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OFFICE OF SMALL BUSINESS PROGRAMS

VISION STATEMENT
The vision of the Office of Small Business Programs at NASA Headquarters is to promote and integrate all small businesses into the competitive base of contractors that pioneer the future of space exploration, scientific discovery, and aeronautics research.

MISSION STATEMENT
✦ To advise the Administrator on all matters related to small business,
✦ To promote the development and management of NASA programs that assist all categories of small business,
✦ To develop small businesses in high-tech areas that include technology transfer and commercialization of technology, and
✦ To provide small businesses maximum practicable opportunities to participate in NASA prime contracts and subcontracts.
The NASA Industry Forum (NIF) is an Agency-wide endeavor to share Center-level information that is of concern to both NASA and NASA's contractors. The NIF is comprised of contractor representatives from all NASA centers. Contractor representatives participate in Center-level non-consensus forum discussions at NIF meetings. The NIF includes representatives from both small and other-than-small businesses. The NIF is not expected to reach consensus decisions, nor to provide consensus advice or recommendations to the Agency.

Centers recommend vendors that participate in their industry councils to the Office of Small Business Programs (OSBP) to participate in the NIF; and the Associate Administrator for Small Business Programs invites representatives from these recommendations to participate.

The NIF meets twice per year in the spring at NASA Headquarters in Washington, DC, and in the fall at a designated NASA center. One of the developments from the NIF are the six initiatives listed below:

1. Help large businesses meet small business goals;
2. Help small businesses grow their business;
3. Provide NASA Procurement Specific Business FAR, SBA (regulation) updates to NIF;
4. Develop plans/ideas to assist Centers in meeting and/or exceeding small business goals;
5. Improve industry awareness and access to forecasted NASA acquisitions; and
6. Improve and develop communication and interaction between NIF and Center Contractor Councils.

This publication is the outcome of the second initiative to “Help small businesses grow their business,” and its purpose is to highlight successful partnerships between NASA vendors and share their stories. The booklet is published twice per year (summer and winter) and is available for download at [http://www.osbp.nasa.gov/publications.html](http://www.osbp.nasa.gov/publications.html).

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NASA INDUSTRY FORUM

REPRESENTATIVE COMPANIES

AMES RESEARCH CENTER

AECOM Technical Services, Inc.
Large Business

(ARTS) ASRC Research and Technology Solutions
Small Business

Bay Systems
Small Business

Jacobs Technology, Inc.
Large Business

GODDARD SPACE FLIGHT CENTER

A.I. Solutions
Small Business

Edge Space Systems, Inc.
Small Business

Honeywell Technology Solutions, Inc.
Small Business

Millennium Engineering and Integration Company
Small Business

Omitron, Inc.
Small Business

Sierra Lobo
Small Business

SSAI
Small Business

SYNEREN TECHNOLOGIES CORPORATION
Small Business

Vantage Systems, Inc.
Small Business

JET PROPULSION LABORATORY

NASA Management Office—Jet Propulsion Laboratory
Large Business

ARMSTRONG FLIGHT RESEARCH CENTER

InuTeq, LLC
Small Business

GLENN RESEARCH CENTER

Science Applications International Corporation (SAIC)
Large Business

Universities Space Research Association
Non-Profit

Zin Technologies, Inc.
Small Business
Tell us about your company’s history and its capabilities:
AE3 Partners, Inc., is a leading provider of architecture and project management services in the Bay Area and beyond. We focus on commercial or civic, transportation, multi-family residential, and exclusive custom home projects. Client types include Government, institutional, corporate, and private sector developers.

Founded in 2007, our firm’s client-centered approach, innovation, and use of cutting edge technology has enabled us to grow to 26 people, with main offices in San Francisco, Oakland, Los Angeles, and Washington, DC. Our clients rely on our experience, responsiveness, and pragmatic design skills. Many of our client’s challenges are actually opportunities to create a better project.

How many employees does your company have?
26

Tell us about your recent success story at the NASA Center(s):
Five years ago, AE3 Partners had the opportunity to team with Architecture, Engineering, Consulting, Operations, and Maintenance Company (AECOM) on the San Francisco Public Utilities Commission Sewer System Improvement Program (SSIP). The project has been a success and enabled AE3 to meet and form strategic relationships with AECOM Federal business line leaders across the United States, from Georgia to Alaska to California. As a result of this hard work and effort, AE3 was chosen as a protégé to AECOM under the National Aeronautics and Space Administration (NASA) Mentor-Protégé Program (MPP).

As a result of entering into this program with AECOM, AE3 Partners has been given several task orders under a Master Services Agreement (MSA) with AECOM providing Construction Management services on various Indefinite Delivery and Indefinite Quantity (IDIQ) tasks at NASA Ames Research Center. In addition, AE3 has attended training sessions on various subjects. These task orders and training sessions have increased AE3’s project management capabilities, improved our quality management system, and helped to develop and implement our capabilities to address issues such as electronic construction administration, permit review and plan-checking process implementation, and facility document archiving and configuration management. These increased capabilities have
helped grow our business and have led to additional opportunities (described in further detail in subsequent sections).

**Describe what services or support you provided at the NASA Center(s):**

AE3 Partners is working under a Master Services Agreement (MSA) with AECOM to provide construction and project management support services for various IDIQ tasks at NASA Ames Research Center (ARC). These tasks are being performed for the NASA Ames Facilities Engineering Branch (Code JCE) for multiple projects throughout the AMES campus.

