

SAFETY

We'll show you risk -
before it turns into reality.



CSSI, INC.

Moving Research to Reality

www.cssiinc.com

Improving Organizational and System Safety

Today's organizations are faced with the constant challenge of creating and maintaining a state of resilience -- one that supports the continuation of critical missions, while ensuring that employees, resources, and assets are protected. This focus on safety is paramount, especially in today's fast-moving, highly technical world. CSSI works with organizations like yours to make the safety of employees and systems priority number one.

AN EXPERIENCED TEAM OF SAFETY SPECIALISTS

At CSSI, our network of safety experts has an in-depth understanding of operations for public transportation, public safety, public health, and the business operations that support them. We leverage that deep resource of knowledge to approach organizational and system safety issues with a highly qualified perspective.

Our safety-focused teams consist of a diverse group of analysts, engineers, scientists, operations specialists, programmers, and designers with relevant experience and knowledge of the problems we are chartered to solve. Along with our in-house specialists, we also tap into a broader network of experienced professionals.

Through the capabilities of this team, we can provide resources and develop safety management systems that enforce newer and stronger standards, and protect organizations from the impacts of safety incidents. We also create improved and automated processes to gain efficiencies, improve the use of information, and implement easy-to-use web-based tools within our customers' organizations.

In an era of shrinking budgets and dwindling resources, our safety specialists help federal, state, and local departments of transportation and commercial customers solve complex challenges to safely increase capacity of existing transportation infrastructure. By designing innovative programs that enhance productivity and ensure safe operations with the lowest possible risk, our customers are able to save millions of dollars.



Customizable System that Reduces the Risk of Incidents

At CSSI, our job is to implement data-driven, predictive safety management systems. We design these systems for companies, enterprises and organizations that embrace the principles of proactive safety risk management and are dedicated to limiting unwanted safety events.

We focus primarily on the areas of:

- **Safety Promotion**

We strengthen the FAA's Just Culture initiative through support ranging from internal and external communications and publications to logistics for national training. In turn, we facilitate a change in organizational safety culture and encourage a voluntary reporting environment.

- **Safety Policy**

We provide subject matter expertise to assist with the creation and disposition of national policy, and help bring it into compliance.

- **Safety Risk Management**

Our proactive safety initiatives include improving the use of structured data to automatically identify significant factors affecting safety. We support the FAA in identifying risks, performing hazards analyses, and developing Safety Risk Management Documents (SRMD).

- **Safety Assurance**

We develop enhanced tools that allow operational facilities to verify compliance and track the effectiveness of their risk mitigation strategies.

Case Study: Voluntary Safety Reporting Program

CLIENT

U.S. Department of Transportation *Federal Aviation Administration*

BACKGROUND

In early 2000, the world aviation community, led by the International Civil Aviation Organization (ICAO), recognized it was time for aviation to embrace safety management systems (SMS), much like the nuclear energy, pharmaceutical, chemical production and medical industries. SMS implementation, an integrated collection of processes and procedures that ensure a formalized and proactive approach to system safety through risk management, was the industry's best chance to further reduce an already low accident rate in preparation for the projected growth of air travel. Voluntary safety-reporting is a required component of an SMS and is based on a model of just culture that promotes mutual trust, cooperation and collaboration.

CHALLENGE

Air travel is one of the safest ways to reach a destination. When a system is so safe, how do you know where to place your focus to keep it that way? The answer is complex and everchanging.

To manage safety risk effectively across the National Airspace System (NAS), the FAA needed first to collect accurate information about what was happening in the system. With an outdated punitive policy and antiquated reporting structure, the FAA was missing key data about safety events from frontline employees closest to operations. As such, the agency was missing crucial information on their risk management system, resulting in an increased risk of safety failures.

SOLUTION

The FAA partnered with CSSI to develop an air traffic safety action program (ATSAP) and provide a web-based tool to more than 20,000 air traffic controllers so they could voluntarily report safety-related events in the NAS in a non-punitive manner. The ATSAP website now provides online training, safety analysis, corrective action tracking, and safety promotion functionality, as well as

data-sharing functionality that allows information sharing on a particular safety event between controllers, pilots and airlines. This web-based tool not only allows controllers to report safety events, but also provides an online tool set for management to review submitter reports and conduct event review committee meetings. The tool also includes a messaging and communication module that ensures anonymity -- a critical factor in the whole process.

RESULTS

A tool now exists for frontline employees to report safety-related events in the NAS voluntarily and in a non-punitive fashion, which has resulted in:

- More than 15,000 (over 70 percent) of controllers using ATSAP to report safety events.
- More than 70,000 safety event reports collected to date.
- Safety-related data from ATSAP shared with other major safety databases within the FAA and aviation industry for purpose of analysis.
- The generation of more than 35 ATASP positives per quarter. ATSAP positives are improvements in current operations that are direct results of corrective actions taken based on the ATSAP reports.

How Voluntary Safety Reporting Can Be Implemented in Your Organization

CSSI offers safety-minded companies a comprehensive suite of tools built around voluntary safety reporting. This suite includes applications, support and training, as well as safety culture guidelines, to ensure successful implementation in complex work environments.



Implementing Market-Leading Ideas

Accomplishments that Speak for Themselves

AIR TRAFFIC SAFETY MANAGEMENT DATABASE

CSSI provided safety analysis to the Department of Transportation, implementing a structured database system to manage more than 20,000 air traffic controllers' self-reported, non-attributable safety-related incidents. The database currently houses more than 70,000 incident reports.

