



2019 ANNUAL REPORT





MISSION

ENSCO cultivates the ideas of our employees and customers, delivering leading-edge research, development, products and services in the aerospace, avionics, national security and rail markets.

We foster top science and engineering talent, creating an environment where employees can tackle our customers' problems in creative and unique ways.

VISION

To create and apply advanced, emerging technologies to make the impossible, possible.



Since its inception, ENSCO has pushed the boundaries of technology, finding ways to innovate, expand, and apply technology to fuel our customers' success. Our strength comes not only from intimate knowledge of customer needs, but also the depth of our expertise and breadth of our capabilities.

Now in our 50th year of business, we celebrate our past achievements and are positioned to address future challenges. We are proud of the lasting impact we have on the world around us—both in what we have achieved and what is yet to come.



To Our Customers, Employees and Shareholders

This year we celebrated our 50th anniversary as a strong, diversified technology company. We've reached this significant milestone by maintaining a keen focus on the value we deliver to our customers and by providing opportunities for exciting work and personal growth for our employees.



SUPPORTING IMPORTANT CUSTOMER MISSIONS

ENSCO takes pride in delivering advanced technology solutions, products and services in support of critical customer missions. This year, we made substantial progress in each of our four market segments:

- As a leading player in ground systems engineering and integration for the U.S. Air Force, this year we delivered critical support to sustain, enhance and architect future U.S. Air Force launch ranges and Satellite Control Networks, and to protect these systems from cyber-attacks. In addition, we began support to the Military Satellite Communications Systems and secured our first commercial cybersecurity contract.
- Our extensive skills in engineering support; software and firmware development; and verification and validation services to major aerospace and avionics companies led to five critical new wins this year, including a contract for an additional three years supporting a major long-term customer. We also significantly expanded the functionality of our IData[®] human-machine interface (HMI) software development toolkit by incorporating a synthetic vision module that provides clear and intuitive pilot navigation even in degraded visual environments.
- ENSCO remains the premier provider of cost-effective, advanced autonomous railroad track inspection systems in the world. We delivered more than 50 track inspection systems and provided research and development, test, evaluation, modeling and data analytical services critical to more than 40 government and commercial customers around the world. We also received the largest autonomous track inspection system award in history and secured new contracts with several international rail customers.

- Building on our strong reputation for providing our national security customers with the advanced technology solutions they require, we developed or significantly enhanced several new systems and methods, including open-source data collection and processing, high-performance computing and radio frequency (RF) and sensor technologies. We are completing development of SenseGuard[™], a new cost-effective, reliable and scalable commercial product for Chemical Biological Radiological and Nuclear (CBRN) threat detection.

Perhaps the most important indicator of our performance is the satisfaction of our customers. We are proud that ENSCO received Contractor Performance Assessment Reporting System (CPARS) scores from “Very Good” to “Exceptional” in approximately 86 percent of all evaluated categories. In our most recent Past Performance Evaluation Report, based on an independent survey of our customer base, we received a strong overall score and perfect, 100 percent ratings for business relations and personnel.

PLACING A PREMIUM ON PEOPLE

ENSCO's ability to realize its full potential depends on the talent and commitment of our employees. We place a premium on attracting and retaining a skilled, dedicated workforce, and we strive to ensure our employees are engaged, well-trained and committed to our customers' missions.

Responses from our most recent employee opinion survey validate that our employees endorse and support the company's customer-centered, professional, innovative and family-friendly culture. Our retention rates remain above the industry average and our employees recommend ENSCO to others—this year an increased share of new hires (32 percent) came from employee referrals.



Answering the Call for Innovation That Meets Customer Needs

Increased R&D investments in cutting-edge, customer-focused technologies

- » **21 IR&D projects**
- » **11 patent applications**

Expanded customer and industry engagement

- » **31 percent increase in proposal submissions**
- » **29 technical papers**

Highly qualified and engaged workforce

- » **Retention rates above industry average**
- » **30 percent of employees have advanced degrees**

We recognize the value of training for career growth and employee job satisfaction. To that end, we expanded our staff development efforts to include additional training for executive leaders, site administrators, junior-level leaders and newly appointed supervisors. Our goal is to equip employees with the knowledge and skills they need to perform their current duties, pursue a satisfying career and serve our customers' missions with the most advanced knowledge and best practices available.

Our strong growth provides increased stability and opportunity for personal and professional advancement through new programs, expanded technology offerings and promotion and training opportunities.

FUELING LONG-TERM GROWTH

Thanks to the dedication and creativity of our technologists, managers, executives and support staff, our revenue grew by 45 percent over the last three years.

