does your company spend doing the following? (Must total 100)**

Commercial work \_\_\_\_\_ %  
 Government work \_\_\_\_\_ %

**Please refer to the map below to determine region in California for the next two questions.**



*Map based on the 2005 California Regional Economies Project Regions.*

**4. How many manufacturing sites does your company have in each region in California and approximately how many employees in each region?**

	Sites	Employees
Northern California	_____	_____
Northern Sacramento Valley	_____	_____
Greater Sacramento	_____	_____
Bay Area	_____	_____
Central Coast	_____	_____
San Joaquin Valley	_____	_____
Central Sierra	_____	_____
Southern California	_____	_____
Southern Border	_____	_____

**5. How many manufacturing sites does your company**

have in other states and approximately how many employees in each state?

	Sites	Employees
Other states (2-digit code)_____	_____	_____
Other states (2-digit code)_____	_____	_____
Other states (2-digit code)_____	_____	_____

6. Approximately how many employees does your company currently employ in total?

- 1 to 50
- 51 to 100
- 101 to 250
- 251 to 500
- 501 to 1000
- greater than 1000

7. What percent of your company's revenue comes from...

**Systems Integration/final assembly**

- None
- < 25%
- 25-50%
- 50-75%
- 75-100%

**Sub assembly**

- None
- < 25%
- 25-50%
- 50-75%
- 75-100%

**Supplying parts**

- None
- < 25%
- 25-50%
- 50-75%
- 75-100%

**Supplying material**

- None
- < 25%
- 25-50%
- 50-75%
- 75-100%

**Special Processing**

- Never
- < 25%
- 25-50%
- 50-75%
- 75-100%

8. Please indicate the Information Technology Management systems you use internally, with suppliers and with customers. (Check all that apply)

**ERP/MRP (Enterprise Resource Planning/ Materials Resource Planning)**

- internally

- w/ suppliers
- w/ customers
- Not currently using

**e-Procurement**

- internally
- w/ suppliers
- w/ customers
- Not currently using

**PDM/PLM (Product Definition Management/ Product Life Management)**

- internally
- w/ suppliers
- w/ customers
- Not currently using

**MES (Manufacturing Execution System/Shop floor control)**

- internally
- w/ / suppliers
- w/ customers
- Not currently using

**CRM (Customer Relationship Management)**

- internally
- w/ suppliers
- w/ customers
- Not currently using

**SPC (Statistical Process Control)**

- internally
- w/ suppliers
- w/ customers

**CAD (Computer-aided Design)**

- internally
- w/ suppliers
- w/ customers
- Not currently using

**CAM (Computer-aided Manufacturing)**

- internally
- w/ suppliers
- w/ customers
- Not currently using

9. If you selected CAD/CAM what programs do you use at your site? (Check all that apply)

- Catia
- PTC
- Other (Please Specify)\_\_\_\_\_

10. Do you use Exostar, the Aerospace & Defense Global trading Exchange at your site?

- Yes but only when requested to.
- Yes with suppliers and customers.
- No
- Other (Please Specify)\_\_\_\_\_

11. Have you participated in an electronic reverse auction?

- As a bidder when requested to.

- As the customer requesting suppliers to bid.
- No

## Management

**1. Please answer each of the following questions about your company.**

**Does your company have a documented corporate strategy?**

- Yes
- No
- Needs improvement

**Does the corporate strategy include a supply chain strategy?**

- Yes
- No
- Needs improvement

**Is it communicated to all employees?**

- Yes
- No
- Needs improvement

**Does your company sell or buy products internationally?**

- Yes
- No
- Needs improvement

**Has your company identified its core competencies and unique value in the supply chain?**

- Yes
- No
- Needs improvement

**Does your company have experience controlling proprietary customer information?**

- Yes
- No
- Needs improvement

**Is your company cleared to do classified government work?**

- Yes
- No
- Needs improvement

**Is your company ITAR (International Traffic in Arms Regulations) compliant?**

- Yes
- No
- Needs improvement

**Does your company use global sourcing and logistics?**

- Yes
- No
- Needs improvement

**Does your site have contingency plans in place for loss of people, IT, and supply chain disruption?**

- Yes
- No
- Needs improvement

**Do your key suppliers?**

- Yes
- No
- Needs improvement

**Do you have specific processes in place to prevent Counterfeit parts from getting to the customer?**

- Yes
- No
- Needs improvement

**Does your company have an effective Injury and Illness Prevention Program as required by state OSHA standards (Title 8, California Code of Regulations, Section 3203)?**

