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U.S. AIR FORCE



# **MTAPP PROGRAM DESCRIPTION**

June 2008

## MTAPP OVERVIEW

The Air Force Manufacturing Technical Assistance Production Program (MTAPP) is a small business supplier development program established by the Air Force Office of Small and Disadvantaged Business Utilization in 1998.

MTAPP activities are guided by the mission and priorities of the Air Force and the Air Force Office of Small Business Programs. Our core strategic objectives are as follows:

<b>Maintaining America's edge</b>	<b>Supporting Our Veteran's</b>
<ul style="list-style-type: none"><li><input type="checkbox"/> Building critical supply chain capabilities</li><li><input type="checkbox"/> Expanding capacity to meet surge demands</li><li><input type="checkbox"/> Increasing available sources of supply</li><li><input type="checkbox"/> Developing lean &amp; agile small SB suppliers</li><li><input type="checkbox"/> Transitioning technology to the Warfighter</li><li><input type="checkbox"/> Modernizing the aging Air Force fleet</li><li><input type="checkbox"/> Winning in cyberspace</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> Developing SDVOSB suppliers<ul style="list-style-type: none"><li>▪ Identifying opportunities</li><li>▪ Increasing capacity</li><li>▪ Building capability</li></ul></li><li><input type="checkbox"/> Increasing SDVOSB utilization</li><li><input type="checkbox"/> Facilitating wounded veteran business participation</li></ul>

***Delivering excellence by developing and championing small businesses as "providers and suppliers of choice"***

MTAPP provides more than individualized technical and managerial assistance to member companies. To achieve its mission, MTAPP has expanded its role within the Air Force supply chain to become a leading provider of small business market intelligence and a champion of small business manufacturers as critical sources of capabilities in areas of unmet Air Force needs. The value of the program for our stakeholders can now be viewed along the following perspectives:

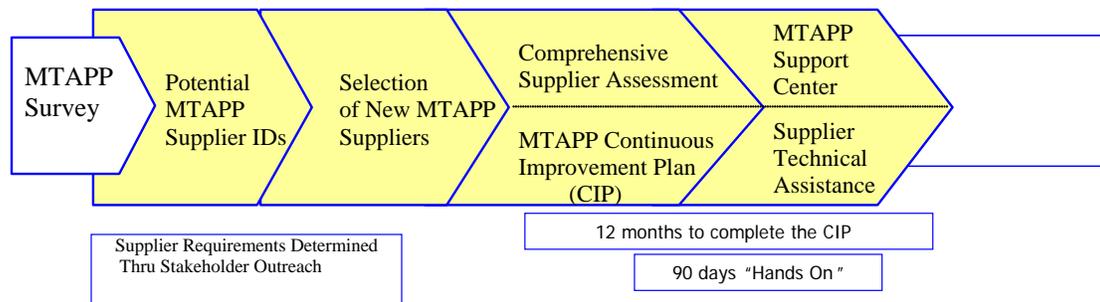
- Provider of ongoing small business market intelligence defining areas of opportunity for increased small business participation
- Strategic partner providing solutions to critical supply chain needs for:
  - Air Force buying commands, Air Logistics Centers, small business offices, and the Defense Logistics Agency (DLA)
  - Major prime and sub tier commercial contractors/OEMs
  - Other government and commercial small business programs
- Networked source of far ranging capabilities across 100 manufacturers dedicated to continuous improvement and best-in-class business performance in support of the Warfighter



MTAPP achieves these objectives through a strategy focused on partnering with stakeholders across supply chain tiers. The ability to reach our objectives and achieve our mission is grounded in the following core program capabilities:

- Identify and forecast critical Air Force supply chain needs by combining stakeholder guidance and ongoing research and data analysis
- Expose root causes of supply chain constraints
- Develop high probability solution plans for small business intervention using the experience of our partners and member suppliers
- Identify capable member suppliers and develop them to provide required capabilities against these plans
- Continuously enhance our leading supplier assistance best practices

MTAPP implements this strategy through an iterative process that aligns standardized assessment and development techniques with the requirements of our stakeholders. To maximize return on invested resources, member supplier development requirements are prioritized against stakeholder needs and investments in customized technical assistance applied to areas with the highest potential return.