Construction management support is primarily for Multiple Award Construction Contracts (MACC II), an IDIQ MSA for various multidisciplinary (electrical, mechanical, structural, civil, et al.) facilities construction projects and includes the following: review, response, and coordination of submittals and RFIs; participation and leadership in all project meetings; preparation and distribution of project reports and documents; participation in site visits, field observation, and testing; quality control oversight of contractor qualifications; and assurance of compliance by NASA, Santa Clara County, with building code requirements.

Project management support has been provided for projects belonging to Planetary Ventures Limited Liability Company (LLC).

**Describe your company's future:**

AE3 Partners is well positioned for future growth. Through programs like the NASA Mentor-Protégé Program, we are increasing our capabilities and strengthening our portfolio. AE3’s plan for 2016 is to focus on the Federal, transportation, and civic or commercial market sectors.

Over the past few years, we’ve had success working on projects at San Francisco International Airport (SFO). With our strengthened project and construction management capabilities, we have been able to win additional projects at SFO (recently in a prime role) and plan to use this experience to expand our transportation portfolio with other transportation clients such as Bay Area Rapid Transit (BART), Los Angeles World Airports (LAWA), and the San Francisco Municipal Transportation Agency (SFMTA).

We are also planning to make the most of our last years in the 8(a) Program to strengthen our relationships with Federal clients such as the U.S. Department of Housing and Urban Development (HUD) and the General Services Administration (GSA). The Mentor-Protégé Program has been a huge success for AE3, leading to increased skills and capabilities. This has, in turn, allowed us to grow our company and win larger and more significant projects.

**How has your business evolved or grown supporting NASA?**

Through the support of AECOM under the NASA Mentor-Protégé Program, AE3 Partners has increased its capabilities, which has led to growth and additional project opportunities for our company. Through our strengthened relationship with AECOM and periodic meetings with AECOM’s National Governments Small Business Liaison and NASA Account Leader, various opportunities beyond NASA Ames have been identified within AECOM and beyond. One example of which is AE3 Partners’ participation on the L.A. County Deferred Maintenance Project team for the City of Los Angeles. This participation has led to an increased presence in the Los Angeles area and growth in our Los Angeles office. In addition, AE3’s Oakland office was recently damaged by a building fire and had to temporarily close. Due to our enhanced project management capabilities and organization, we were able to quickly move all operations to the San Francisco office. This enabled us to continue business as usual without compromising project deadlines.

The Mentor-Protégé Program has been a huge success for AE3, leading to increased skills and capabilities. This has, in turn, allowed us to grow our company and win larger and more significant projects.

**AE3 Partners, Inc.**

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**Socioeconomic Category:** Minority-Owned Small Business

Rick Dumas, Principal
415-233-9991
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Tell us about your company’s history and its capabilities:
Logical Innovations, Inc., is a Small Business Administration (SBA)-certified 8(a)/Small Disadvantaged Business, Woman-Owned Small Business, and Economically Disadvantaged Woman-Owned Small Business with experience supporting NASA technical, business, and administrative services contracts since 2006. Logical’s current and past Federal clients include NASA at Armstrong Flight Research Center (AFRC), Ames Research Center (ARC), Johnson Space Center (JSC), Glenn Research Center (GRC), Headquarters (HQ), Goddard Space Flight Center (GSFC), Marshall Space Flight Center (MSFC), and Stennis Space Center (SSC); the United States Agency for International Development (USAID); the Department of Commerce – U.S. Census Bureau; the Department of Defense – U.S. Army and Space and Naval Warfare Systems Command (SPAWAR); the Department of Homeland Security – Federal Emergency Management Agency (FEMA); and the Department of Transportation at Federal Highway Administration (FHWA) and Federal Aviation Administration (FAA). Additionally, we support commercial energy industry clients and prime contractors.

Logical Innovations has been honored as “One of Houston’s Best and Brightest Companies to Work For” by its employees and validated by its customers through awards, recognition, exceptional Contractor Performance Assessment Reporting System (CPARS) evaluations, and glowing third-party surveys.

How many employees does your company have?
Logical Innovations currently has 70 employees, with an additional 53 employees with its majority owned and managed joint ventures. As of May 1, the employee count exceeds 140.

Tell us about your recent success story at the NASA Center(s):
Logical Innovations has provided support services to NASA since its first day of operations on November 1, 2006. We are a company with a long history supporting NASA, dating back more than 31 years through the personal career of owner Denise Navarro, who worked as a NASA contractor for more than two decades before forming the company.
Since our inception, we have continually added new NASA locations to our portfolio of customers. With a pipeline of opportunities focused on NASA, we set a 5-year goal in 2013 to add AFRC to our growing list of NASA customers. After years of marketing, research, and growth (that began with the Center for Applied and Translational Sensory Science CATSS I opportunity), we directed our focus to the CATSS II effort, an effort for which we have built a solid foundation and developed a strong past performance and set of capabilities to successfully perform, after determining to “no bid” CATSS I to further develop.

Our patience and persistence paid off in December 2015, as we began supporting AFRC with the phase-in of the CATSS II contract. We achieved our goal 2 years early when we began our first day of operations on January 1, 2016.

