

DEFENSE

# A united force for military technology.



**CSSI, INC.**

Moving Research to Reality

[www.cssiinc.com](http://www.cssiinc.com)

# High-performing systems win wars only if deployed successfully.

It takes more than technology to acquire and sustain today's military systems. As technological ingenuity increases and military tactics evolve, it's critical that we also increase our speed to adapt and redeploy our military systems. CSSI stands ready to serve, with experienced military professionals and technologists dedicated to ensuring systems deliver advanced operational capabilities to the warfighter.

## AN EXPERIENCED TEAM OF SYSTEMS SPECIALISTS

As geopolitical dynamics and global economics challenge our global supply chains and distribution networks, we must use our limited resources with increased efficiency. Now more than ever, our professional acquisition and system program officers are called on to shorten acquisition cycles, increase system lifespans and secure system capability at a lower cost – while still charged with the command to bring our loved ones home.

At CSSI, we are dedicated to coordinating, facilitating and managing activities that navigate obstacles and deliver safe, secure and efficient mobility solutions. We analyze diverse, competing influences that limit success to find the intersection of technologies, relationships, and operations that provide the most optimal solutions for evolving capabilities. Our extensive team of systems engineers, management analysts and mission experts develops comprehensive, reality-based recommendations for systems life cycle management complexities. To earn your trust, we provide independent and unbiased systems engineering management services that help you increase system capabilities, extend system lifespan, and reduce cost of ownership. As a result, CSSI can provide comprehensive analyses, competent teams of experts, and a level of trustworthiness that allows you to make wise decisions with confidence.

At CSSI, we're dedicated to supporting the widespread use of systems engineering in the Department of Defense acquisition process. We're focused on improving delivered system performance, including supportability, sustainability and affordability. Our experts are committed to excellence in systems engineering throughout the system life cycle and across all engineering disciplines and support functions.

## Today's services designed for tomorrow's challenges

### OPERATIONAL CONCEPTS AND CAPABILITY ANALYSIS

We use experts from a range of military operations and areas of expertise to collaboratively develop operations and capabilities to meet future mission needs. Our human-based, computer visualization, collaboration approach allows us to create solutions that best enable the warfighter. We use our experience soliciting information, managing workgroups, and analyzing data to develop capability plans, concepts of operations, analysis of operational alternatives, and procedural documentation. Our customizable approach helps you plan current expansions or changes to systems, develop feasible operations, and evaluate organizational impacts to future operations.

### MILITARY SYSTEMS LIFECYCLE MANAGEMENT

CSSI leverages many years of system research, prototyping, and analysis to assist the military with the acquisition, integration and sustainment of systems. With the use of our external influencer analysis methodology and model-based systems engineering (MBSE) approach, your decisions for alternative solutions improve your probability of success. CSSI can perform acquisition engineering to define interfaces and evaluate the integration of air traffic management systems, meteorological systems, oceanographic systems, global positioning, navigation, avionics, and C4 systems. With the CSSI approach, you know the decisions you make today will have the desired effect throughout the entire lifespan of your systems.

### SAFETY MANAGEMENT AND REPORTING

Our safety management team provides interrelated services, tools and capabilities designed to implement a data-driven, predictive safety management system within a customer's enterprise. We implement safety management systems within companies, enterprises and organizations that desire to limit unwanted safety events within their operating environment and who embrace principles of proactive safety risk management. This approach will ensure you minimize your safety prevention investments while maximizing your safety benefits.

### TECHNOLOGY PORTFOLIO MANAGEMENT

Our team is well-versed in a variety of technologies. To help you make the best technology investments for current and future systems, CSSI will analyze and manage a diverse portfolio of innovation and technology investments. Our approach analyzes and determines the optimal portfolio balance. We analyze technology risks, technology maturity, technology roadmaps, and the interdependency between various technologies. We help our clients make investments today for innovations and technologies that are most able to increase the capabilities and performance for the life of their systems. We help you align strategies and technologies with your users needs to ensure systems perform at peak performance for a minimum cost of ownership.

# Case Study: Adapting Systems to Provide Remote Weather Radar Data

## CLIENT

### U.S. Department of Navy

## BACKGROUND

The Supplemental Weather Radar (SWR) Program provides meteorological situational awareness for Navy and Marine Corp activities around the world where existing weather radar data is insufficient. The system is a 250kw Doppler weather radar sensor system that provides real-time meteorological analysis to 240 kilometers.

