



C E L E B R A T I N G

*Sixty Years*

NEW FRONTIERS  
THE DECADE 2008-2018





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# **ANSER's** FIRST 50 YEARS

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Analytic Services Inc. began in 1958 as a not-for-profit corporation, an independent institute committed exclusively to public service. Ever since, it has supplied objective, timely, forward-thinking analysis, independent of political or commercial influence, to federal, state, and local governments.

ANSER was originally established to assist the U.S. Air Force, which needed a technically qualified, unbiased organization close to the Pentagon that could rapidly analyze already identified as well as evolving mission requirements to help the Air Force decide what systems to acquire. The first office was in Alexandria, Virginia, and the company had 35 employees. Its first president, Dr. Stanley Lawwill, would serve until 1981. In 1960, ANSER moved to Leesburg Pike in Fairfax County, Virginia, not far from its current location in the Skyline complex.

From 1958 until 1976, ANSER was a federal contract research center serving one client: the Air Force, although in 1965 it began self-sponsored independent research not reliant on government funding. In 1976, the company received a new status: nonprofit public-service research institute. Although its main customer still was the Air Force, ANSER was now free to take on other contracts too—for example, studying health systems not only for the Air Force Surgeon General but also for government and university clients.

ANSER moved again in 1978, this time to Army-Navy Drive in Arlington, Virginia. Two years later, the company began work for two Defense Department organizations it would serve for decades to come: the Air Force Scientific Advisory Board and the Defense Advanced Research Projects Agency.

Jack Englund became ANSER's second president in 1981; he would serve for 10 years.

In 1983, ANSER opened an office in Colorado Springs to serve the Air Force there—work that continues today.

The next year, ANSER moved again, this time only a few blocks away, to Crystal City. Major areas of study for the company in the 1980s and 1990s were the Strategic Defense Initiative, the U.S. nuclear arsenal, and the Advanced Tactical Fighter (the future F-22 Raptor).

In 1988, ANSER opened an office in Tampa, Florida, to serve U.S. Special Operations Command; it remained open until 2001.

The next year, ANSER had a new president: former astronaut Dr. John Fabian, who led the company for seven years.

Following the war in the Persian Gulf, from 1991 to 1993 ANSER conducted the Gulf War Air Power Survey.

In 1992, one year after the Soviet Union dissolved, ANSER opened the Center for International Aerospace Cooperation in Moscow, Russia. This landmark operation continued into 1999. The company also began offering legislative analysis and providing expertise to the Defense Department's Chemical and Biological Defense Program; both efforts continue today.

In 1994, ANSER began researching Joint Advanced Strike Technology, the basis for the F-35 Joint Strike Fighter—work that continued into the 21st century.

ANSER began three innovations in 1997: It opened a West Virginia office to do biometrics work for the National Institute of Justice, work that continued for five years; it started a Toastmasters chapter, the Analytic Speakers; and it began helping to operate the NASA Institute for Advanced Concepts. The NASA work is still part of the company more than 20 years later.

The next year, a new president arrived at ANSER: Dr. Ruth David, who would run the company until 2015.

By 1999, ANSER had more than 650 staff and was poised for further innovation on the eve of the new century. In 2000, the company established its Institute for Homeland Security, which began publishing the *Journal of Homeland Defense* and *Homeland Defense Newsletter*. These publications soon changed their titles from “Homeland Defense” to “Homeland Security,” better reflecting their focus. In 2000 and 2001, ANSER also worked with the USS *Cole* Commission to produce a report on the bombing of that ship in Yemen a few months earlier.

In 2001, ANSER moved again (still within Arlington) to Shirlington, where it would stay for 12 years.

In 2002, ANSER began providing base security assessment and training for Pacific Air Forces, work that it still does 15 years later.