- Yes
- No
- Needs improvement

## Material

**1. What type of Supply Chain planning for materials does your site perform?**

- 3-5 years
- Annual
- 3-month
- All of the above
- None

**2. How well is inventory accuracy controlled by your site?**

- >98%
- >90%
- <90%

**3. At what point in your company's product development cycle does your supply chain organization and suppliers usually get involved to collaborate?**

- Early phases of product development (design and/or requirements).
- After design is complete, during the production planning cycle.
- When production plan is complete and part orders are required.
- Other (Please Specify)\_\_\_\_\_

**4. At what point in your customer's product development cycle is your company invited to participate?**

- Early phases of product development (design and/or requirements).
- After design is complete, during the production planning cycle.
- When production plan is complete and part orders are required.
- Other (Please Specify)\_\_\_\_\_

**5. What process does your company usually use to select suppliers?**

- Best Value (Competitive selection process based on multiple factors including total cost, quality, delivery, stability).
- Competitive selection which factors primarily price and capacity.
- Usually select known suppliers without competitive bids from others.
- Availability to deliver.
- Other (Please Specify)\_\_\_\_\_

**6. Approximately how many active suppliers do you have?**

- <50
- <500
- <2000

- >2000

**7. Approximately how much does your company spend in material procurement annually?**

- <\$5M
- <\$50M
- <\$250M
- <\$1,000M
- >\$1,000M

**8. How are suppliers managed by your company?**

- We measure suppliers on cost, quality, and delivery and work together with key suppliers to help them improve.
- We measure suppliers on cost, quality, and delivery and share that information routinely with them.
- Little or no metrics are used to manage suppliers

**9. Does your company manage suppliers?**

- For key components
- When there are problems only
- Never

**10. What improvement processes are used by your company? (Check all that apply)**

- Six Sigma
- Lean
- Value stream mapping
- Risk and opportunity management
- Statistical Process Control
- Other (Please Specify)\_\_\_\_\_

**11. Does your company use a specific tool to periodically communicate performance and quality metrics to your customers?**

- No communication of performance.
- Communicate performance but no tool in place.
- Communicate performance using a customer provided tool.
- Communicate performance using our own tool.

**12. Do your suppliers use a specific tool to periodically communicate performance and quality metrics to your company?**

- No communication of performance.
- Communicate performance but no tool in place.
- Communicate performance using a communication method that we provide.

**Manufacturing and Quality Processes**

**1. How much are lean principles used in your manufacturing areas?**

- Lean principles used throughout.
- Lean principles used in about half
- Some lean knowledge and implem

- Lean not implemented.
- Lean not understood.

**2. What manufacturing process controls are used by your company?**

- Mistake Proof (Poke-yoke) and/or SPC used throughout.
- Mistake Proof (Poke-yoke) and/or SPC used in 50% of areas.
- In-process inspection is used to check quality.
- Post-production inspection is used to check quality.
- None
- Other (Please Specify)\_\_\_\_\_

**3. How long has your site used a continuous improvement method such as Six Sigma or lean?**

- For > 2years
- For about 1-2 years
- Less than 1 year
- No continuous improvement process used.

**4. How are performance metrics used in manufacturing to drive improvements?**

- Hourly and daily visual controls and metrics are used by the production line teams to manage production, quality, and inventory.
- Weekly performance metrics are shared with the production line teams by management.
- Monthly performance metrics are shared with the production line teams by management.
- No performance metrics are shared.

**5. Please put in rank order according to priority of supply chain metrics. (1 highest to 5 lowest)**

- On time delivery to customers \_\_\_\_\_
- On time deliver by suppliers \_\_\_\_\_
- Customer return rate/Cost of poor quality \_\_\_\_\_
- Inventory turn \_\_\_\_\_
- Order fulfillment lead time \_\_\_\_\_

**6. How are procedures used by your company in manufacturing to assure good quality?**

- The “standard work” methodology has been implemented (e.g. Nissan/Toyota).
- Written procedures are actively used.
- Written procedures are in place and referred to only for training.
- No written manufacturing procedures are in place.

**7. How does your site manage supplier quality issues?**

- Supplier quality issues are documented and analyzed. The site and suppliers work closely together to resolve problems and improve quality.
- Supplier quality issues are documented. Suppliers are sent information and expected to

- resolve problems independently.
- Suppliers do not respond well to quality problems.
- Other (Please Specify) \_\_\_\_\_

**8. Does manufacturing lay out its product lines to align best with the TAKT time (the rate at which your customers buy your products)?**

- Yes
- No
- Don't know

**Quality Assurance and Documentation**

**1. Which of the following Quality Management System Certification does your company have?**

- AS9100
- ISO 14001
- ISO 9001:2001
- TS 16949
- Mil-Q-9858
- Mil-I-45208
- MIL-PRF 38534
- N/A
- Other (Please Specify) \_\_\_\_\_