### *MTAPP Supplier Development Framework*

The Manufacturing Technical Assistance Pilot Program (MTAPP) was created in 1998 as a five-year pilot initiative to assist in increasing the capabilities and enhancing the competitiveness of small business manufacturers in support of the Air Force and DoD missions. During its pilot phase, MTAPP worked with 61 designated small business manufacturers providing the following support:

- Assessed small businesses in terms of capacity and contract viability
- Developed continuous improvement plans (CIP) in areas of deficiency
- Provided individualized technical assistance and resource support expand capabilities and address deficiencies

At the close of its pilot phase, and in recognition of the rapidly evolving needs of the Air Force supply chain, MTAPP conducted a strategic program review and determined that changes would be required optimize the impact of its network of small business



manufacturers. In recognition of this need for change, MTAPP identified the following requirements for achieving this optimization:

- Focus program efforts using market research and stakeholder input to identify areas of need where MTAPP had a high probability of providing a solution
- Increase program impact by refining the supplier selection and development process to align with areas of need
- Select new MTAPP members based on more stringent requirements integrating minimum performance and capability requirements
- Expand MTAPP reach by raising the programs visibility within the aircraft procurement community
- Enhance member company business development opportunities and increase their likelihood of identifying and winning business opportunities
- Align technical and managerial assistance efforts with evolving industry requirements and expectations
- Increase program efficiency by establishing clearly defined time lines for active program participation by the selected small businesses

In May 2003, MTAPP transitioned to production status with the selection of a new technical assistance provider and a refined statement of work guided by insights gained during the pilot phase. The production phase kicked off with an initial research effort with the objective of establishing a cornerstone roadmap for program implementation. This effort formalized the processes by which MTAPP would continually identify and address evolving supply chain needs.

## **MTAPP SUPPLIER IDENTIFICATION PROCESS**

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At the core of the identification process for new MTAPP manufacturing companies is a search for organizations that have the technical and business capabilities to address specific identified needs. Examples of previous categories of capabilities/end product requirements used include:

- Advanced composite manufacturers
- Reverse-engineering capability
- Kitting of spares for repair in battle field
- Canopies/Windshields
- Power supplies/Thermal Batteries
- Landing Gear (F-15)

To maximize MTAPP resources and to minimize supplier development risks, MTAPP relies heavily on our major stakeholders for the requisite insights and data to complete both our Research Study and supplier identification phases. During the supplier identification process MTAPP works closely with these government, commercial, and industry organizations to ensure fair and open access to all small businesses operating within the identified sectors of the supply chain. In addition, MTAPP remains an open program for self nomination by any

small business that believes it can meet both the capability and performance requirements of the selection process. This broad based and open effort is required to ensure that the selected suppliers possess the requisite capabilities, experience, and commitment.

*Stakeholder Nominations*

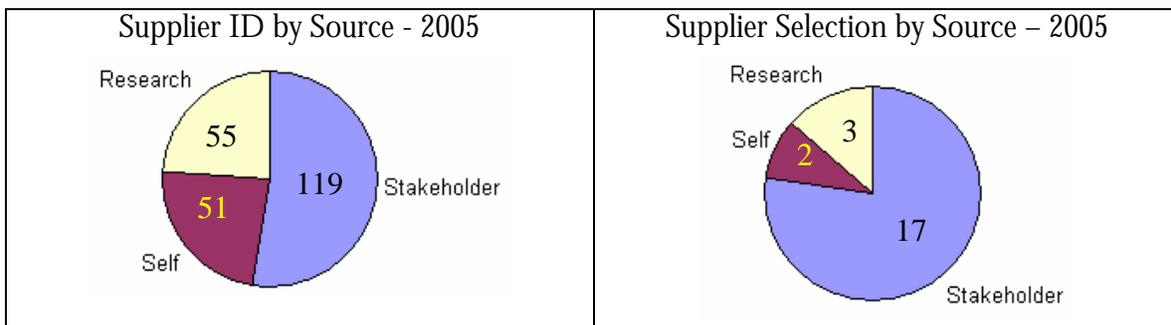
Following the completion of the Research Study effort, MTAPP works with participating stakeholders to identify suppliers for consideration within the program. Nominating organizations receive a summary of the needs identified by the study, capabilities required to address these needs, and the minimum requirements for nominated suppliers (see below for detail.) MTAPP reviews these findings with each stakeholder via conference call to identify specific focus areas relevant to the stakeholders own supply chain efforts. The desired outcome of this effort is to both ensure that supplier development efforts are coordinated and to manage the size of the nominated supplier pool.