Describe what services or support you provided at the NASA Center(s):
Under the CATSS II contract, Logical Innovations provides acquisition, financial, administrative, outreach, and strategic communications support to our AFRC customers across multiple organizations, and at three different locations. Our staff members focus on providing in-depth support to customers, from both institutional and program perspectives. Further, we maintain a network of additional bench support for special projects, as required.

How has your business evolved or grown supporting NASA?
Logical Innovations began its corporate career with its first subcontract in November 2006 at GSFC. As a growing small business, we continued to network by attending various NASA small business events, primarily focusing on those that provided the most coverage for the investment, such as the JPL Small Business Conference that was attended by representatives from all NASA Centers, Headquarters, large prime contractors, and other small businesses. Events such as these provided us access and introductions to all NASA Centers and helped build our network of potential teaming partners. The workshops provided lessons on building, growing, and sustaining a business. Over the years, we added several other NASA Centers to our portfolio, as a prime, subcontractor, or bench support, to include AFRC, JSC, GRC, ARC, MSFC, SSC, and Headquarters. Presently, we are a prime contractor at AFRC, JSC, ARC, GRC, and HQ, and a subcontractor at GSFC and JSC. As we expand our footprint across NASA, we participate and contribute to those Centers we support through involvement with organizations such as NASA Industry Forum, contractor councils, and small business councils.

Describe your company’s future:
As Logical Innovations approaches its 10th year of operations this November, we reflect on the successes and lessons learned we have enjoyed and endured and look forward to continued success and growth. Our goal is to have a presence at all NASA Centers across the country. In fact, one of our favorite slogans is “Coming soon to a NASA Center near you.” As we continue to grow and develop our capabilities, we are setting additional goals for growth within new Federal agencies, expansion of our portfolio of offerings, and development of our network of valued teaming partners.

We recognize that all successes, past, present, and future, are not accomplished without our amazing staff that work with us and provide outstanding support for our clients to solidify our reputation.
Tell us about your company’s history and its capabilities:
ZIN Technologies, Inc., provides engineering and product development services and products to the aerospace community. Our primary customers are National Aeronautics and Space Administration (NASA); Department of Defense (DOD); and prime contractors such as Wyle, Ball, Science Applications International Corporation (SAIC), and Aerojet. ZIN is a Minority-Owned Small Business located in Cleveland, OH, and is AS 9100-registered. ZIN has supported unique research and development programs in the aerospace/aeronautic industry for over 60 years. We provide design, development, engineering, production, and system integration across various programs and projects. We provide test and evaluation of advanced aerospace systems and support the full life-cycle development of aerospace hardware and software. Our engineers are experts in custom and Commercial Orbital Transportation Services (COTS) avionics, structural analysis, thermal management, dynamics analysis and vibration isolation, power, imaging, diagnostics, and electro-optics systems.

How many employees does your company have?
Our organization of more than 250 employees consists of scientists, engineers, designers, technicians, and administrative personnel.

Tell us about your recent success story at the NASA Center(s):
ZIN and the Cleveland Clinic Foundation (CCF) established a new company to commercialize a NASA SBIR-derived wireless bio-monitoring technology called vMetrics. The vMetrics system is a compact ambulatory biometric data-monitoring device for commercial and military use. This vMetrics was named one of NASA’s Hallmark success stories and was featured during NASA’s 50th anniversary celebrations. vMetrics completed Remote Patient Management (RPM) clinical trials in Atrial Fibrillation post-ablation, total knee replacement, and anticoagulation management at the Cleveland Clinic. The vMetrics System defines the state of the art in mobile wireless physiological monitoring, providing a small modular and extensible platform that is configurable to meet various RPM protocols.
Describe what services or support you provided at the NASA Center(s):

ZIN primarily provides engineering services for hardware and software development for space-related programs. These engineering services and products include mechanical, electrical, propulsion, structural, and test engineering support. A prime example of our services is the recently completed acceleration measurement system project. ZIN was a prime contractor to NASA for the design and production of four flight-qualified systems for the Magnetospheric Multiscale (MMS) mission. These systems are inertial navigation avionics boxes that are used in the guidance of NASA's global mapping satellites. The units provide crucial navigation data to the satellites to steer them in orbit. In addition, ZIN will provide major electrical components to Sierra Nevada’s Dream Chaser.

How has your business evolved or grown supporting NASA?

ZIN’s first NASA contract was awarded in 1969 to provide design and drafting services. ZIN’s capabilities have evolved from those post-Apollo days to developing facility class payloads that are flown on the International Space Station (ISS). We have evolved to provide complex satellite and space vehicle systems. ZIN started operating its first research and production facility for the assembly and manufacture of space experiments in 1999 in Cleveland, OH. To date, over 75 percent of the physical science research on ISS has been developed and operated by ZIN. ZIN built and operated the first ISS payload Physics of Colloid Spheres (PCS) and continues to operate the longest running ISS payload (Space Acceleration Measurement System (SAMS)).

Describe your company’s future:

ZIN is focused on supporting the future of manned and unmanned space travel. We are aligning our core capabilities with major national thrust areas that include NASA and DOD programs, as well as commercial exploration. NASA is designing and building capabilities to send humans farther into the solar system than ever before, including to an asteroid and Mars. ZIN’s contributions include fire safety and prevention and the Human Health Countermeasures (HHC) capability that is responsible for understanding the normal physiologic effects of spaceflight and developing countermeasures for those with detrimental effects on human health and performance. ZIN also supports a new generation of commercial payloads for a wide range of new scientific research with direct application to products here on Earth.
Two Fibertek, Inc., flight lasers and lidar electronics are delivered and will be integrated into NASA's Goddard Space Flight Center Ice, Cloud, and land Elevation Satellite (ICESat-2) Earth Observing System mission.

