



***THE AEROSPACE CORPORATION***

***PASSIONATE ABOUT  
MAKING A DIFFERENCE***

**Corporate Social Responsibility 2018**



Aerospace Women's Committee members and senior leaders participated in Women's Week in events across the country. The theme was "Stronger Together," and events included the following: the Women of the Year Awards Ceremony, Speed Mentoring Tea, and the Volunteer Appreciation Luncheon.



# OUR COMMITMENT

## STEM

Inspiring and nurturing the next generation of engineers and scientists who will shape and secure the future of our nation.

## Commitment to Our People Where They Live and Work

Establishing long-term, positive change by connecting with and enriching our communities, and helping our neighbors across the spectrum of community challenges—on both personal and corporate levels.

## Diversity and Inclusion

Cultivating a rich tapestry of top talent from many walks of life—for optimized creativity and innovation.

## Sustainability

Demonstrating honorable corporate citizenship by meeting our own needs without jeopardizing the needs of future generations.

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## Letter from the President

I am delighted to share The Aerospace Corporation's Corporate Social Responsibility Report for 2018, which highlights our service as corporate citizens of our community.

This is a dynamic era of change for space, with many exciting opportunities that will reshape our lives. Just as Aerospace remains committed to staying ahead of the challenges that confront our nation's space enterprise, so, too, do we remain dedicated to serving the needs of our fellow citizens here on Earth.

I am proud that, over this past year, Aerospace expanded its work to promote the STEM fields for schoolchildren across the nation and expanded its charitable involvement with our neighborhoods. We also introduced more initiatives to promote diversity and inclusion, incorporated new measures to protect the environment, and enhanced the company's business ethics practices.

These various efforts not only improve lives but also the life of our company, providing a growing foundation for us to serve as both stewards of our community's well-being and our country's mission in space.



**Steven J. Isakowitz**  
President and CEO



Steve greets the 2018 summer interns at Intern Day in El Segundo, CA.



# STEM | Science, Technology, Engineering, and Mathematics

It's the kids of today who will colonize Mars tomorrow



Steve sits with our Aero Scholars, three of whom are Dr. Wanda M. Austin STEM Endowment scholarship recipients, past and present, and the scholarship applicants who were selected to intern at Aerospace.

**Back Row (L-R)** – Aureliano Yopez (UC Berkeley), Natalia Salazar (Cal Poly Pomona), Carlos Rivas (St. John's University), George James (UC Merced), Julia Rios (Cal Poly San Luis Obispo), Heydy Arias (UCLA)

**Front Row (L-R)** – Miguel Tamayo (UC Santa Cruz), Idalia Perez (Stanford), Steve Isakowitz, Odinakachukwu "Aka" Amobi (Cal State Northridge)



## Dreaming Big, the Highest Form of Living

**Introducing Odinakachukwu “Aka” Amobi, third recipient of the Dr. Wanda M. Austin STEM Endowment scholarship**

People can because they *think* they can.

But before the “think they can” part, there simmers a shy, fledgling dream. This dream seedling is the genesis of something great—and the single-minded belief in oneself is the subsequent spark of the dream’s ever-branching opportunities and possibilities.

The Aerospace Corporation found this very special combination of belief, chutzpah, intelligence, and heart in a young man named Odinakachukwu Amobi, or “Aka” for short. We saw his dream and his drive, and we wanted to be a part of it—to contribute to it in a meaningful way— and thus awarded Amobi the Dr. Wanda M. Austin STEM Endowment scholarship.

Amobi, a student of St. Bernard High School, has achieved astounding academic success at the highest level and enhanced his school’s STEM program with his positive and enthusiastic approach to learning, particularly in robotics. Born in Torrance, California, Amobi moved back and forth between Nigeria and California during his elementary years. As a young child, Amobi would go with his mother on weekly trips to The Proud Bird, an airplane-themed restaurant near Los Angeles International Airport (and a long-favorite haunt of Aerospace employees). Instead of eating, Amobi remembers gazing in awe at the vast collection of instruments of flight. Science continued to command his attention, and an eighth-grade science class would ultimately ignite his dream to reach for the stars.