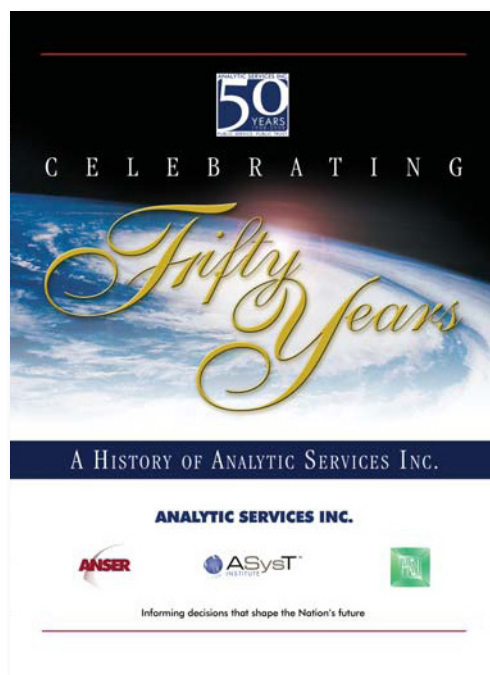
In 2004, the year after the Department of Homeland Security was established, ANSER received a contract to operate the Homeland Security Institute, a federally funded research and development center, for the Department. That same year, the company began developing Vigilant Guard exercises for the National Guard and U.S. Northern Command—work that continued through 2012.

In 2004 and 2005, ANSER hosted three major federal commissions: the Defense Base Closure and Realignment Commission, the Space Shuttle *Columbia* Accident Investigation Board, and the Independent Panel to Review Department of Defense Detention Operations.

ANSER established the Applied Systems Thinking Institute (AsyT), which led to systems thinking becoming a core part of the company's vision: "We advance the art and science of decision-making by applying systems thinking."

In 2007 and 2008, ANSER hosted the Commission on the National Guard and Reserves, began developing antiterrorism communications for the Army (work that is still going on), and began helping plan and develop the U.S. Vietnam War Commemoration.

And in 2008, Analytic Services celebrated its first 50 years of service to the Nation.



<http://www.anser.org/docs/anser-50th-history-book.pdf>



# *Celebrating 60 Years*

## NEW FRONTIERS: THE DECADE 2008–2018

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The past decade has been a time of change for Analytic Services Inc.—changes in leadership, in how we are organized to work, in areas of work, in physical location, in the size of our workforce, and in the contracting landscape. These changes have brought new challenges and new opportunities requiring ANSER to adjust, transition, and change to continue to provide service to the Nation. What has remained constant going into ANSER's seventh decade is the company's dedication to its core values: public service and independent research and analysis. As in the decades before, the people of ANSER have continued to provide solutions that benefit the country.

Since 2004, Analytic Services had been divided into two operating units: ANSER and the Homeland Security Institute (HSI). HSI was a federally funded research and development center (FFRDC) sponsored by the U.S. Department of Homeland Security. While other not-for-profit organizations and FFRDCs addressed some aspects of the homeland security mission space, HSI was unique in that its analysts dedicated all their efforts, intellectual capital, and resources to supporting the federal, state, local, tribal, public, and private sector organizations that make up the homeland security enterprise.

The ANSER operating unit continued to provide professional advisory and assistance services (A&AS) to a variety of long-standing and loyal customers, and responding to new challenges with new clients. For example, we began to support the Defense Forensics Enterprise System for DoD, we expanded our ongoing support to DTRA by forming teams to support multiple DTRA Directorates, we worked with the DoD CIO office, and under new WHS contract vehicles we began to support the DoD Office of Management and Personnel. In addition, we began work for the Centers for Disease Control and Prevention and the Africa Center for Strategic Studies. Most recently, we expanded our work to provide SETA support for the OSD Office of Manufacturing Resiliency and Assurance (MRA) and the Industrial Base Analysis and Sustainment (IBAS) program.

As the current decade began, both operating units continued to provide outstanding support delivering independent studies and analysis, free of conflict of interest, to the wide scope of our client base. However, we knew contracting and government funding changes would impact our future work and cause uncertainty in our planning as we moved forward.