Integration of the flight lasers into the ATLAS instrument for the ICESat-2 was completed in early 2016.

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Tell us about your company’s history and its capabilities:
Fibertek, Inc., is a 30-year old private small business that provides electro-optical technologies and technical/engineering support services to the U.S. Department of Defense, National Aeronautics and Space Administration (NASA), and other members of the Government and aerospace communities. We are based in Virginia and specialize in the development of field-hardened electro-optical sensor systems and lasers for our customers. Our technical staff members have earned advanced degrees in physics, chemistry, electrical engineering, mechanical engineering, or related disciplines. We have full analysis capabilities to support integration on all platforms, including space vehicles, and we leverage a fully integrated product life-cycle management (PLM) approach.

How many employees does your company have?
Fibertek has 135 employees.

Tell us about your recent success story at the NASA Center(s):
Fibertek is responsible for ICESat-2’s Advanced Topographic Laser Altimeter System (ATLAS) instrument laser design, development, fabrication, and test. The ICESat-2 program is NASA’s flagship Earth science altimetry lidar, used to measure ice sheet elevation change and sea ice thickness, while also generating an estimate of global vegetation biomass. ATLAS is the lone instrument on the ICESat-2 mission. In addition to delivering the two flight lasers, Fibertek also delivered key electronic components on the ATLAS instrument.

ICESat-2, slated for launch in 2017, will continue the important observations of ice-sheet elevation change, sea-ice freeboard, and vegetation canopy height begun by ICESat in 2003. Together, these data sets will allow for continent-wide estimates of the change in volume of the Greenland and Antarctic ice sheets over a 15-year period, as well as long-term trend analysis of sea-ice thickness.

Describe what services or support you provided at the NASA Center(s):
Fibertek was responsible for the ATLAS laser design, development, fabrication, and test. The ATLAS lasers output a visible, green, laser pulse 10,000 times per second. Each laser pulse is approximately one billionth of a second long and contains more than a millijoule of energy. The lasers are expected to operate
continuously for the 3-year mission life, firing over 1 trillion laser pulses. The laser performance requirements and long lifetime represent a significant increase in complexity and reliability compared to previous space-based laser systems.

The demanding laser requirements are a result of the differences between the original ICESat launched in 2003 and ICESat-2. The latter will use a micro-pulse, multi-beam approach. This will provide a dense cross-track sampling to help scientists determine a surface’s slope with each pass of the satellite. The sensor will have a high pulse-repetition rate of 10 kHz, to allow the satellite to take measurements every 70 cm along the track. These instrument features will improve the elevation estimates in sloped areas, as well as rough land surfaces such as crevasses.

**How has your business evolved or grown supporting NASA?**

Fibertek’s successful execution of the ICESat-2 laser contract is the result of numerous NASA-funded programs, such as the Small Business Innovation Research (SBIR) program, to develop the critical technologies. The program allowed us to significantly upgrade our facilities to a new 50,000-square-foot facility with 37 fully equipped optical or laser labs and 13,000 square feet of certified cleanrooms. Fibertek is poised to grow its new space hardware system development efforts in support of future NASA missions.

Two key lessons learned during the ICESat-2 contract are the importance of a closed-loop anomaly tracking and reporting system and the value of developing a flight representative prototype for early environmental testing.

Fibertek’s success in delivering spaceflight hardware for ICESat-2 serves to demonstrate our discriminating capabilities for high-reliability space system hardware.

**Describe your company’s future:**

Fibertek will continue advancing the state of the art in lasers, receivers, and electronics that meet the demanding requirements of airborne and space-based lidar systems. Our pioneering work over the last 30 years in electro-optical systems has allowed us to become a globally recognized industry leader, as evidenced by NASA’s continuing support of Fibertek for programs targeting the next generation of Earth and Planetary Science lidar systems. These NASA-sponsored programs involve the development of lasers, receivers, and electronics in support of wind, carbon dioxide, methane, and water vapor lidar systems. In addition to these science-based systems, we are also developing advanced laser communication and landing and docking systems. Fibertek will work closely with Goddard Space Flight Center (GSFC) and other NASA centers to provide high reliability electro-optical systems and associated electronics.

“Fibertek is proud of our accomplishment of delivering state-of-the-art, high-reliability laser systems months before the scheduled laser integration onto ATLAS,” said Guy Beaghler, Fibertek’s President and Chief Executive Officer (CEO). “Fibertek is looking forward to the next mission.”
Tell us about your company’s history and its capabilities:

ANRE Technologies, Inc., (Anretech) is a small, Woman-Owned Small Business based in La Crescenta, CA, that supports organizations in implementing and optimizing all aspects of data center engineering and operations. The company was founded in 2011. Our capabilities include project management, systems engineering, software development, data flow and networking, hardware selection, life cycle methodologies, infrastructure systems, building and facilities management, and seismic analysis.

How many employees does your company have?

Anretech employs seven highly skilled employees (in addition to subcontract teaming partners and subcontractors), who serve in the following roles: Senior Systems Architect, Senior Networking Architect, Senior Cyber Security Engineer, Senior Database Architect, Senior Database Administrator, System Administrator, and Software Development Engineer.