**2. How often does your company do quality self audits?**

- Annually
- Quarterly
- Monthly
- Never

**3. What is your site's Nonconformance Management process? (Check all that apply)**

- Documented Nonconformance Process with Corrective & Preventative Action process
- Root cause analysis
- Risk Management System

**4. Does your company have NADCAP Certification in these areas? (Check all that apply)**

- |                     |       |      |       |
|---------------------|-------|------|-------|
| NDT                 | ○ Yes | ○ No | ○ N/A |
| Material Testing    | ○ Yes | ○ No | ○ N/A |
| Heat Treat          | ○ Yes | ○ No | ○ N/A |
| Welding             | ○ Yes | ○ No | ○ N/A |
| Brazing             | ○ Yes | ○ No | ○ N/A |
| Chemical Processing | ○ Yes | ○ No | ○ N/A |
| Platings            | ○ Yes | ○ No | ○ N/A |
| Coatings            | ○ Yes | ○ No | ○ N/A |
| Soldering           | ○ Yes | ○ No | ○ N/A |

**Engineering and Technology**

**1. What capabilities exist in your company? (Check all that apply)**

- New product design
- Design for manufacturability analysis
- Engineering analysis (stress, thermal etc.)
- Testing
- Prototyping - physical
- Prototyping – virtual/digital simulation

**2. What percentage of your suppliers does your site involve with...**

- |  |        |
|--|--------|
| New product design                           | _____% |
| Design for manufacturability analysis        | _____% |
| Engineering analysis (stress, thermal, etc.) | _____% |
| Testing                                      | _____% |
| Prototyping - physical                       | _____% |
| Prototyping - virtual/digital simulation     | _____% |

**3. What percentage of your sales involve customer collaboration with your site?**

- |  |        |
|--|--------|
| New product design                           | _____% |
| Design for manufacturability analysis        | _____% |
| Engineering analysis (stress, thermal, etc.) | _____% |
| Testing                                      | _____% |
| Prototyping - physical                       | _____% |
| Prototyping - virtual/digital simulation     | _____% |

**Training and Development**

**1. Does your company have a workforce development plan that has defined skill requirements, assessment, gaps analysis, and training for all positions?**

- Yes all positions
- Yes key positions only
- No

**2. Are there training and procedures to control high risk activities (e.g. lock out/tag out, confined space entry, excavation/ trenching, work at heights, work requiring hazardous energy control, high voltage electrical work, work involving scaffolding or steel erection)?**

- Yes, with careful auditing/oversight.
- Yes, but limited auditing/oversight.
- No

**3. Where do you anticipate a shortage of employees to occur in the next five years? (Select all that apply)**

- Skilled production
- Unskilled production
- Scientists and Engineers
- Sales and Marketing
- Management
- Customer Service
- None



**Environments**

Not Important Very Important  
1 2 3 4 5

**Initial General Space Hardware Training**

Not Important Very Important  
1 2 3 4 5

**Launch Vehicle Environments, Loads and Testing**

Not Important Very Important  
1 2 3 4 5

**Performance, Reliability, Redundancy for Space Products**

Not Important Very Important  
1 2 3 4 5

**Remote sensing for Earth Science Applications**

Not Important Very Important  
1 2 3 4 5

**Space Environment - Implications for Spacecraft Design**

Not Important Very Important  
1 2 3 4 5

**Space Environment and Spacecraft Environmental Hazards**

Not Important Very Important  
1 2 3 4 5

**Space Systems Fundamentals**

Not Important Very Important  
1 2 3 4 5

**Space Vehicle Mechanisms: Elements of Successful Design**

Not Important Very Important  
1 2 3 4 5

**Spacecraft Connector Mate and Demate**

Not Important Very Important  
1 2 3 4 5

**Spacecraft Thermal Control**

Not Important Very Important  
1 2 3 4 5

2. How can others in the supply chain help you meet quality, delivery, and cost goals more effectively?

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3. What are the primary reasons your company has moved sites out of California? In to California?

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4. Additional Comments:

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**Share Your Thoughts**

1. Please list other key training areas your company would like to pursue in the next 3 years.

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**THANK YOU FOR YOUR TIME**

If you are interested in getting a copy of the summarized results of this survey please provide contact information and remove this page and turn it in separate from your survey responses. All information gathered here is stored in a separate database and will not be shared without your permission.

Name:

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- Innovation Event**
- Annual Transforming Space Conference**
- International Business Event**
- Manufacturing Events**
- Science Technical Engineering Mathematics (STEM) Education Events**
- All Events**

e-mail: \_\_\_\_\_