Aerospace established the Dr. Wanda M. Austin STEM Endowment scholarship in 2015. The fund provides financial assistance to underrepresented and underprivileged high school students who demonstrate academic excellence and strong leadership skills, and intend to pursue undergraduate study in a STEM field at a four-year college or university.

Amobi will receive a \$10,000 scholarship, which is potentially renewable for up to four years, along with a summer internship opportunity at Aerospace. He will attend California State University, Northridge in the fall to start his undergraduate studies in computer engineering.



Aka and his Aerospace mentor, Sonia Henry, discuss working at the corporation.



St. Bernard High School students have fun simulating the communications check in Aerospace’s version of mission control—the Mission Operations Center, part of our Spacelift Telemetry Acquisition and Reporting System, also known as the STARS lab.

## Sprouting Young Talent: Mentoring St. Bernard High School Students

Some say that mistakes are our youths’ greatest mentors. While that may be true, it’s also true that the wisdom and guidance of experienced and learned mentors can help our young ones see where their talents lie and help them navigate a course toward their future callings.

It’s for this reason that The Aerospace Corporation has partnered for four consecutive years with St. Bernard High School for an annual STEM Summit. Our engineers have volunteered their time to help mentor the St. Bernard students, leading up to the STEM Summit on February 24. This time, they methodically and successfully worked on two activities: building a balsa bridge and designing a plane.

As it turns out, the mentored became mentors: Soon after the summit, the St. Bernard students had the enriching opportunity of mentoring 140 middle-school students from the surrounding Playa del Rey community.

Now *that’s* as full circle as it gets.



A career panel of Aerospace and Los Angeles Air Force Base employees share their experiences about college with middle-schoolers on a weekend STEM tour of Aerospace.



## School's Out! (But Inspiration Isn't, for L.A. Team Mentoring)

### Working to Make a Better Future

It's never too early to make a difference, as 10 Aerospace interns demonstrated on June 15—and these kids certainly did make that difference, with just a half-day commitment!

Our interns got to serve as mentors to at-risk middle-school students, as part of the Los Angeles Team Mentoring (LATM) organization's *School's Out Leadership*

*Camp*. This is a five-day college awareness experience offered to middle-schoolers, in which they're provided an opportunity to build their leadership skills, set goals, go on field trips to colleges, and most importantly, learn exactly how they can start planning for college NOW!

*So how did this union of Aerospace interns and middle-school students come to be?*

LATM, whose mission is to guide middle-school students growing up in challenging urban environments, participated in an Aerospace STEM tour in March. LATM was seeking mentors to sit with and interview middle-school

students on their culminating projects. It also wanted mentors who would give these adolescents the tools and support necessary to make positive choices during a critical part of their lives.

We at Aerospace felt that this was the perfect opportunity for our interns, since they had already gone through the college application process. Our conscientious interns asked thought-provoking questions of the middle-schoolers, offered inspiration, and provided valuable college and career insight.

We have to say—it was *the* perfect match.



The MAES Chapter presents Steve with a signed and framed T-shirt as a token of their tremendous appreciation for his participation in the STEM Immersion Day at Cal State Long Beach.

## Space Gloves, Goodie Bags, Aerospace Comic Books—and STEM

### The ALMA MAES STEM Engineering Extravaganza

Two-hundred sixty middle-school students from multiple Long Beach Unified schools experienced a full summer day of STEM immersion at California State University, Long Beach, thanks to the tireless efforts of the Aerospace Latino Members Association (ALMA) and the Latinos in Science and Engineering (MAES) Student Chapter, who volunteered their time to host the event.

Despite the heat, the kids were not deterred—they were eager to learn and asked a ton of questions. Thanks to the Aerospace iRobotics team, the kids also had the opportunity to participate hands-on in demonstrations of some of the cool concepts Aerospace is working on.

Speaking of cool, our CEO Steve Isakowitz brought in a variety of tech gear to share with the students, and tossed a bunch of Aerospace T-shirts to the kids. Isakowitz even had a hand in making sure the kids got to see and put on a real space glove!

We're not sure who was more excited on this energizing day of tours and workshops—the middle-school students, the MAES students, or the Aerospace volunteers!