There were various reasons for this uncertainty. The government contracting environment became more constrictive and cost dependent, with a more focused emphasis on the use of lowest price technically acceptable (LPTA) contract vehicles resulting in award to the lowest bidders. Since overall budgets were decreasing and congressionally imposed continuing resolutions impacted government budget planning, fewer resources were available for some contracts, resulting in ANSER facing significantly more competition from large businesses for much of our traditional A&AS work. Thus we organized and planned for these challenges as we faced the new decade.



2008–2011

## Expanding the Boundary

As Analytic Services Inc. began its sixth decade, the government contracting environment presented numerous issues for ANSER to overcome. Both operating units—ANSER and HSI/HSSAI—were facing challenges due to uncertainty in the contracting climate. However, both also had earned a sterling reputation among their past and current government clients for tackling complicated projects with enthusiasm and expertise.

At the start of 2008, the Homeland Security Institute continued to provide responsive studies and analysis support to a variety of DHS agencies under our original base contract award. In 2009, the initial five-year contract to operate HSI terminated. Analytic Services Inc. was awarded a contract to operate the new homeland security FFRDC, known as the Homeland Security Studies and Analysis Institute (HSSAI). Building on its previous congressional charter and a solid foundation of high-impact contributions, the new institute sought to expand its support to DHS and others across the homeland security enterprise.

Although our FFRDC continued to provide significant support to the DHS Science and Technology Directorate (S&T), the breadth of the Institute's work expanded significantly over previous years. Of the approximately \$30 million in studies and analysis support that was delivered in fiscal year 2008, approximately \$22 million was provided outside DHS S&T. That year, the Institute was engaged in more than 80 tasks and provided support to virtually every major staff function and component within DHS and to several homeland security-related initiatives in agencies outside the Department.



Major impact projects were developed by our analysts as they supported DHS's top priorities (outlined in the 2010 DHS Quadrennial Homeland Security Review) during this period. These priorities included counterterrorism; border security; enforcement of immigration laws; disaster preparedness, response, and recovery; and Department unification—a leaner, smarter, more effective agency. HSSAI realigned its analysts into divisions that led efforts in these focus areas.

In December 2010, ANSER's senior management reorganized the ANSER operating unit to focus on five mission areas: Global Threat and Intelligence, Mission Assurance, Enterprise Systems Planning, Operational Analysis and Management, and Science and Technology. New Vice Presidents and Directors were appointed to lead the charge in these areas.

ANSER delved into new territory in the summer of 2009 when the company was awarded a Mentor Protégé Program (MPP) agreement by the Army Small Business Office to support Halfaker and Associates. This provided three years of specialized business services, operational, and business development support to a small business, which to date has survived its 8(a) nine-year program and continues to be successful.

As we ended operations in 2011 and transitioned to face new business and operational issues, ANSER continued to provide its historical base of truly exceptional, responsive, and professional analytical support to a wide variety of DoD, DHS, and other clients as it forged into the challenging years ahead.

# 2008

## Air Force Cyber Threat Training

ANSER provided expertise for computer network defense to the Air Force by assessing and analyzing network events, intrusions, and attacks on the Air Force network. The Air Force, along with the rest of DoD, had grown to rely more on the cyber domain for all mission areas, so understanding and recognition of those threats by all personnel was essential to mission success.

As the first step in training and education on responding to the cyber threat, the commander of U.S. Strategic Command directed that all combatant commands, services, and agencies receive a minimum level of cyber threat training. The Air Force asked ANSER to develop the training mechanism to reach all Air Force personnel in such a way that they accomplish their “wing safety day.”

ANSER analysts began developing a plan to ensure that all Air Force airmen would be reached. Their three-pronged approach to meet the training objective called for 1) developing a standard cyber threat briefing applicable to all personnel; 2) crafting a message from the Director of Operations, Plans, and Requirements to all major command commanders emphasizing the seriousness of the threat and the importance of the training; and 3) creating an “Airman’s Roll Call” article on the cyber threat

(the Airman’s Roll Call being a required weekly briefing, from all Air Force supervisors down to the lowest ranks in all organizations).