Following a period of focused discussion, The Technical Service Provider collects from the “Nominators” a list of the contractually required number of potential supplier nominations. Incoming nominations are placed into the supplier eligible pool for the selection review detailed below.

*Supplier Self-Nominations and MTAPP Research*

MTAPP remains committed to being a program open to any small business able to meet both the minimum supplier requirements and possessing capabilities tied directly to a stakeholder through the MTAPP website, we solicit self nominations for program consideration. Where possible, these self-nominated suppliers are matched with a stakeholder for the review process. The evaluation process described below is conducted blind as to the nominating source.

In certain circumstances, MTAPP must find small business suppliers capable of meeting specific needs. This can result from either stakeholder request to expand their potential nominating pool or absence of nominated suppliers covering the need.



**MTAPP SUPPLIER SELECTION GUIDELINES**



New MTAPP companies are chosen based on selection criteria developed from joint discussions with the AF Program Management team. These criteria include both minimum performance thresholds and overall capabilities.

*Minimum Supplier Requirements*

In parallel with the collection of the nominations, The Technical Service Provider completes a review of each supplier to independently determine eligibility along the following criteria:

	<b>AREA OF NEED/NOMINATION FOCUS</b>	
<b><u>Minimum Selection Requirements</u></b>	<b><u>Technology/Process</u></b>	<b><u>Manufacturing/Output</u></b>
Must Be a Manufacturing Business	NO	YES
Must Be a Small Business	YES	YES
Minimum Annual Revenue	\$2 million	\$5 million
Minimum Number of Employees	10 Employees	20 Employees
Minimum Years in Business	2 Years	10 Years
Ability to address AF/DoD/Prime needs	YES	YES
Min. quality system review (ISO compliance)	NO	YES
Current SBIR/STTR Phase II Grant	YES	NO

*Supplier Capability and Performance Evaluation*

Once the list of nominated suppliers meeting the capability/eligibility requirements has been finalized, MTAPP conducts a supplier evaluation to rank suppliers. This evaluation process is standardized within commodity/capability categories to ensure a fair and equitable decision process. Where relevant the Nominator is asked to be an active participant during the supplier information collection activities. The evaluation includes an interview of nominee senior management to determine interest and commitment to the underlying business and process improvement philosophies that make up the foundation for MTAPP program activities.

The Technical Service Provider will assess each nominee in the following categories:

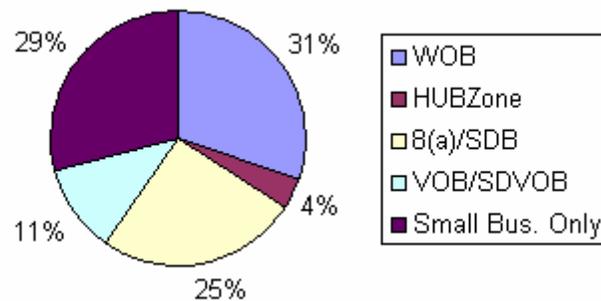
- Management strength
- Operations planning
- Quality systems and performance
- Production capabilities
- Financial stability

*Socio-Economic Considerations*

Because the MTAPP program is a small business initiative, additional consideration will be given when appropriate to the following supplier categories:

- Certification status – 8(a)/SDB, VOSB, HUB Zone, Alaskan Native Corporations (ANC), and Native American owned businesses
- Socio-economic classification - woman owned business, minority owned business

Below is the breakout of MTAPP companies by certification and socio-economic status:



These considerations will only play into the selection of suppliers when there is no capability or performance based differential between suppliers.