Tell us about your recent success story at the NASA Center(s):

Anretech was recently selected to participate in Jet Propulsion Laboratory’s (JPL’s) Mentor-Protégé Program. Our selection was the direct result of our past performance on a contract supporting an FY15 “IT Footprint Study” on behalf of the JPL Office of the Chief Information Officer (OCIO). The study included an assessment and inventory of 98 data centers’ equipment, capacity, safety, and functions. This study was instrumental in aiding the OCIO with identifying a means of consolidating the laboratory’s data center operations. Due to our successful execution of the study, and the “above and beyond” efforts to submit a highly detailed report to the OCIO, they proposed initiation of a mutually beneficial mentor-protégé agreement for us to continue our collaboration on data center initiatives.

Describe what services or support you provided at the NASA Center(s):

During the past 5 years, Anretech has supported JPL as a subcontractor and prime contractor in all aspects of information system (IT) infrastructure and systems engineering services. The key areas of support include network operations; system operations; system administration; system engineering and design services and support, including system monitoring; data storage; and backup and recovery services.
We have also had opportunities to demonstrate the following core competencies in supporting the lab: software development; cloud services and computing; systems operations and maintenance; data center design and management; database design, development, and management; network enterprise design, integration, consolidation, support, and security; and help desk support.

**How has your business evolved or grown supporting NASA?**

Working with JPL has taught us the importance of diligence, communication, and trust. Prior to receiving a direct award with the lab, we focused on developing business by identifying customers, submitting an unsolicited proposal, and maintaining communication. Through a subcontract with a large prime, we gained additional visibility. Our work as a subcontractor led to a contract to perform several small tasks for data center support. Ultimately, our successful performance fostered end-user confidence in our ability to manage larger-scale projects.

Becoming a JPL supplier required time and patience. The early years of marketing to JPL were valuable in helping us understand the needs of our target customer and prepared us to meet those needs when the opportunity became available.

**Describe your company’s future:**

Anretech looks forward to partnering with the JPL OCIO to overcome any IT challenges they may face. We have many opportunities, especially in the systems engineering and systems consolidation, to help JPL projects successfully migrate their critical systems into state-of-the-art OCIO data centers. Reducing the lab’s smaller data centers into a few centrally managed data centers will reduce costs on many fronts including facility operations, power usage, and most importantly, labor costs.

In addition, Anretech endeavors to leverage its past performance and enhanced technical capabilities gained through the JPL mentor-protégé program (which will provide opportunities for coaching and collaboration on OCIO initiatives and leadership training) to support future prime contracts and subcontracts at other NASA centers.
Tell us about your company’s history and its capabilities: GS Engineering, Inc., was founded in 2001 and is an agile business focused on design, manufacturing, and analysis services for aerospace and vehicle platforms. We specialize in product development, instrumented field testing, and technology integration. GS Engineering’s expertise includes lightweight structural system design, electronics design, and integration of advanced materials.

GS Engineering has received over 600 engineering service contracts totaling over 1,000,000 man hours as a prime contractor to the Department of Defense, supporting a variety of Original Equipment Manufacturers, as well as other Tier I, II and III corporations.

The collective team background encompasses professional expertise in the fields of aerospace, professional motorsports, military and commercial trucks, consumer automotive, off-highway and construction equipment, and rail.

How many employees does your company have? GS Engineering employs over 60 people of the following disciplines: mechanical engineers, electrical engineers, metallurgical engineers, test directors, test engineers, mechanical designers, engineering interns, quality engineers, technicians, and support staff.

Tell us about your recent success story at the NASA Center(s): GS Engineering was able to leverage its engineering resources, quality management system, and vetted supply chain to provide high precision titanium and aluminum machining on critical components for the Orion program, working with Lockheed Martin and Arcata Associates (LMAA). This relationship was formed as a result of the Historically Underutilized Business Zone (HUBZone) Industry Day sponsored by National Aeronautics and Space Administration (NASA) at the Johnson Space Center (JSC) in Houston. By meeting directly with representatives from Lockheed, GS Engineering was able to show their capabilities and competencies to company advocates, which garnered enough interest for the relationship to continue.
Describe what services or support you provided at the NASA Center(s):
N/A

How has your business evolved or grown supporting NASA?
By supporting NASA, GS Engineering has leveraged their investment in AS9100 certification. This has allowed the company to vet its internal quality processes and provide quality manufacturing services not only to NASA, but to other clients as well. This has enabled improvement in the overall quality of services to all of GS Engineering’s clientele and put the company in position to expand to other aerospace areas.

Describe your company’s future:
GS Engineering seeks to be a world-class provider of niche engineering and manufacturing solutions for aerospace, defense, and land vehicle systems. By growing core skill sets and maintaining confidence with our clients, GS Engineering is building its reputation as a go-to resource for complex engineering and fabrication problems. GS Engineering has continued to grow into markets outside of its core military foundation and is expanding more into aerospace, rail, and other high technology markets.
Tim Van Nes, an MEI employee on the KLXS contract at the Kennedy Space Center, recently participated in the crawler-transporter verification and validation rollout for the new jacking, equalization, and leveling system at Kennedy.

MEI employee Justin Ausanka is helping oversee the fabrication and installation of the new extensible platforms for the Vehicle Assembly Building High Bay 3 at the Kennedy Space Center. Image shows platform H-North half being installed in the high bay.