To drive future growth, we have been investing heavily in the technology and solutions that accord us the ability to solve our customers' dynamic challenges. In 2019 we further increased internal research and development expenditures, investing in 21 advanced technology projects across a range of technologies that includes cyber, artificial intelligence, autonomous systems, machine vision, advanced displays, ultrasonics, RF signals, modeling and high-performance computing. Our R&D efforts resulted in a record 11 patent applications and 29 technical papers this year, up significantly from fiscal year 2018.

While these numbers are impressive, the real value lies in the impact on our customers' most challenging needs. As they face emerging threats and increasingly complex environments, we are helping them address their challenges

by developing new technology solutions and integrating capabilities from across the company. Inter-divisional collaborations allow us to meet our customer missions faster, more effectively and at lower cost. Throughout the pages of this report, you will see examples of how we accomplished this in many different areas.

Our collaborative technology and business development efforts have also set the stage for ENSCO to pursue larger, higher-value contracts. Last year we submitted \$316 million in proposals, a 31 percent increase over fiscal year 2018. We aggressively pursued opportunities that we would not have historically, including a number of large opportunities with new customers. In fiscal year 2020 it will be critical to turn these collaborative efforts into business that leverages the company's best capabilities for our clients.

CONFIDENTLY LOOKING FORWARD

We approach the next 50 years with confidence. The next generation of challenges will be more formidable than ever, but we are poised to partner with our customers to stand up solutions that anticipate and keep pace with their evolving needs.

ENSCO continues to focus on the quality of our work, value to our customers, innovation in our solutions, extraordinary customer service and ever-improving productivity. We remain fully committed to our vision—to *create and apply advanced, emerging technologies to make the impossible, possible.*



Boris Nejkovsky
President

CELEBRATING 50 YEARS OF IMPACT

Shaping Technology to Meet Customer Missions

The world has changed tremendously since Dr. Paul Broome founded ENSCO in 1969, but there is one thing that has remained constant: our ability to develop and deploy advanced technology to help solve our customers' problems. ENSCO has flourished over the past 50 years because we have demonstrated, on thousands of occasions, our determination both to provide customers with exemplary solutions and services and to stand behind what we deliver.

Through our commitment to our customers, ENSCO has built a series of remarkable long-term relationships with its customers, many of which span decades. This dedication is the reason that today, ENSCO has achieved an enviable reputation throughout the industries we serve as a value and trusted partner.

A PROVEN RECORD: MEETING CUSTOMER NEEDS WITH TECHNOLOGY

Our ability to address our customers' needs depends on our mastery of technology. Throughout our history, we have made it a priority to expand our technical expertise and capabilities, adding new technologies to our portfolio as they emerged. To our initial company expertise in signal processing, we have built capacity in a number of complementary fields. They include artificial intelligence, autonomy, machine learning, machine vision, high-performance computing, embedded software, web and social media data analysis, and cybersecurity—disciplines that didn't exist 50 years ago.

Technology is not only an empowering tool, but also what facilitates our success and the success of our customers' missions. A critical reason for ENSCO's success is our commitment to understanding our customers' needs and developing innovative technological solutions that address them. For example, ENSCO pioneered autonomous track inspection

technology for use on revenue trains, allowing our customers to dramatically increase frequency of track inspection at a much lower cost per mile. More than 450 ENSCO systems are deployed, enabling our clients to inspect more than 50,000 miles of track every day, thus increasing the safety of their rail operations.

Another reason for our success is our ability to combine an interlocking suite of technological competencies into an end-to-end product or service. Citing just one example, our National Security Systems Division drew on its overlapping expertise in sensor design and integration, signal processing, modeling and simulation and decision-making tools in creating our SENTRY chemical, biological, radiological, nuclear and explosive threats (CBRNe) protection system for building, campus and border security. Today, SENTRY guards some of our nation's most critical infrastructure.

SUPPORTING CRITICAL MISSIONS

A key factor in ENSCO's longevity is our ability to deliver complex mission-critical solutions, the ultimate test of engineering knowledge and experience. Over time, we have channeled our technological prowess into four areas—aerospace, avionics, national security and rail—and in each of these markets we provide critical solutions, products and services that address challenges where failure is not an option.



For example, ENSCO provides system engineering and integration services to sustain and advance U.S. space ranges and the satellite control network. We are involved in some of the most critical and exciting activities that are taking place in our country's space efforts today.

Another example is our unique IData® Tool Suite, which is the only commercially available software development toolkit for streamlining avionic display design that offers DO-178C certification and is used in both avionics and space cockpits. While these offerings are on the opposite end of the services, solutions and products axis, both support customers' critical missions and both solve complex technical and engineering challenges.