## **MTAPP SUPPLIER COMPREHENSIVE ASSESSMENT AND CIP CREATION**

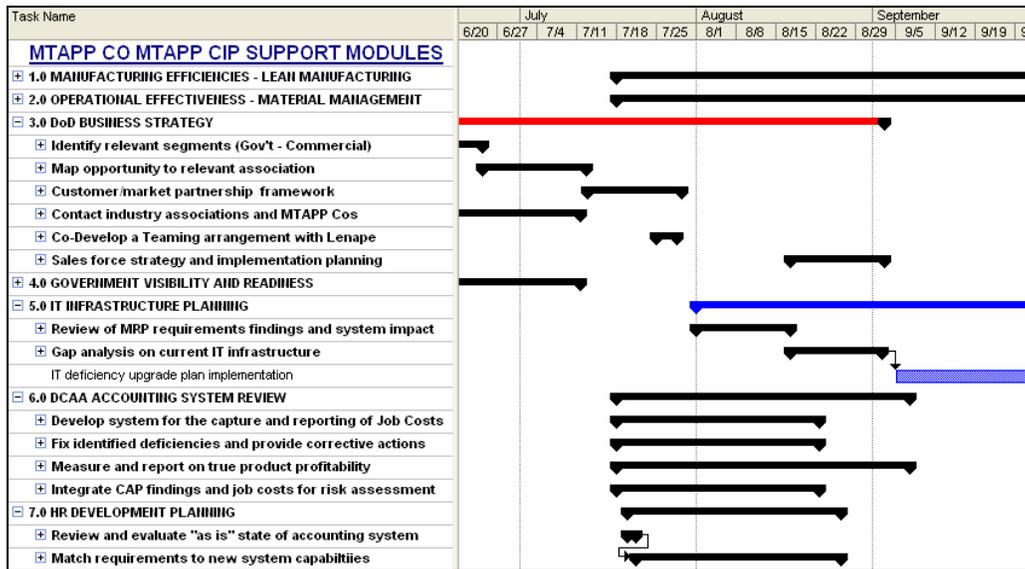
Once selected as a new MTAPP supplier, each member company is assessed to identify areas of potential improvement for their CIP. The MTAPP comprehensive assessment process (CAP) involves an in depth review of business strategy and all functional areas impacting business performance.



The results of this assessment are captured in a supplier scorecard that integrates observations from across functions to create a holistic view of the company's potential as a long-term Air Force supplier.

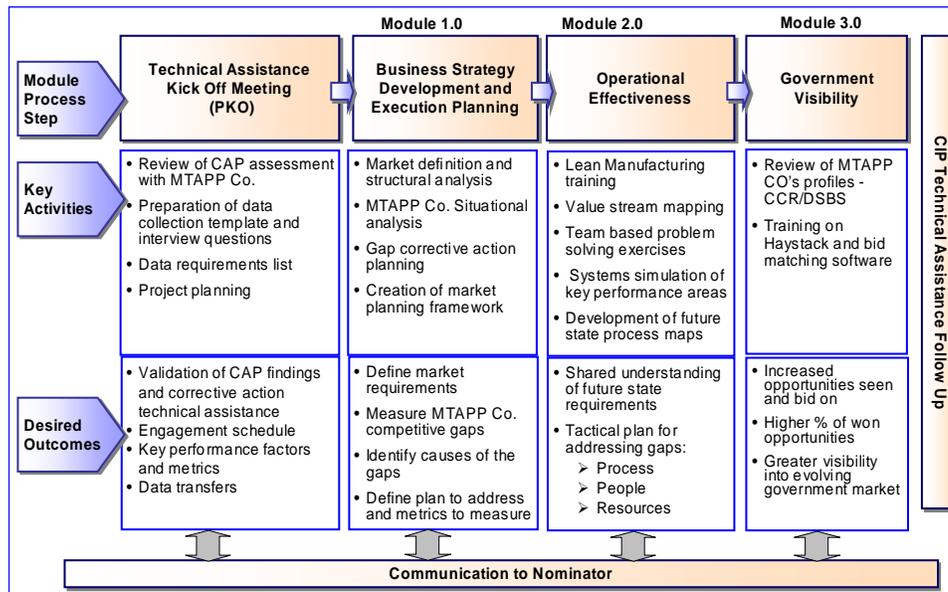
Assessment Areas	Grade	Summary Conclusions
Manufacturing	Y	Manufacturing capabilities are well suited for the core production of composite materials . Production efficiencies will be realized with a modern approach to lean manufacturing. Full MRP implementation of COSS will identify scheduling issues earlier in the process.
Quality	Y	MTAPP CO is positioning their quality assurance system for ISO/AS registration and has made significant progress. Management is committed to these efforts and has demonstrated to the Asaba Group that quality is a top priority.
Information Technology	G	Ghost-Net is the service provider that is currently contracted to maintain MTAPP COs Information Technology system. Improvements after implementation and full utilization of COSS will streamline the transference of data between the departments at MTAPP CO.
Human Resources	G	A team spirit existed at MTAPP CO. A friendly working atmosphere was evident. A new mindset is beginning to evolve and employees are again looking to the future as a change in attitude that is focused around a more lean environment takes shape.
Finance and Accounting	G	MTAPP CO has the appropriate systems in place for future growth. They have a very capable team and a CPA that drives the department. They need to develop budgets and link their systems. MTAPP CO needs to prepare for the DCAA audit in the future.
Sales and Marketing	Y	MTAPP CO is dependent on a limited number of clients and is addressing the issue of instituting their future requirements to become ISO/AS registered in order to continue to secure future contracts.
Government Sales Readiness	Y	MTAPP CO has not as yet developed a direct-to-government selling strategy or business pipeline. Breaking into the government market will require significant review of all potential entry points. MTAPP CO will need to develop capabilities in recognizing targets as varied as SBIR/STTR and aging aircraft.