MEI employee Rob Haber supports the verification and validation testing of the mobile launcher umbilical arms and launch accessories at the Launch Equipment Test Facility (LETF). Image shows the Orion Service Module Umbilical (OSMU) retracting during a separation simulation test.

Tell us about your company’s history and its capabilities:
Formed in 1994 as a Veteran-Owned Business, Millennium Engineering and Integration Company provides systems engineering, technical assistance, design and development, integration, operations, safety and mission assurance, and program support to the Federal defense, space, aviation, and cyber markets. As a large small business, Millennium operates as a prime of several major contracts and as a subcontractor to many of the industries leaders. Millennium has contracts with the National Aeronautics and Space Administration (NASA), the Air Force, Navy, the Federal Aviation Administration (FAA), and the Missile Defense Agency (MDA) in both the small business set-aside and full and open market. In addition, Millennium is contributing to many national space programs and has a presence at four NASA Centers. We are also a small business that gives back to other small businesses through Department of Defense (DOD)- and NASA-approved mentor-protégé programs.

How many employees does your company have?
Millennium employs over 500 people in a variety of technical and program support labor categories with highly specialized and highly skilled experts in those fields, including many senior engineers and scientists who are subject matter experts in their fields.

Tell us about your recent success story at the NASA Center(s):
A major goal of the Small Business Administration is to develop small businesses and compete at the full and open level. After years of providing services at Kennedy Space Center (KSC) on small business set-aside programs, Millennium was awarded a full and open contract, KLXS-II, to provide system engineering, integration, test, verification, and program management support for the transformation of KSC to a 21st century spaceport. As a full and open contract, Millennium was required to submit and implement a small business subcontracting plan. Millennium submitted a plan that exceeded small business goals across several key socioeconomic areas. “It was important for us to remember our beginning and to give back to the small business program,” said James Gray, Program Manager on KLXS-II. Millennium has been performing well and meeting its small business goals. The company has won several awards on the program, including the
NASA Exceptional Service Award, the GSDo Preliminary Design Review (PDR) Team Award, the Silver Snoopy, and the 2015 Kennedy Software Contractor of the Year Award. The successful growth and development of a small business to the full and open level is precisely what the Small Business Program is designed to facilitate, and Millennium is an example of those efforts.

Describe what services or support you provided at the NASA Center(s):
Millennium provides engineering services at four NASA Centers (Ames Research Center, Goddard Space Flight Center, Kennedy Space Center, and the Jet Propulsion Lab). In addition, Millennium provides flight safety and mission assurance support at the Wallops Flight Facility (as the prime contractor) and at Johnson Space Center (as a subcontractor). Millennium’s engineers have supported a number of NASA projects and missions and several aeronautics programs including the next generation unmanned aircraft system (UAS).

How has your business evolved or grown supporting NASA?
Millennium’s growth with NASA has spanned two decades, with the company evolving from a small subcontractor providing engineering and integration services to a major prime engineering service contractor with over $700 million in contract value and ranked among NASA’s top 50 contractors. Millennium’s work has expanded beyond satellite engineering to providing support to a full spectrum of mission types.

Describe your company’s future:
Millennium will continue its thrust into prime contracting of high value engineering and related services with NASA, DOD, MDA, the Navy, and the Air Force. Our footprint will expand to new Centers and broader services and into the burgeoning commercial space sector. We will also continue our work in safety and mission assurance and move into cyber security. We will grow our knowledge and technology base through selective developments of key technology such as our automated flight safety system for launch vehicles and our Space Data Integrator, which integrates launch and reentry vehicles into the national airspace for the Federal Aviation Administration. We will continue our progress toward becoming a knowledge- and technology-based company at the forefront of change as the Nation continues its leadership in space, aviation, and defense.
Tell us about your company’s history and its capabilities:
The company started business in Maryville, MO, in 1972 and was known as Midland Engineering. In 1989, Troy Hayes and his predecessor, John Teale, former chief executive officer (CEO), purchased the company. (John retired in 2012.) The surveying and mapping sectors of Midland Engineering grew steadily, and in 2001, the company sold the engineering practice and created our current companies, Midland Surveying and Midland GIS Solutions. In 2013, both companies became Historically Underutilized Business Zone-certified with the Small Business Administration. Today, our entire focus is on providing a full range of high quality geospatial services to a wide variety of clients located throughout the United States. Midland Surveying provides professional land surveying services that include boundary surveys, topographic and utility surveys, design and construction surveys, and geodetic surveys. Midland GIS Solutions is a professional firm offering a wide variety of geospatial services, including Global Positioning System (GPS) data collection services, utility inspections, parcel mapping, Geographic Information System (GIS) data development and conversion, Web-based and mobile GIS solutions, training, and technical support. Together, Midland Surveying and Midland GIS have 10 field data collection crews and 4 professional land surveyors licensed in 8 states. We currently hold Federal contracts with the United States Army Corps of Engineers, United States Department of Agriculture, United States Geological Survey, and NASA.

How many employees does your company have?
We currently have a staff of 50 employees. Out of those, 42 work from our headquarters in Missouri, and 8 full-time employees are based at the NASA Langley Research Center (LaRC) in Hampton, VA.