Photogenic winners of the 41st Robert H. Herndon Memorial Science Competition proudly display their awards.



## Not Your Run-of-the-Mill Science Fair

**Fired Up at the 2018 Robert H. Herndon Memorial Science Competition**

“Lines of code? *LINES OF CODE??* I don’t need no stinkin’ lines of code!” shrieked the autonomous nanobot, before it snapped its fingers and scooted off in a righteous huff.

Okay, that part didn’t happen—but, thanks to the dogged commitment and determination of some brave and hard-working students, autonomous nanobots did indeed make an appearance in The Aerospace Corporation’s 41st annual Robert H. Herndon Memorial Science Competition. These nanobots shared an equal spotlight with

ionic thrusters, optical sensors, passive energy storage, color-based candy sorting (but of course), fuel-efficient cars, and more.

The middle- and high-schoolers who participated in the competition—which occurred on May 17 at Aerospace’s East Coast office in Chantilly, VA, and on May 24 at the El Segundo, CA headquarters—had a blast showcasing their leading-edge experiments and inventions. These experiments and inventions—both practical and aspirational—drew upon the traditional disciplines of electrical, mechanical, structural, and

environmental engineering, as well as biology, material science, and physics.

Each team was assigned an Aerospace employee who acted as an adviser. Students learned to pitch their ideas to the judge—a vital skill for any career in science and engineering. In addition to tabletop demonstrations, the competition included a separate essay component. The judging panels included representatives from both Aerospace and the U.S. Air Force.

Competing for the first time was the Girls Academic Leadership Academy, a new STEM-centered, all-girls school in the Los Angeles Unified School District.

Designed to stimulate and promote interest among underprivileged and minority students in engineering and STEM subjects, this competition also aims to increase diversity across the aerospace industry.



# Giving Back to Our Communities

Paying it forward

Members of the Chantilly Aerospace Women's Committee (AWC) gather to celebrate the successful women's clothing drive, Clothes the Deal, held in August. On the West Coast, 2,020 pieces of women's clothing were donated, and on the East Coast, an estimated 40 pounds of women's clothing was donated.



***“Give your business clothes a second life... and someone else a second chance.”***

***- Clothes the Deal***



## Flexing Fierce at the Summer Games

Frisbees sliced through clean, salty air. Flying feet kicked up sand and soccer balls. Human pyramids assembled up! Up! UP! —then laughingly tumbled into the sand.

These were just some of the many fun scenes that made up this year's Aerospace Summer Games.

Held annually at El Segundo's Dockweiler beach, the Summer Games boasts a day of friendly competition and fun in the sun for local aerospace and aviation companies. This year, 27 companies competed in events such as dodgeball and tug of war. The Aerospace Corporation's "A-Team"—more than 200 strong and led by CEO and coach Steve Isakowitz—sporting bright, cerulean shirts and clapped deafening thunder sticks to cheer on their teammates.

Out of the participating 27 teams, the A-Team finished in fourth place. The A-Team also won the canned food drive by donating the most items to a local charity.

Members of Aerospace's formidable "A-Team" pull with all their might at the Aerospace Summer Games.





Aerospace participated in Los Angeles Air Force Base's Open House in July, where we operated a STEM booth to show children how fun and invigorating STEM can be.

## A Festival, a Parade, a LOT of Service Members—and STEM

### Partnering with SMC for Community Outreach

#### Live on Green! (December 25-January 1)

Eighteen volunteers from The Aerospace Corporation joined with the Space and Missile Systems Center (SMC) to pay tribute to space exploration in this winter family festival, which took place during the iconic Rose Parade and Rose Bowl Game. We demonstrated our space debris modeling data, let visitors touch real space junk, and had people guess when they thought the Chinese space station Tiangong-1 would plummet back to Earth.

#### Armed Forces Day Celebration (May 18-May 20)

Aerospace teamed with SMC to participate in the 59th annual celebration of our military in Torrance, CA. Forty-three Aerospace employees ran the Armed Forces Day 5K For Freedom. We also hosted a kids' booth with games and giveaways that illustrated our commitment to STEM education.