In collaboration with the senior management of the member company, MTAPP uses the conclusions of this CAP to develop an ongoing CIP. This CIP includes both areas for specific technical assistance engagements and areas where the company must expend internal resources to realize improvement objectives. This CIP is then tracked by MTAPP during a 12 month period of supplier development.



## MTAPP TECHNICAL ASSISTANCE IN SUPPORT OF MEMBER CIP

Following the creation of the MTAPP company CIP, technical assistance engagements address areas where requirements for outside expert technical assistance and the potential impact on the member company's ability to enhance its support of the Air Force.



### *MTAPP Technical Assistance Focus Areas*

#### **Business Strategy**

**Strategic planning and business strategy:** Strategic planning and business strategy assistance will help the company's leadership team develop a plan that provides guidance, directions, and decision boundaries for their companies. The goal is to assist the companies develop a set of plans for surviving and prospering in the industry value chain. This effort will assist the companies with defining their vision, mission, competitive advantage, and implementation plans.

**Organizational structure and alignment:** This involves structuring and aligning the human resources to accomplish the companies' objectives / goals. Assistance will focus on helping companies to define the optimal firm architecture, structure of the organization, and key performance monitoring metrics.

**Sales and Marketing planning:** Assistance will assist in defining and developing a comprehensive sales and marketing strategy by helping the firm accomplish the following: understand the industry / commodity dynamics and characteristics, select and prioritize product / market opportunities, conduct an internal capability assessment and develop required product / service offerings, create sales and marketing plans.

**Competitive benchmarking:** MTAPP companies are provided benchmarking statistics on how they compare with industry top quartile and average benchmarks. In addition, companies are provided specific comparisons to an identifiable set of comparable competitors. The benchmarking information will contain both relevant financial and operating statistics. The competitive benchmarking information will help MTAPP companies understand performance gaps and how best to address these gaps with available technical assistance.

**Accounting, financial, and cost improvement assistance:** The accounting, financial, and cost improvement assistance focuses on enhancing capabilities in financial reporting, financial and accounting management, and improving company cost performance. Cost improvement focuses on reducing purchasing, overhead, and operational-related costs, and on productivity improvement. For those companies who lack government approved accounting system, the necessary assistance in establishing one is provided. All MTAPP companies have the capability to graduate with a government approved accounting system.