Tell us about your recent success story at the NASA Center(s):
When we first became aware of the solicitation for the Geospatial Support Services (GSS) contract, we knew that our HUBZone status and expertise in the geospatial industry would qualify us for the work; however, we had not previously pursued contracts that required full-time, on-site staffing and elected not to pursue it. We were then contacted by Min Kim with Genex Systems, a professional firm based in Hampton, VA, with a long history of providing support services to LaRC. Min encouraged us to partner
with Genex on this effort and coordinated a meeting amongst some of our staff in Missouri with several Genex team members currently working at LaRC on the GSS contract. Although the contract is in its early stages, the on-site GSS staff members have proven to be excellent and are on schedule with the Year One Tasks awarded. Our employees in Missouri and at LaRC have both benefited from exchanging information and understanding new processes for geospatial data collection and management. The opportunities for both teams to see tremendous growth is very exciting!

Describe what services or support you provided at the NASA Center(s):
Midland GSS JV and our subcontractor Genex Systems have a staff of 14 full time and 1 part time employee permanently on site at LaRC. The staff includes an onsite project manager, field surveyors, GIS analysts, programmers, system analysts, measurement technology specialists, a Building Information Modeling (BIM) model manager, and facility data analysts. These highly trained and experienced GSS professionals work with the NASA Program Director, Brad Ball, to perform a variety of tasks including configuration control of the current GSS enterprise information network, BIM, database management, spatial data support for buildings, survey and measurement services for construction and maintenance, dig permitting, utility marking, survey measurement services for science and research projects, GSS measurement, GSS mapping and Web tool development and services, GSS analytics, Software Application Development, and research and development of next-generation GSS systems. The GSS team at LaRC has developed a number of applications, such as the flood impact analysis tool, that are currently being utilized by a variety of customers outside of NASA including other Government organizations.

How has your business evolved or grown supporting NASA?
This opportunity has brought us together with other geospatial professionals working in areas that we have not worked in before, such as BIM and terrestrial scanning. An opportunity for a major BIM and scanning project was recently brought to us by one of our long-time clients in the Midwest. With the expertise and technical assistance of our staff at LaRC, we have been able to pursue that opportunity and plan to add those services to the list of services we currently provide. As we move forward during this engagement, we see many opportunities to expand the types of services we offer to our clients in the Midwest as a result of our new experiences with LaRC. Our staff in the Midwest also possess skills and experience in various areas of geospatial support services that are not currently being utilized by NASA. We are working on plans to present our ideas on how some of our technical processes could result in potential improvements to the GSS program at Langley.

Describe your company’s future:
We see a future of growth for both Midland Surveying and Midland GIS Solutions. The experience we have already gained and will continue to gain through working with Ball and others at NASA, along with our GSS team members, will put us in a position to pursue similar opportunities in the private and public sectors. The more I am involved with this contract and learn about the GSS program that has been developed at LaRC, the more impressed I am with it. I am convinced that if similar geospatial systems and tools could be developed at all major Government installations, the impact in time and facility management cost savings would be significant. One of our goals during this engagement with NASA will be to develop programs that illustrate those savings and also to inform other Government agencies and clients of the advantages and positive impacts of utilizing geospatial solutions. It is our belief that over the next few years, the financial impact of these types of programs will become apparent.
Tell us about your company’s history and its capabilities:

In August of 1977, Michael K. Riley and Thora A. Riley founded AMRO Fabricating Corporation—AMRO (A Michael Riley Operation). The metal fabricating facility opened its doors in an 8,000-square-foot South El Monte building, with six employees. AMRO supported commercial metal fabricating. AMRO began venturing into the Aerospace Industry in late 1979, with the fabrication of a Stair Case Platform for TRW Systems. AMRO’s customer base continued to grow and the company upgraded to a much larger South El Monte facility by December of 1980, employing approximately 25 people.

In mid 1986, AMRO was awarded an Isogrid Panel Contract by McDonnell Douglas to support the Titan Program, giving AMRO the opportunity to specialize in the bump forming process of the isogrid from which the barrel panels for the external tank of the Space Shuttle are made. AMRO offers flight-heritage isogrid and orthogrid metallic structures used for spacecraft and launch vehicle primary structures. Some of our capabilities include high-speed machining, brake forming, welding, assembly, installations, laser tracking, and heat aging. AMRO is also proud to be part of the NASA/Boeing Mentor-Protégé Program.

How many employees does your company have?

AMRO currently has 220 employees.

Tell us about your recent success story at the NASA Center(s):

AMRO is in a mentor-protégé agreement with Boeing and National Aeronautics and Space Administration (NASA). Through this agreement, we have made lean manufacturing improvements and program management improvements and earned National Aerospace and Defense Contractors Accreditation Program (NADCAP) certifications. We have recently reshaped our Market Participant (MP) Agreement to address other areas that will help our business operations.

Further benefits include national recognition for our contributions to our country’s next generation launch vehicle.

Our success was attributed to open and honest communication with our mentor. We are staying focused on value-added training and minimizing the disruption that occurs during training. The
primary focus was always to keep the business moving forward and never lose sight of critical daily operations. The other area of our success was the willingness of the mentor to reshape our MP plans. Business changes and new opportunities or weaknesses surface that require changing course to meet one’s goals. This flexibility and understanding by the mentor truly benefits the small business, as resources are limited.

Describe what services or support you provided at the NASA Center(s):
Manufacturing of core stage barrel panels for Space Launch System (SLS) Program, Launch Vehicle Stage Adapters (LVSA), Multi-Purpose Crew Vehicles (MPCV), and Stage Adapters. Other support includes tooling and ground support equipment.