PEOPLE ARE OUR MOST IMPORTANT ASSET

Ultimately, our ability to build relationships, deliver high-caliber technological solutions and manage a diversified business—in short, the sources of our staying power—rests on the skills and commitment of our employees. Our priority has always been to create a challenging and rewarding environment for our employees, one that enables them to do their best work.

They come to ENSCO because of the opportunity to work on meaningful projects that support important missions and to tackle challenging, impactful

At the Head of Our Class

In each of our four markets, ENSCO has taken a leadership position in critical key technology areas.

- **Aerospace Science and Engineering**—Launch safety, satellite control network engineering, high-fidelity weather forecasting
- **Avionics**—Software engineering, HMI display design, verification and validation
- **National Security Systems**—Low-SWAP sensor design, radio-frequency technology, positioning, navigation and timing (PNT), CBRNe threat detection, atmospheric and computational chemistry
- **Rail**—Autonomous inspection systems, track-inspection vehicles, enterprise data-analytics services, transportation safety research, advanced research, test facility sight management

issues. They stay at ENSCO because they are respected as individuals and recognized for their contributions to the company. Last year we established several employee recognition awards, which we now present during the company's annual meetings. We are currently launching several new professional development programs. We are proud of our high retention rates—many employees have been with us for several decades—and with these programs we are working to ensure that future generations of employees enjoy highly satisfying careers at ENSCO.

LOOKING AHEAD TO THE NEXT 50 YEARS

As proud as we are of our accomplishments over the last 50 years, we know that to stand still is to fall behind. To flourish, ENSCO must continue to evolve much as we have throughout our history, developing new technologies, entering new markets, reinforcing existing relationships and cultivating new ones.

Accordingly, we are moving forward on a number of fronts. We are strengthening and expanding our portfolio of future-defining technologies. We are collaborating across the company to maximize the value of our existing expertise. And we are capitalizing on these efforts to elevate the value of our solutions, foster deeper, longer-term partnerships with existing customers and reach new customers in new industries. Our goal is to ensure that ENSCO extends its success as a customer-focused technology company through our next 50 years.



CONSTANTLY EVOLVING

Strengthening Our Portfolio of Future-Defining Technologies

ENSCO is differentiated by our commitment to cutting-edge technologies and our agility in adopting and developing new technologies to better meet the needs of our customers. Historically, ENSCO has been known for world-class expertise in such areas as system engineering and integration, sensors, complex mechanical systems, mission-critical software, signal and image processing and data analytics.

One of the advantages of our 50 years of experience is that we have developed insight into the potential value of emerging technologies—and this knowledge guides our investments. The advent of such game-changing technologies as artificial intelligence, machine learning, advanced processing, autonomous capabilities and cyber has created the opportunity for ENSCO to rethink existing products, add features and develop ever-higher levels of responsiveness in serving our customers.

Taking advantage of dramatic advances in high-performance computing, massively parallel architectures and algorithms, for instance, we now run weather, chemical dispersion and other models in just minutes that once took days, providing virtually real-time support for decision-makers. At the same time, technological improvements in mobile low-power computing and wireless communications have allowed us to significantly heighten the performance and capabilities of our advanced autonomous sensors used for special target detection or railroad track inspection.

We have applied our cyber expertise across multiple markets, from aerospace to national security to transportation safety. Our ability to ensure that robust cyber protection measures are incorporated in any new architecture or design is an essential skillset we bring to the critical systems engineering process in aerospace and avionics markets. We are actively exploring DO-326A cybersecurity solutions for avionics software and firmware design and

development. Our goal is to be the first company that brings this capability to market.

We have also integrated autonomous capabilities, artificial intelligence and machine learning into rail inspection systems, nonproliferation treaty monitoring and various sensor systems. For instance, by incorporating deep learning algorithms into track video inspection systems, we have realized a significant improvement in true positive detection rate and reduction of false positives.

OPENING THE DOOR TO NEW CUSTOMERS AND MARKET SEGMENTS

ENSCO's ability to introduce products and offer services that incorporate technologies like cyber or machine learning reinforces our reputation as a company that is truly differentiated by its technology. But these new technologies also set the stage for us to develop offerings for new markets. For instance, we are now applying our cyber expertise to develop a system to protect the records at a consolidated car rental facility serving one of the nation's largest airports. We also envision harnessing our expertise in cybersecurity to ensure the integrity of networks supporting rail and other surface transportation hubs.