PREDICTIVE ANALYTICS AND DATA WAREHOUSING

We are developing a solution for the Federal Aviation Administration that will provide comprehensive analysis of large volumes of structured and unstructured safety data, and run complex algorithms that predict future clusters of high-risk air traffic safety indicators and incidents.

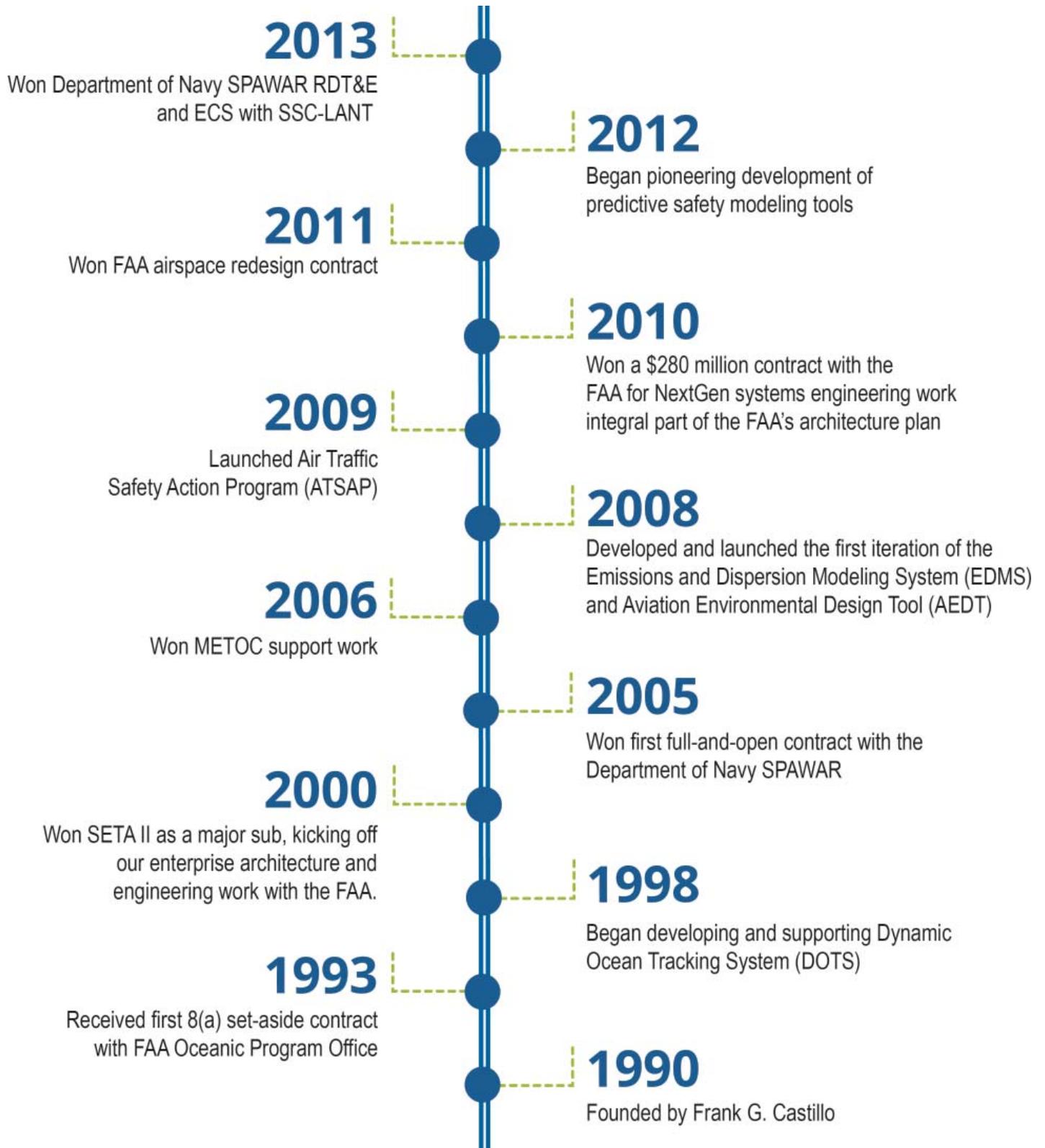
RVSM MONITORING SERVICES

We have helped the United States and countries around the world safely plan and implement Reduced Vertical Separation Minima (RVSM), which decreases vertical space between aircraft, allowing twice as many aircraft to fly at certain flight levels. We are also the world's leading provider of RVSM monitoring services to certify that planes can fly safely and effectively at RVSM levels, and we have supported more than 7,500 flights.

SAFETY MANAGEMENT SYSTEMS

We assisted the FAA Air Traffic Organization and the Office of Airports in their internal SMS implementation initiatives. We draw on this experience to help clients avoid unwanted safety events and liabilities by implementing proven methods to monitor and control safety threats in an increasingly crowded NAS.

A History of Partnership



About CSSI

CSSI, Inc. partners with government and commercial clients to deliver engineering, technical and management solutions to complex, high-consequence challenges affecting transportation systems at all levels. Leveraging its deep roots in aviation, CSSI, Inc. pioneers innovative analytics and best practices that produce groundbreaking results to 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.



400 Virginia Ave, SW Suite 210
Washington, D.C. 20024

+1 (202) 863-2175 phone

+1 (202) 863-7400 fax