## CHALLENGE

When the Navy initially installed the SWR, forecasters were collocated with the system and did not need remote access to the data. Due to cutbacks, the forecasters were moved to centralized locations resulting in a need for remote access to the data provided by SWR. Though the system was capable of remote data delivery, a number of network security policy changes necessitated the removal of SWR from the network until the Navy could implement new network security policies and procedures. The main obstacle was that the Host Based Security System (HBSS) was required on all networked assets. SWR had a number of internal processes that conflicted with HBSS, resulting in SWR not operating correctly during HBSS implementation.

## SOLUTION

Over the course of several months, CSSI Information Assurance and SWR System Administration teams worked with HBSS administrators and engineers to identify each of the individual conflicts between SWR and HBSS. The main challenge here was accessing the inner workings and relationships of the various processes that make SWR function, since SWR is a commercial product. To overcome this problem, the team developed a logical, step-by-step escalation of implementing HBSS security features to identify the individual, conflicting SWR processes. At each evolution, the team developed a set of policies, rules and exceptions in HBSS to allow SWR to function properly. The process continued until HBSS was operating at the desired security level.

## RESULTS

With an operational SWR in the lab in Charleston, SC, the CSSI Information Assurance and SWR System Administration teams collected the HBSS policies, rules and exceptions into a SWR-specific set. They then delivered these sets to the various Navy Network Operation Centers that provided connectivity for SWR around the world. Once they applied specific HBSS data sets to each remote SWR system and tested them, the Navy Network Operation Centers were able to connect the remote SWR systems to the network and once again begin providing remote datasets for mission planners.



More than 20 years of experience leads to a world of difference.

## A History of Partnership

### Accomplishments that Speak for Themselves

#### MEETING THE SYSTEMS CHALLENGE

Our team of experts helped the Department of Navy develop a unified approach to update the Automated Surface Observation System (ASOS) and meet the modern security requirements that satisfy the US Navy, US Air Force and the Federal Aviation Administration. The Navy accepted and submitted our proposals and helped the National Weather Service gain a better understanding of the impact and options related to the ASOS upgrade. As a result, the project got back on schedule for a 2020 timeframe for implementation.

#### SHARPENING THE FOCUS AS THE PMO DELIVERS RESULTS

The team worked closely with the Department of Navy Meteorological and Oceanic (METOC) Integrated Project Team to manage a highly complex project with status and action items too large to accomplish within budget and on time, resulting in execution inefficiency and disorganization. We employed our advanced program management expertise and introduced Lean-Agile project management methods to manage the project and set mutually agreed upon objectives that broke large tasks into smaller actions; employees were able to complete the smaller actions in two week iterations.

#### TAKING TECHNOLOGY TO THE ENDS OF THE EARTH

We developed a sophisticated solution to connect and seamlessly integrate international operations for the Department of the Navy, SPAWAR Office of Polar Programs (SOPP). We played a key role in designing networks and systems as well as implementing cost-effective solutions to centrally manage computer systems and servers from one location.