As these examples illustrate, having an extended palette of technological strengths provides vital flexibility, allowing ENSCO to anticipate and accommodate changing customer needs while multiplying our opportunities for growth.

INNOVATION THROUGH COLLABORATION

Combining Expertise to Better Serve Our Customers

Oftentimes the critical barrier to innovation is institutional, not technological. At ENSCO, we are highly conscious of this obstacle, encouraging collaborations among our divisions and partnering with other companies whose technology helps fill gaps in our offerings or decreases time to market. Our goal is to ensure that all our customers, regardless of their market, gain the full benefit of technologies we offer.

PROMOTING COMMUNICATION AND COLLABORATION ACROSS THE COMPANY

When ENSCO was a smaller company, it was easier for our engineers and scientists to exchange ideas, introduce each other to new technologies, and collaborate on cross-cutting products and services. Today, ENSCO has 600 employees, divided among 10 offices, including an office in Australia. As a result, we have become much more deliberate about bringing people together to heighten awareness of projects underway across the company, disseminate know-how from one division to another, and promote joint projects.

We know how powerful communication and collaboration can be because we have seen it arise spontaneously in the past. For instance, teams from our Aerospace Science and Engineering Division, with its expertise in weather forecasting, and from our Rail Division collaborated to develop our Predictive Rail Temperature System. This allows railroads to more accurately identify portions of track at risk of buckling due to high heat and issue slow orders accordingly. Railroads appreciate this service because blanket slow orders and unnecessary heat inspections cost millions of dollars each year.

To promote collaborations that address unmet customer needs, we have created the ENSCO Technology Council, chaired by our Chief Strategy and Technology Officer, which includes some of the company's top technologists. The council reviews all proposed IR&D requests, recommends projects for IR&D funding, and monitors their progress. Just the process of reviewing requests has raised awareness across the company of opportunities in specific markets and triggered discussions about how scientists and engineers with complementary expertise might work together to address them.





COLLABORATION



PARTNERING FOR INNOVATION

These efforts have produced a series of exciting interdivisional projects in various stages of development. To cite just a few, our engineers from our Aerospace Science and Engineering Division are conferring with positioning, navigation and tracking (PNT) specialists in our National Security Systems Division to study new PNT applications for their customers. Our Avionics Division is sharing its strength in safety-critical systems with our Rail Division to reinforce our offerings in positive train control, a system that automatically stops trains under dangerous conditions. And our Rail Division partnered with our National Security Systems Division to demonstrate SenseGuard™, our CBRNe monitoring and detection solution, to transit authorities. These initiatives and others like them have the potential to add significantly to our growth.

TAPPING OTHER SOURCES OF TECHNOLOGY

When appropriate, ENSCO takes advantage of COTS technology as a way of accelerating the delivery of new products and services to our customers while allowing us to concentrate on higher-level efforts like systems integration and signal processing. On other occasions, we form alliances with other technology companies to develop products that fill out our offerings.

For instance, we secured intellectual property from another company to provide the foundation for our Automated Maintenance Advisor (AMA). This client-server solution accepts track measurement data from a variety of sources and recommends maintenance tasks based on measured track conditions.

In 2019, we formed a significant alliance with DeepSig Inc. that allowed us to harness its OmniSIG's artificial intelligence capabilities for our National Security Systems Division customers. ENSCO is training OmniSIG to detect and classify wireless and radar signals of high interest to customers in the Department of Defense and in the U.S. intelligence community.

Taken together, our efforts to develop and expand our own technological strengths, to make these strengths available throughout our organization, and to supplement them with COTS and select technologies from other sources positions ENSCO well for the future. These efforts set the stage for us to achieve substantial growth by pursuing higher-value programs, increasing system and product sales and entering new markets.

BIGGER, BOLDER SOLUTIONS

Fostering Longer-Term Relationships by Delivering More Comprehensive, Higher-Value Programs

Our ability to thrive as a company depends on developing a full suite of offerings, one that includes higher-value products and integrated solutions as well as custom services and research and development. This comprehensive approach not only elevates our presence in the markets we serve but also gives us a variety of ways to connect with customers regardless of the degree of support they require, laying the groundwork for deeper relationships as time goes on.

All of our divisions have made strides in this direction. For instance, 20 years ago, our Rail Division delivered services almost entirely to a limited number of key customers. Today, it is a technology and system provider worldwide. Our Avionics Division has also made substantial progress moving up the value chain, providing solutions and software development in addition to the certifications that previously were its mainstay.