The ANSER training presented various ways for personnel to protect themselves and the Air Force mission against malicious actions, such as safeguarding sensitive information, following established procedures for data storage and transfer, and keeping antivirus software on home computers up to date.

The Airman’s Roll Call article—approved and released by the chief master sergeant of the Air Force—was briefed to more than 300,000 Air Force personnel around the world as well as thousands of government civilians and contractors.

## HSI Support to DHS Wildfire Risk Mitigation Effort

In response to the California wildfires of 2007, the DHS Directorate for Science and Technology investigated what technologies could mitigate the risk posed by the growing wildland-urban interface fire problem.

An HSI task team supported the Directorate with research and analyses to rapidly identify wildland-urban interface technological solutions for first responders. The solutions were expected to be available in 6 to 12 months and cost less than \$1 million.

In this effort, HSI analyzed prospective wildland-urban interface technology solutions. First, the institute task team comprehensively surveyed the state of technology and techniques for fire mitigation, as well as for combating the

### OTHER KEY PROJECTS

HSI assessed public acceptance of new technologies

ANSER integrated DoD capabilities into the Nation’s response plans

HSI initiated second quadrennial Biodefense Net Assessment

ANSER worked with Air Force Air Combat Command to develop requirements documents, Program Objective Memorandum, Budget Estimate Submission, and Test Project Orders





primary and secondary after-effects of fires, as applied to the wildland-urban interface environment and the risk related to structures. The objectives of the technology survey were to identify potential technology providers and to record data on technologies in a database structured to facilitate their subsequent evaluation.

The HSI task team contacted the National Labs and other federal laboratories to locate individuals—points of contact—who were knowledgeable about specific technologies and could provide specific information on a prospective technology. The team then sought other sources for wildland-urban interface technology solutions not covered or pursued by the labs. This was accomplished through formal survey-interviews with researchers and program managers in forestry organizations, professional (such as industry) associations, private-sector (such as insurance) companies, other federal government agencies, building and fire code organizations, and universities.

To support the Science and Technology Directorate's requirement of a quick

turnaround for data, the survey that HSI conducted in a five-week period identified 224 technologies from 83 sources. The survey identified preliminary candidate technologies falling within the directorate's time and cost criteria. Further, the findings of the survey suggested specific areas where the directorate could effectively focus future involvement in the wildland-urban interface problem.

After receiving the initial technology survey, the Science and Technology Directorate requested that the HSI team further analyze the technology data by evaluating the technologies—especially how effective they were at filling wildland-urban interface capability gaps. Additionally, the team conducted a program- and portfolio-level analysis of other agencies' key programs in the wildland-urban interface technology area.

#### OTHER KEY PROJECTS

ANSER improved DoD's ability to plan, coordinate, and conduct operations and measure performance supporting the Global War on Terrorism

DTRA received ANSER chem-bio support for high visibility warfighter support missions

ANSER supported ASD(HD&ASA) improving our Nation's ability to respond to incidents with total force and increased resilience

ANSER provided HQ Air Combat Command technical support to formulate the Combat Air Force's (CAF's) long-range investment plan

# 2008



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## DHS Office of Health Affairs Pandemic Influenza Strategic and Programmatic Analysis

In 2006, the Chief Medical Officer was assigned the responsibility within DHS for medical issues related to natural disasters, along with acts of terrorism and other manmade disasters. DHS Secretary Michael Chertoff formed the Office of Health Affairs (OHA) in January 2007 to implement these responsibilities.

In 2008, the HSI team performed research and analysis in support of OHA's responsibilities related to avian influenza and pandemic influenza. Through numerous and diverse tasks, the research and analysis included:

- Evaluating program performance
- Determining and assessing operational and logistical requirements that needed to be addressed as training, planning, execution, and policy guidance were developed
- Evaluating execution of implementation plans and advising as appropriate on performance improvement opportunities
- Collaborating with other federal entities on health and medical issues as they related to DHS mission and activities

The HSI team's efforts supported entities within OHA with roles in setting and driving policy and activities to improve the Nation's long-term preparedness for and response to avian influenza and pandemic influenza events and, congruently, any all-hazard events, including foot-and-mouth disease and foreign animal disease.