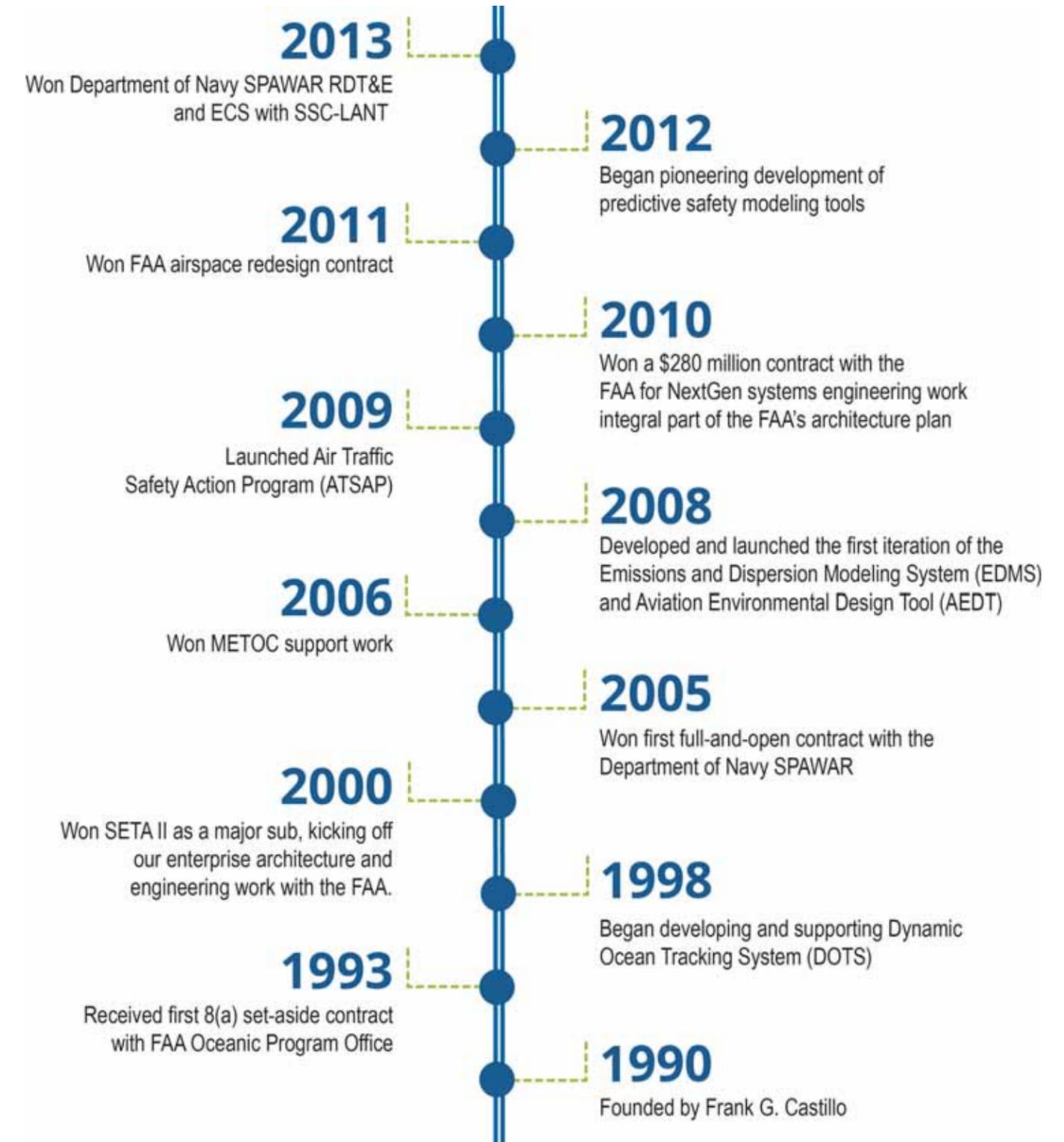
#### THE FLEXIBILITY TO CHANGE WITH THE WEATHER

The CSSI team and Space and Naval Warfare Systems Center Atlantic (SSC LANT) developed a proof-of-concept prototype for testing to satisfy the requirement for automated shipboard weather observation and reporting. The Automated Shipboard Observation system was successfully demonstrated and well-received at sea onboard the USS DWIGHT D. EISENHOWER. Today, commercial-off-the-shelf (COTS) hardware solution provides the warfighter with continuous 24-hour automated shipboard weather observation and automatic measurement of various weather parameters.

#### Find out more.

CSSI stands ready to help military entities excel. Call us to schedule a meeting, or visit our website at [cssiinc.com/defense](http://cssiinc.com/defense), and let's take on your biggest challenges.

[www.cssiinc.com](http://www.cssiinc.com)



## About CSSI

CSSI, Inc. partners with government and commercial clients to ensure transportation systems are designed and equipped to safely and efficiently move people and materials. Leveraging deep roots in aviation, CSSI, Inc. pioneers innovative analytics and best practices that enhance productivity, decrease costs, and improve safety.

Founded in 1990, CSSI, Inc. employs nearly 300 professionals, has offices in five locations and supports clients throughout the United States and globally.

For more information on CSSI, Inc., please visit [www.cssiinc.com](http://www.cssiinc.com).



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