#### Los Angeles Fleet Week (August 31-September 3)

Aerospace volunteers and SMC joined forces at Fleet Week's STEM Village to inspire the next generation of students to pursue a STEM career. Our volunteers helped students launch more than 800 straw rockets, and handed out a record amount of rocket-related regalia.



"Ready, set, launch!" Families had fun at LA Fleet Week, where they constructed their own rockets with straws, paper, and tape, and blasted them high into the air.



# Diversity and Inclusion

Respect for our fellow humans is our top priority

***“What makes our culture of inclusion strong and powerful is the diversity of our talent pool, which empowers our company to unleash innovations that address the toughest challenges confronting our nation in space.”***

*- Courtney Moore, director of Diversity and Inclusion*

## Corporate Statement on Diversity and Inclusion

The Aerospace Corporation understands that our people are our most valued resource. We rely on the brightest and most skilled individuals in the aerospace and engineering industries to confront the most complex and formidable problems in space. The vast breadth and difficulty of these challenges demands that we recruit, employ, and retain a diverse workforce whose rich backgrounds provide a multitude of perspectives needed to generate solutions that ultimately advance our nation’s security and well-being. A diverse workforce is also critical to supporting our efforts to generate innovations that not only promote mission success for our partners in industry and government, but also push the frontiers of what is possible in space.





Steve and Dr. Wayne H. Goodman, Aerospace executive vice president, gather with the 2018 summer interns for the TEC Talk event in Chantilly, VA.



## Shaping the Future—United and Inclusive

### *The Aerospace Executive Diversity Council*

We're all unique, coming from diverse backgrounds and all walks of life, yet one belief bonds all of us to each other—the belief that we can make a difference. This core belief empowers us to do our best work.

At Aerospace, where our people are our most precious resource, we launched the Aerospace Executive Diversity Council—chaired by our CEO—in November 2017 to assist in creating the corporation's diversity and inclusion goals and to foster a stronger, more diverse workplace.

The council works tirelessly to maintain a dynamic and robust diversity and inclusion strategy for the corporation. We realized early on that Employee Resource Groups resonate importantly in our culture of inclusion. Previously named Affinity Groups, their impact at Aerospace goes far beyond networking; they help the corporation advance corporate initiatives as well as the agenda for recruiting, professional development, and the way we brand and position ourselves in the marketplace. An inclusive and diverse culture helps us to find and retain the

brightest and most diverse talent, and it makes our workplace all the more dynamic and inviting.

Over the next year, we will be launching a new video campaign called "Diversity Speaks: United and Inclusive," which will highlight each of our eight Employee Resource Groups (the Aerospace American-Indian and Alaskan-Native Council; Asian Pacific American Association; Black Caucus; Lambda Alliance; Women's Committee; Military Veterans; Totally Adaptable Group; and Latino Members

Association). These groups actively represent their constituencies at Aerospace, and their lead officers are members of the Aerospace Diversity Action Committee (ADAC). In turn, each group will share insights regarding their respective communities and communicate how they are valuable business partners of the corporation.

Aerospace understands that celebrating diversity is not about how we are all different, it is about how we embrace our vast uniqueness—and how we stand to benefit from such a rich, beautiful tapestry of talent.



Terita Norton, proud recipient of the 21st Century Trailblazers in Systems Engineering Award.

## Honoring Engineering Excellence

### *The 21st Century Trailblazers in Systems Engineering Award*

Success in great endeavors is rarely swift or easy—but so what? The thing is, it's not even required—if you genuinely, deeply love what you do. Some distant, "sweet realization of reward" is not the end game for those who embrace their work; it's all about the process, which is itself its own payoff. Yet when success is achieved, it is worth noting and celebrating.

To that end, The Aerospace Corporation was pleased to recognize this timeless quality of excellence and perseverance in our own Terita Norton, recipient of the 21st Century Trailblazers in Systems Engineering Award.

This award was presented as part of the 2018 National Society of Black Engineers (NSBE) Celestial Torch Awards, which took place at the 2018 NSBE Aerospace Systems Conference held in Houston, TX.

Along with being a highly respected and exemplary aerospace engineer, Norton's inspiring leadership of Aerospace's STEM outreach programs in Chantilly, VA has energized the next generation of rising systems engineers.