This HSI teamwork provided programmatic and professional support to prevent, protect against, respond to, and recover from not only avian influenza and pandemic influenza, but also agroterrorism, chemical and biological terrorism, zoonotic disease, and emerging infectious diseases.

## ANSER Medical Support to DoD for Chemical and Biological Defense

The Defense Department's Chemical and Biological Defense Program exists to provide chemical and biological defense capabilities to ensure that the department's operations are unconstrained by chemical or biological effects. ANSER provided comprehensive support to the Special Assistant for Chemical and Biological Defense and Chemical Demilitarization Programs, the principal deputy for Chemical and Biological Defense Program matters.

DoD medical chemical and biological defense research and development programs provide numerous products to protect and treat Service members. Assessment methodologies enable threat evaluation and injury prediction. Medical prophylaxis and treatment strategies reduce performance decrements, injuries, and deaths of military personnel in the field. This enables them to accomplish their missions, reducing the need for medical resources and decreasing the probability of long-term health effects.

The ANSER Medical Support Team's tasks spanned a wide range of activities. These included strategic planning, program and budget analysis, metrics development, technical support,

coordination of department-wide and interagency chemical and biological defense activities, briefings, and program reporting. The reporting included the DoD's Chemical and Biological Defense Program Annual Report to Congress.

ANSER's medical support efforts also required interfacing with other departments and agencies on behalf of the Special Assistant, including the Services, the Joint Staff, the Defense Threat Reduction Agency, the Program Executive Office for Chemical and Biological Defense, the Department of Health and Human Services, the Department of Homeland Security, and the Government Accountability Office. These interactions supported the development of effective chemical and biological defense countermeasures.

Of particular importance was ANSER's support to the full life-cycle activities involved in the chemical and biological defense medical research, development, and acquisition process. These included science and technology assessments, evaluation of compliance with Food and Drug Administration regulations, and support for the highly visible Transformational Medical Technology Initiative. The initiative's mission was to protect the warfighter from conventional or genetically engineered biological threats by accelerating the discovery and development of broad-spectrum medical countermeasures using novel technology platforms and innovative management approaches.

## Psychosocial Impacts of a Terrorist Attack on a National Icon

Terrorist attacks are a threat to the safety and security of the United States. Risk assessments looking at the possible consequences of such attacks typically consider three main categories: economic impacts, injuries, and fatalities. The 2003 DHS document *The National Strategy for the Physical Protection of Critical Infrastructures and Key Assets* warned that a terrorist attack against critical infrastructure could also cause "profound damage to our national prestige, morale, and confidence." This suggests that there is potentially a fourth category of consequence—psychological impact—that should be considered as part of the risk equation.

The Department of the Interior (DOI), which has sector-specific responsibility for national icons (such as the Statue of Liberty), was particularly interested in exploring whether the psychological impact of a terrorist attack could be measured. If it could, DOI wanted to know whether such a measure would have a material impact on how the Department thought about preventing and responding to attacks.

HSI proposed to DOI a modest pilot study to explore the issue. The study was divided into three main areas of analysis:

1. Identify icons that Americans view as the most important national symbols, an attack on which would constitute the most direct blow to "national prestige, morale, and confidence."
2. Explore and define what factors would need to be considered in assessing the psychological impacts of such an attack. Such

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factors might include a range of psychosocial (psychological and social behavior) measures.

3. Assess whether DOI could mitigate the psychosocial impacts of terrorism in terms of both prevention and response and, if so, what types of activities that would entail.

HSI began its analysis by reviewing literature to identify any existing studies documenting the psychosocial impacts of previous terrorist attacks in the United States. The data pool on this issue, however, was limited. As a result, the institute team held a roundtable consultation with subject matter experts to explore their thoughts regarding the characteristics of a terrorist attack that might shape the attack's psychosocial impacts, as well as the ways in which those impacts might change in the event of an attack on a national icon.