VALUE-ADDED SERVICES

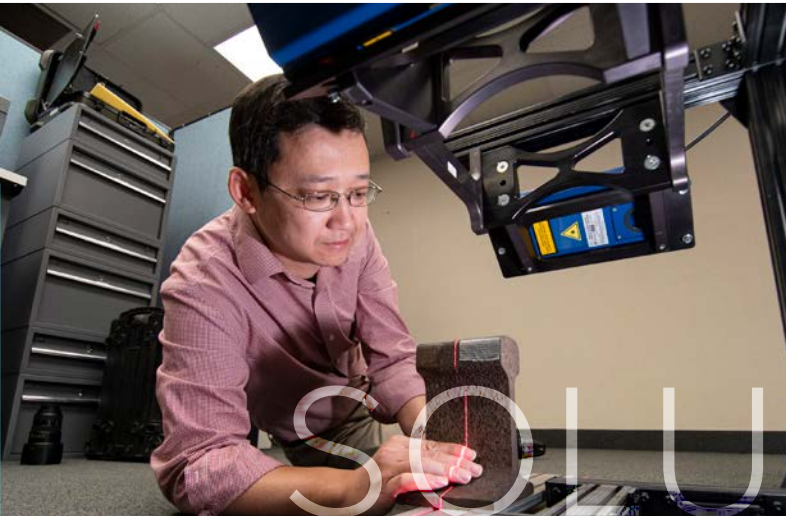
ENSCO is known for providing value-added services in a host of areas, from geophysical sensor research and development, to avionics system and software verification and testing, to rail safety and security. Our ability to create integrated solutions depends, in large part, on the experience and domain expertise we gained in providing such services.

Our Aerospace Science and Engineering Division, for example, has provided systems engineering services to the Air Force launch ranges for more than three decades. Our familiarity with their launch range operations, our growing expertise and our long relationship as a trusted provider played a key role in securing the multiyear Range Network Systems Engineering and Integration contract from the Space and Missile Systems Center, part of the Air Force Space Command. ENSCO is also leading the development of the standard training systems for the space enterprise and tracking of space objects.

ADVANCED RESEARCH AND TEST FACILITY SITE MANAGEMENT

Having the quality control, safety and environmental processes to effectively manage research and development centers is an important differentiator for ENSCO. For instance, our Rail Division recently expanded its site operations in Chambersburg, Penn., to conduct advanced railway safety research. This site features multiple shops and office buildings with direct rail access to perform the latest research in track and vehicle safety. As surface transportation systems evolve, ENSCO sees a growing need in establishing regional research and test centers around the country.





COMPELLING PRODUCTS

Having products like SenseGuard™, MetWise® and MicroSearch® provides another way to build lasting relationships with customers while providing an additional revenue stream. Here again, the knowledge gained providing our customized services creates a starting point for developing more standardized product offerings. For instance, our Simulation, Test and Recording System (STARS) product had its origins in the range instrumentation and missile simulator we built to help the Air Force evaluate the real-time mission-critical systems being developed for its new Eastern Launch Range command center. Subsequent requests for similar systems confirmed the demand for a simulation product and inspired us to create STARS.

Conversely, our ability to field products often leads to additional requests for services. As an example, our assistance in helping STARS customers implement the product quite often leads to follow-up architecture and systems engineering work. We see the same phenomenon with IData, our advanced HMI toolkit for the development and deployment of embedded software displays. After purchasing IData, our customers often call on us for implementation assistance, software engineering and certification.

INTEGRATED SOLUTIONS

We have already demonstrated our expertise in applying systems integration to producing high-value

solutions for our customers. System integration has been fundamental to our ability to deploy track inspection vehicles and in our CBRNe systems like SenseNet, our advanced biothreat detection system.

We are taking this skillset and applying it to capture even higher-value opportunities. In our Rail Division, for instance, we are combining our unparalleled track and vehicle inspection knowledge, our track management data suite, our expertise in modeling, simulation and artificial intelligence, and our repository of track data to provide turnkey managed data-analytic services for our customers. With a generation of railroad engineers retiring and margins tight, we believe this approach offers significant value toward the future of precision railroading. We are pursuing similar strategies in our other divisions.

A MISSION-CRITICAL PARTNER

By putting together a comprehensive, well-designed portfolio of high-quality value-added services, compelling products and integrated solutions, we are positioning ENSCO to take its place as an indispensable partner for mission-critical operations. We have formed a Business Development Council to help identify new prospects, coordinate business development across the company and ensure that our markets appreciate the progress we are making. Our goal is not only to build our client base, but to be the company to which customers turn for advanced solutions to the most complex challenges they face.

MANAGEMENT TEAM



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