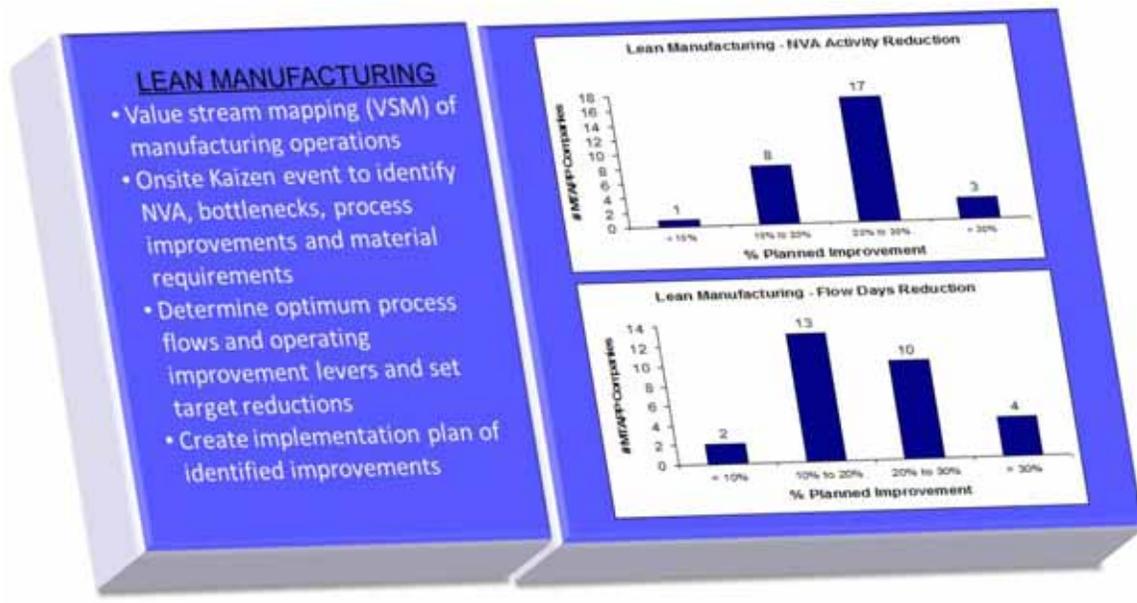
### Operational Effectiveness

**Lean Manufacturing:** Lean manufacturing aims to minimize the amount of all resources, such as time, capital, etc., used in the various activities of the company. Beginning with value stream mapping exercises of current and future state flows, these engagements focus on identifying and eliminating all non value-added activities in design, production, customer service, and supply chain management. Manufacturing and operations assistance can be

provided for the following initiatives: pull production, flexible operations, total productive maintenance, error proofing, waste elimination, conversion reduction, shop floor control, layout optimization, and industrial materials management.

**Quality program developments and upgrades:** Assistance with implementation of quality programs and compliance is provided. In addition, areas for improvement are identified, with a plan to make the improvements, and the results measured against the management established requirements. The assistance is focused on the following standards: AS9100, ISO9000: 2000, QS-9000, TL 9000

**Business process improvement:** This form of assistance is targeted on improving the cross-functional business processes within the firm. Business processes such as order fulfillment, product development, risk management, etc. are addressed. Provided assistance is targeted to enhance the firm’s process diagnosis capabilities: process mapping, evaluation, optimization, and re-design. These engagements are typically closely tied to the Lean Manufacturing initiatives but focus more on the information flows of the organization.



**Business Support Systems**

**Internal DCAA audit assistance:** MTAPP will add value and improve participant’s organization’s controls and governance operations. Internal audit operations can be augmented when necessary, peer reviews provided, complex risk management assignments completed, and advice boards established. In addition, assistance will focus on achieving compliance to DCAA requirements. This assistance is addressed: accounting and financial audits, ISO / Quality audits and DCAA processes / procedures.



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**Information and business systems:** Consultation for a wide range of Information Technology requirements is provided, such as production control and business operations software identification and selection, database development, and other IT related issues. The goal is to get the maximum benefit from the investment in technology. Some examples include the following: web site development assistance, Manufacturing Resource Planning (MRP) software identification and implementation, Facility networking, and Information Systems

*MTAPP Additional Technical Assistance in Support of Member's Ongoing Improvement Efforts*

At the end of the 12 months of active CIP assistance, the participating companies complete the program and become a member of the MTAPP Reserve. Members of the Reserve program have the following benefits:

- Continued technical assistance provided by the helpdesk assistance center
  - Parts history reports to assist with response to government bids/RFPs
  - Tailored RFP and bid matching assistance
  - Bi-annual competitive benchmarking profiles
- Networking with other MTAPP and Reserve companies
  - Potential opportunities for alliance and partnering
  - Sharing of knowledge and bidding opportunities
- Ongoing training and knowledge transfer
  - Regional training events sponsored by MTAPP stakeholders
  - Access to online training and knowledge resources

## **MTAPP WEB SITE AND ONLINE RESOURCES**

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The MTAPP website has been updated numerous times to provide more valuable content for both our small business members and our major stakeholders. The site offers insights into ongoing industry changes as well as links to sources of valuable information. For potential commodity buyers from both government and commercial organizations, the site also provides a searchable database of MTAPP company capabilities.