In Phase II, HSI conducted two small pilot surveys designed to rank and validate the importance of selected national icons. The second survey also began examining the potential impacts of a terrorist attack on icons symbolizing such qualities, by asking whether respondents' confidence in government

includes a level of assurance that the government is providing adequate security for those icons.

In the last phase of research, HSI held a scenario-based exercise involving government officials responsible for creating strategies for protecting against and responding to terrorism. The ideas proposed in this discussion suggested the types of activities that might be best suited to mitigating the psychosocial impacts of a terrorist attack on a national icon—and that therefore might be of the most value to DOI to implement.

## Defense Forensics Enterprise System

One of ANSER's most significant new awards as a prime came with the 2008 contract award for five years to support the Defense Forensics Enterprise System (DFES). Under this ID/IQ award, ANSER provided integrated forensic solutions to DoD across the full range of military operations and provided timely doctrine, organization, training, materiel, leadership and education, personnel, and facility (DOTMLPF) solutions for the Defense Forensic Enterprise (DFE)—an enterprise comprising of all DoD's forensic capabilities across all levels of war and in all operational environments. These services enabled ANSER to provide global, end-to-end services from analysis of complex issues such as developing a holistic, enduring, program of record for the DFE. ANSER supported critical components of the DFE and had been at the center of the DoD forensic transformation process from the start of the program. ANSER successfully completed 20 major task orders that have helped to translate DoD's vision for a DFE into reality.





## Biometrics and Forensics

In 2009 ANSER developed the first forensics concept of operations for the Marine Corps, and since 2009 it has assisted the Army Criminal Investigative Laboratory and its successor organization, the Defense Forensic Science Center, in numerous efforts both inside and outside the United States: developing the organizational strategic plan and sensitive site exploitation training, providing mock trial training, developing a forensics academy, and providing expeditionary forensics assistance in Afghanistan. From 2011 through 2013, ANSER worked with the Defense Intelligence Agency to create biometric application and technologies policy for the Agency's Office for Forensic Intelligence. In 2012 and 2013, for the Army Provost Marshal General, the company developed a strategic plan, a forensics strategic plan, and a forensics expeditionary concept of operations. ANSER also provided functional and force management expertise for the Provost Marshal General. For the Defense Forensic Science Center, ANSER monitored and guided DNA and molecular biology projects to facilitate the transfer of ideas from research scientists into tangible products for DoD forensic examiners and military police.

## Army Antiterrorism Awareness

In 2009, ANSER created the Mission Assurance Directorate, with Mike Glaspy as its first leader. The new directorate led a significant expansion of the company's security enterprise work, eventually focused on three customer bases: the U.S. Army's Office of the



Provost Marshal General (OPMG), the Pentagon Force Protection Agency, and the Defense Security Service.

Among dozens of projects ANSER has delivered for OPMG, the longest running is a comprehensive antiterrorism strategic communications plan designed to increase terrorism awareness at Army facilities. In 2009, ANSER created iWATCH ARMY, a modern version of neighborhood watch focused on the threat of terrorist activity. The initiative uses media awareness products (including posters, brochures, websites, and public service announcements) to educate the Army community—Soldiers, civilians, and family members. ANSER's other contributions to the project include quarterly themes that focus on the most critical terrorism-related problems, the creation and advancement of Antiterrorism Awareness Month, and an annual 5-day conference that draws 350 attendees to discuss current issues. All told, ANSER's Media Services team has produced over a thousand print products for this project. The Army has reported a significant increase in local terrorism awareness since the iWATCH program began.

### OTHER KEY PROJECTS

ANSER executed Technical Support Working Group tasks for Personal Security Decision Aid and Forensics Explosives Primer

ANSER planned, executed, and gathered lessons learned from a full-scale Operational Response Test conducted by the Pentagon Force Protection Agency

HSI examined Israeli counterterrorism

HSSAI evaluated air cargo security

HSSAI reported on counter-radicalization in U.K.