How has your business evolved or grown supporting NASA?
Our business has evolved from the early ARES barrel panel and tooling contracts to the current SLS contracts. Business has evolved and now includes employees and offices in Huntsville, AL. With Endoscopic Ultrasound (EUS) and upcoming production requirements, our expectation is for exponential growth.

Describe your company’s future:
In the future, I see AMRO becoming a tier one (1) supplier, meaning that we will be providing full-up top assemblies to our customers utilizing modern technologies (friction stir welding, additive manufacturing, test, and qualification). Our goal is to provide low cost solutions to our customers and provide them with a competitive position. The continued downward pricing pressures and budget cuts are very challenging. Moving more of the complex assemblies to qualified small businesses is a logical way to stay ahead of budget challenges.
Tell us about your company’s history and its capabilities:
A2Research, JV (A2R) is the contractor for the Laboratory Services Contract (LSC) NNS15AA53C at John C. Stennis Space Center (SSC) and the Michoud Assembly Facility (MAF). A2R is a joint venture (JV) with Alcyon as the majority partner and is a Small Business Administration SBA-Certified 8(a), Small Disadvantaged, Woman-Owned Business. A2R has enjoyed great success supporting SSC under the LSC since May 1, 2010, providing the gas and material science services; environmental laboratory analysis services; calibration and repair services; graphical information services; and specialized technical, business, and administrative systems services required to support SSC’s mission requirements. The recent addition of the MAF to the LSC is a testament to the contract management, customer service, customer satisfaction, and the capabilities of A2R.

How many employees does your company have?
A2R has 60 employees. We are known for our dedicated, highly trained staff, including a Registered Environmental Manager (REM), doctorate- and master’s-level subject matter experts, and U.S. military veteran personnel. Our team’s flexibility allows them to perform professional data reduction and analysis to develop objective evidence, renderings, trends, opinions, conclusions, and experimental design, along with verified improvement suggestions in support of NASA’s Space Launch System (SLS) and rocket propulsion technology. A2R introduced a new quality program that incorporated Voluntary Personal Protection (VPP) safety and quality into all of the services provided, creating a “Built in Safety and Quality” (BISQ) program and at the same time saving the NASA customer in excess of $3 million during the 5-year life of the contract.

Tell us about your recent success story at the NASA Center(s):
A2R successfully converted a complicated, service-oriented, cost-plus contract to a firm-fixed-price contract without loss of quality or customer satisfaction. Contract metrics track A2R’s level of service, cost performance, customer satisfaction, quality, and safety. A2R has exceeded all contractual requirements, including financial, by establishing an organizational structure that facilitates responsibility, accountability, and effective communication throughout the contract with all customers. A2R has received an
exceptional score in performance schedule since inception of the contract, meeting every customer deadline for direct work. All contract data requirements have been submitted on time in the NASA SSC Contract Deliverable System. According to Robert Harris, NASA Procurement Officer, “A2R has executed flawlessly on all contract deliverables since the inception of the contract.”

Describe what services or support you provided at the NASA Center(s):
A2R provided an innovative solution with the development of “OPA (o-Phthalaldehyde) by reverse derivatization.” Kennedy Space Center urgently needed a National Institute of Science and Technology (NIST) traceable, low-cost, safe process for the International Space Station (ISS). A2R provided proof of concept and documentation in less than 6 weeks, in time for the ISS flight.

Establishment of the “NIST Traceability of Permanent Gas Standards using NIST and Environmental Protection Agency (EPA) Protocol Gas Standards” has resulted in a $35,000 cost savings annually and enhanced quality. A2R finalized the HCFC225 (Hydrochlorofluorocarbon) Replacement Study and Liquid Oxygen (LOX) Impact Investigation for NASA Engineering and Safety Center (NESC) (joint White Sand Test Facility (WSTF), Marshal Space Flight Center (MSFC), and SSC).

How has your business evolved or grown supporting NASA?
A2R started the contract in May 2010 with less than 10 people. The lab service contract added 50 people to the company. Alcyon’s partner provided the General and Administrative Expense (G&A). The LSC operation was successful, leading to many awards, including 10 Space Flight Awareness, 3 Silver Snoopy, the 2011 Small Business of the Year Region IV, the 2012 NASA Small Business Prime Contractor of the Year, the 2013 SSC Contractor Excellence Award, and the 2014 SSC Small Business Prime Contractor of the Year.

Due to the success of this contract, A2R has been invited to join many teams bidding contracts. Alcyon was recently awarded the SEAS contract at Goddard Space Flight Center (GSFC) and the support services contract at Glenn and Plum Brook. Alcyon, now 350 employees strong and growing, provides its own G&A.

Describe your company’s future:
A2R’s future is bright. We now have a mature corporate infrastructure, with financial stability with established processes and systems. A2R now provides for its own G&A and employee benefits packages. We continue to expand our customer base and expand capabilities to support customer’s needs, while managing risk. We embrace diversity and encourage employee outreach programs such as Special Olympics, Partners for Stennis, and Citizens for Space Exploration.

We participate in working groups and industry associations. These meetings, conferences, and symposiums provide the opportunity to observe other organizations, thereby providing insight into our industry performance. Approved seminar and conference expenses are company provided to encourage participation. A2R is very active and supports the Small Business Program at SSC and MAF.
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