## Eyes Wide with Wonder on Both Coasts

### Take Our Kids to Work Day

The sounds of shouts, giggles, and laughter spiraled through the air on April 26, as a swarm of energetic schoolkids descended on Aerospace. It was the annual Take Our Kids to Work Day, during which dedicated Aerospace employees and volunteers ensured the day was chock full of fun, games, and STEM.

In El Segundo, CA, the children visited the virtual reality lab, the drone facility, the STARS Mission Control Center, and the ever-popular cryogenics lab, where they discovered how hungry scientists make ice cream. They also learned about space junk and orbital modeling, tried on space gloves, made slime, launched mini-rockets, and controlled robot cars.

In Crystal City, VA, the kids enjoyed the egg drop competition, which involved devising ways to drop eggs from the rooftop without breaking them. They also built Lego™ rockets, examined a CubeSat, and learned about life as an astronaut.

In Chantilly, VA, kids built Lego models of the space shuttle as well as a simple model circuit. They also constructed rockets and launched them at a target across the auditorium.

This was the largest-ever Take Our Kids to Work Day for Aerospace, with more than 170 children participating in El Segundo, 48 in Chantilly, and 10 in Crystal City, not to mention an army of volunteers and chaperones.

For Take Your Kids to Work Day, the children of our Aerospace employees gather in the STARS lab in El Segundo to learn about rocket launches (left), in Crystal City to understand the physics of an egg drop (upper right), and in Chantilly to launch homemade rockets (lower right).





# Protecting Our Environment

Using our environmental resources wisely

## EV Chargers at Aerospace

Working to Make the Future Better

"Fill 'er up!"—right where you work.

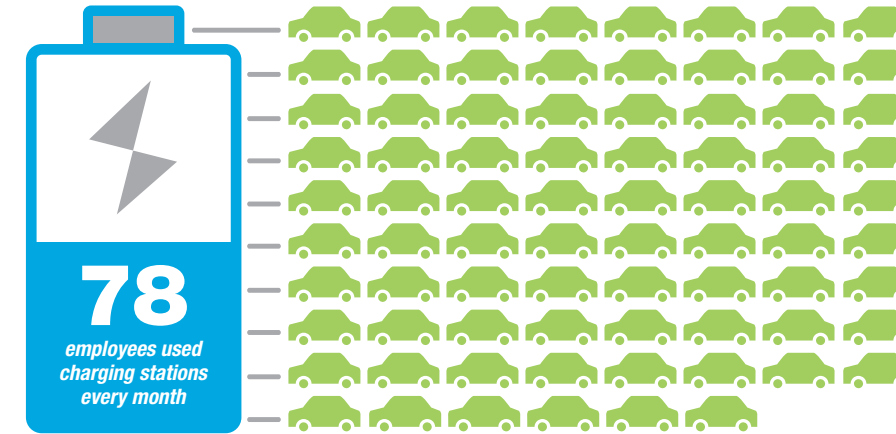
Whether their baby is known as "Betsy," "MOMobile," "Phantom," "Bobbypins," or "The Mammoth," Aerospace employees can now conveniently charge their electric or hybrid cars.

Aerospace has 25 charging stations with 50 ports (2 per charger), installed in June 2018 for those employees working in El Segundo.

Aerospace has also been monitoring electrical energy consumption and has engaged in three initiatives this year:

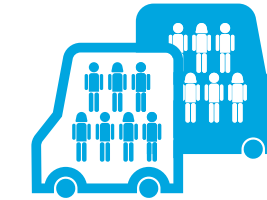
- Aerospace headquarters has continued its nine-year trend toward reducing its electrical energy use. In 2018, electrical consumption was reduced by another two percent overall. This is attributed to numerous energy conservation and efficiency programs, including the LED lamp program and use of newer, more efficient system equipment and motors.
- Another efficiency improvement in 2018, the installation of submeters, provides the ability to monitor energy usage in individual campus buildings. Submeters enable Aerospace to identify energy savings opportunities by collecting more accurate localized metrics, and establishes a baseline against which new initiatives will be measured. "If you can't measure it, you can't improve it."
- This year, Aerospace has also been studying a battery solution to reduce our peak energy demands in hopes of implementing a solution next year. "Peak demand" is when electricity usage on the energy grid is at its highest and when energy users need to reduce their usage the most—due to the exorbitant strain placed on the electricity network and resultant power outages. The good news is that reducing peak energy demand can lead to significant energy cost savings as well as vastly benefit the overall grid.