HSSAI studied terrorist recruiting on the Internet

# 2009

# 2009



## Distinguished Visiting Fellows

Beginning in 2009, HSSAI's team of analysts was complemented by 12 Distinguished Visiting Fellows (DVF). The Fellows possessed a broad spectrum of expertise and experience in homeland security that enhanced the Institute's capabilities and its work. The DVF program enlisted accomplished leaders in the field of homeland security to inform current work, mentor young analysts, and represent HSSAI at the highest levels. The DVFs served as strategic advisors and experts, contributed to the Institute's analytical work across the enterprise, and attended homeland security events across the country. HSSAI task teams drew heavily on expertise and other resources provided by these Fellows, who also significantly expanded the Institute's network. Over the years, they participated in a broad range of project topics from cybersecurity metrics to Federal Air Marshal operations to risk-based decision making to DHS's interdiction posture. A notable member of the DVF corps was Elaine Duke, who later served on ANSER's Board of Directors before being named Deputy Secretary of Homeland Security

(and, for six months in 2017, Acting Secretary of DHS).

## FEMA Doctrine Documents: NIMS and NRF

Following a string of natural disasters that included Hurricane Katrina in August 2005, government agencies were called upon to reform their approach to emergency management. As the Nation's preeminent federal disaster preparedness and response agency, FEMA was already tasked with advancing two foundational guidance documents—the National Incident Management System (NIMS) and the National Response Framework (NRF)—among other federal departments and agencies, state and local governments, and private and nonprofit organizations nationwide. The doctrine contained in these documents enables more efficient emergency response and recovery operations, allowing organizations and jurisdictions at different levels to work together more seamlessly.

In 2009, FEMA turned to HSSAI for help with several tasks related to NIMS and the NRF, including:

- Developing a NIMS National Strategy to prioritize the system's implementation through a system of goals and objectives and researching how this strategy can effectively be implemented across a highly diverse stakeholder population nationwide
- Supporting the NIMS Training Program, including the potential revamping of the Five-Year National Incident Management System Training Plan, a key planning document widely used by stakeholders
- Ensuring that guidance documents are as useful as possible to stakeholders, incorporating changes and recommendations made in different forums

To meet FEMA's needs, HSSAI interacted with numerous governmental stakeholders inside and outside the federal government as well as throughout states, tribal nations, and municipalities across the country. The institute also assisted FEMA in leaning forward to understand the unique concerns of private-sector and nongovernmental stakeholders in a highly diverse threat environment, including both manmade and natural disasters and pandemics.

## Commercial Satellite Communications Trends

With the launch of commercial telecommunications satellites, it became feasible for anyone to place a telephone call from home to practically anywhere on the globe. Satellite communications became the most lucrative form of commercial space technology, generating billions of dollars in revenues each year. The markets for commercial

global positioning services and imaging satellites paled in comparison.

ANSER's Janus team assisted the Intelligence Community for many years with the seemingly insurmountable problem of keeping abreast of new and emergent technologies entering the marketplace. The team provided information technology-related assessments of the most critical telecommunications technologies employed commercially around the world, including information concerning telecommunication satellites. Janus team members faced a daily challenge to solve difficult analytical and technical problems, knowing well they were doing their small part in keeping key players in the Intelligence Community abreast of events in the commercial marketplace that could impact national security.

In 2009, the Janus team was tasked to develop a series of reports that tracked the innovations occurring in the international commercial telecommunications satellite market. The world's telecommunications sector had evolved extensively to include fiber-optic cabling and mobile telephone systems, and satellite manufacturers continued to upgrade their equipment capabilities to keep them as a competitive form of communications in the current environment. Perhaps the biggest impact on the telecommunication satellite industry was the industry's evolution to digital transmissions, particularly those involving Internet Protocol formats.

One of the Janus team's reports on tracking innovations in the international commercial telecommunications satellite market focused on one of the world's largest telecommunications satellites ever launched, the Ipstar satellite system. The Ipstar satellite provides coverage to

2009

# 2009



a vast region in Asia. Launched in 2005, the satellite was the largest commercial satellite at that time and the first high-speed two-way broadband satellite to use an Internet Protocol platform.