## **MTAPP PROGRAM PERFORMANCE TRACKING**

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MTAPP monitors its progress as a leading small business initiative to ensure that our stakeholders receive maximum value from the program. Our efforts are focused on achieving five core objectives.

*MTAPP Strategic Objectives:*

- Champion SB manufacturers within the AF supply base and position suppliers to deliver a meaningful value proposition to the AF
- Rapidly identify and address the most critical AF supply chain issues with the highest probability for successful small business solutions

- Build the strongest possible network of SB manufacturers to provide long-term support of these evolving AF supply chain
- Maintain the most innovative and practical supplier development methods and execution frameworks
- Maximize the return on invested resources for all our stakeholders

MTAPP meets these objectives by leveraging the experience and support of our program sponsors including front-line Air Force supply chain personnel, our prime contractor partners, and leading aerospace industry organizations. MTAPP maximizes the return on supplier assistance investments by combining stakeholder input with iterative research to accurately identify the most critical Air Force supply chain needs and target our assistance to addressing the root causes in these challenge areas.

Air Force Need	Source	Activities	Outcome
<b>Avionics &amp; Testing Equipment</b> <i>Source Development</i>	WR-ALC (ESCC)	<ul style="list-style-type: none"> <li>• Value stream map core processes</li> <li>• Identify and remove waste (NVA)</li> <li>• Root cause analysis on failed parts</li> <li>• KanBan inventory system</li> </ul>	<ul style="list-style-type: none"> <li>• 28% NVA removed</li> <li>• 12% failure reduction</li> <li>• \$8M in incremental AF contract support</li> </ul>
<b>F-15 Landing Gear Supply Constraint</b> <i>Increased Capacity</i>	OO-ALC (LGCC)	<ul style="list-style-type: none"> <li>• Value stream map core processes</li> <li>• Identify and remove waste (NVA)</li> <li>• Create Lean Six Sigma teams</li> <li>• Improve production scheduling</li> <li>• Explore teaming to expand capacity</li> </ul>	<ul style="list-style-type: none"> <li>• Reduced NVA 20%/ Flow Days 27%</li> <li>• 22% increase in machine availability</li> <li>• \$20M in incremental AF contract support</li> </ul>
<b>Thermal Batteries Adv Power Supplies</b> <i>Increased Capacity &amp; Capability</i>	AFRL Lockheed Martin	<ul style="list-style-type: none"> <li>• Remove NVA from manufacturing</li> <li>• Implement AS 9100 quality system</li> <li>• Identify most critical AF requirements</li> <li>• Pursue R&amp;D teaming with established prime contractor</li> </ul>	<ul style="list-style-type: none"> <li>• 20% NVA reduction</li> <li>• AS 9100 certification</li> <li>• Teaming agreement for new AF NiMH battery</li> </ul>
<b>3<sup>rd</sup> Party Logistics Kitting of spares</b> <i>Advanced Supply Chain Capabilities</i>	WR-ALC (SECC) OC-ALC (JACC)	<ul style="list-style-type: none"> <li>• DCAA system compliance</li> <li>• Automated MRP/estimating systems</li> <li>• Train on AF commodity council req'ts</li> <li>• Lean analysis on kitting processes</li> </ul>	<ul style="list-style-type: none"> <li>• MTAPP Co. awarded \$28M 3 year contract (WR-ALC)</li> <li>• Kit-Pack: \$5M in incremental AF support</li> </ul>
<b>Repair/Overhaul CSAR: HC-130N PHH-60G</b> <i>Contract Execution</i>	WR-ALC	<ul style="list-style-type: none"> <li>• Develop quality and safety manual</li> <li>• Remove NVA from repair process</li> <li>• Capital planning for new facility</li> </ul>	<ul style="list-style-type: none"> <li>• Awarded \$48M CSAR R/O contract</li> <li>• Completed first task 7/07</li> </ul>