Charging your vehicle at Aerospace just got easier, with 50 charging ports now available.



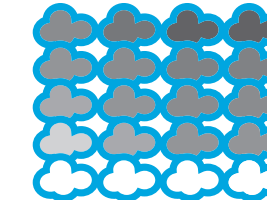
electrical energy consumption was reduced by:

**4.7**  
megawatt hours



**645**  
employees commuted

by mass transit, vanpools, and carpools



which resulted in

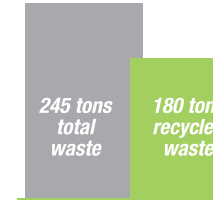
**2,116**  
tons of CO<sub>2</sub>

emissions reduced



Aluminum, brass, steel, stainless steel, and electronic equipment

**52,000**  
pounds re-used and recycled



**72%**  
recycled or reused

waste diverted from landfills



**\$18,000**

\$18,000 worth of better-quality used furniture and other items donated to non-profit organizations

## Beauty Is the Beach

Helping Clean Up in Our Community

There's an old saying that the ocean rocks the moon to sleep every night, and the sun awakens and kisses the beach. The beach brings us profound joy, peace, and excitement, all at once, while allowing us to marvel at something so majestic—for free.

It's our duty to preserve such beauty, because paradoxical to its magnificence, the beach cannot fend for itself—it cannot clean itself.

On a rainy day, April 19, Aerospace teamed up with the Space and Missile Systems Center (SMC) for a beach cleanup at Manhattan Beach Pier in Manhattan Beach, CA. For Aerospace, this was our first organized beach cleanup, and our group of volunteers did a splendid job picking up the beach debris. We are eager to participate in more beach cleanups with SMC and hope to see even more of our Aerospace people at the beach next time, sporting the cool green shirt.



To commemorate Earth Day 2018, a dedicated group of Aerospace employees came together to beautify Manhattan Beach, CA.



# Business Ethics

Devotion to a high ethical standard

***“Business ethics lie at the center of our core values of objectivity and integrity. Our commitment to these values is enduring and critical to addressing the evolving demands of the space enterprise.”***

***- Malissia Clinton, senior vice president, General Counsel***

## The Aerospace Ethics Program Provides a Safe and Thriving Workplace

To thrive in the workplace means more than just getting by, doing your job, and functioning adequately. To thrive at work is to enjoy a feeling of empowerment, safety, satisfaction, and wholeness. These factors ultimately affect the quality of your life. The Aerospace Corporation is wholeheartedly committed to honesty, fairness, and integrity in dealing with our employees—and this extends to our customers, suppliers, and all those with whom we interact.

Ethics—the moral principles and values that govern the conduct of our leadership and employees—dominate our corporate values. As employees of Aerospace, our actions, both large and small, are shaped and guided by rules, regulations, and common sense. Aerospace’s reputation for disciplined adherence to its code of ethics is greatly valued by its customers, and places us in the position to serve them in a very unique relationship built on objectivity and trust.

We are vigilant in adhering to a code of ethics. To augment this ongoing process, we have developed some frequently asked questions about situations that could

arise during our day-to-day activities here at the company. We are rigorous about following up and seeking improvement.

Our goal at Aerospace is to continue to recruit and retain the best people, nurture a creative environment, and help our people find ways to innovate. To enable our employees to enjoy a culture of respect and dignity, we welcome open and honest feedback. This is a participatory mindset grounded in basic decency. We encourage our people to take action—if they see or hear something that is unfair, wrong, discriminatory, or hurtful, we ask that they speak up. We will listen.

Aerospace is committed to providing equal opportunity for our employees and a workplace free from any form of harassment based on race, sexual orientation, gender presentation, age, color, creed, religion, physical challenge, national origin, and veteran status, or from any other behavior contrary to the fundamental human dignity of the individual.



Members of the Aerospace D8 building site council brainstorm on ways to invigorate the workplace design.