Another Janus team report provided detailed information concerning satellites that used the relatively new K<sub>a</sub>-band technology. Satellite service providers were engaging in more aggressive exploitation of the K<sub>a</sub>-band for two-way broadband services for residential and business customers in areas either not served or underserved by terrestrial broadband networks.

The Janus team prepared an additional report that focused on commercial satellite communication trends, providing information on future telecommunications satellite systems. Progress on the adoption of Internet technology in communication satellites was detailed to include how the market would shake out over the next five years.





## Assessment of Risks for Airports

Beginning in 2009, HSSAI focused considerable effort on key aspects of the risks facing commercial airports. In one effort, the institute supported the execution and analysis of a pilot program at seven domestic airports that were physically screening airport employees entering secure airport areas. Later, a follow-on effort assessed the cost and operational implications of employee screening at all domestic commercial airports. In a related effort in 2010, HSSAI catalogued and assessed best-practice security measures at commercial airports. As part of this effort, our analysts developed the Commercial Airport Resource Allocation Tool (CARAT), which enables airport operators to examine the costs and benefits of current and potential security investments. In 2011, we expanded this work to include U.S. airlines operating at airports overseas. This successful effort was highlighted in congressional testimony.

## Police Advising and Assistance

ANSER personnel assisted the Office of the Army Provost Marshal General across the spectrum of military police operations, including identifying and correcting problem areas and implementing the Provost Marshal General's strategic vision for the Military Police Corps. Later, the company developed the Military Police Corps Strategic Plan. In 2010, ANSER, under a contract with Marine Corps Headquarters, worked to provide a police advising train-the-trainer course and antiterrorism information. It also provided scientific, engineering, architectural, resource management, technical, and program management assistance to the Pentagon Force Protection Agency, including developing a system that tracks more than \$10 million of agency supplies and equipment and helping map the agency's process of identifying and responding to suspicious activities. ANSER also developed technical proficiency training and certification programs.

## OTHER KEY PROJECTS

ANSER's START Follow-on Treaty Team provided support in formulating and influencing national security priority of reducing nuclear weapons between the U.S. and Russia

ANSER conducted Joint Interagency Training and Education Center, WV (Guard) AT Level II Training

ANSER helped the Arizona Department of Emergency and Military Affairs plan and execute a large-scale exercise

ANSER executed Integrated Defense Risk Management Process "ForcePRO" training contract with Air Force Space Command

ANSER supported HHS ASPER health security initiatives

# 2010

# 2010

## Vigilant Guard

A team of ANSER analysts designed, developed, and refined a comprehensive full-scale regional exercise program in support of U.S. Northern Command (starting in 2008) and the National Guard Bureau (starting in 2004). The program, Vigilant Guard, provided state National Guard Joint Force Headquarters with an opportunity to examine, evaluate, and improve existing plans and standard operating procedures for a variety of homeland security scenarios using a combination of preparatory regional and leadership tabletop exercises followed by full-scale exercises.

Major initiatives provided realistic disaster response training for thousands of civil and military personnel in regional exercises. Those initiatives also included a pandemic influenza tabletop exercise at the National Guard Bureau Adjutants General level and various other exercise initiatives supporting military and civil clients. Each year, two Vigilant Guard exercises were linked with larger National Exercise Program exercises hosted by U.S. Northern Command.

In 2010 alone, Vigilant Guard trained 21 states, two U.S. territories, and over 8,900 military and civilian responders.

Each exercise was tailored to participating states' training requirements. Typical activities included tabletop exercises, communications exercises, functional exercises, full-scale exercises, and multiple planning meetings mandated by the Department of Homeland Security's Exercise Evaluation Program. Training focused on providing an environment that realistically integrated the National Guard into civilian-led response activities

### OTHER KEY PROJECTS

ANSER helped run NASA's Innovative Advanced Concepts Program

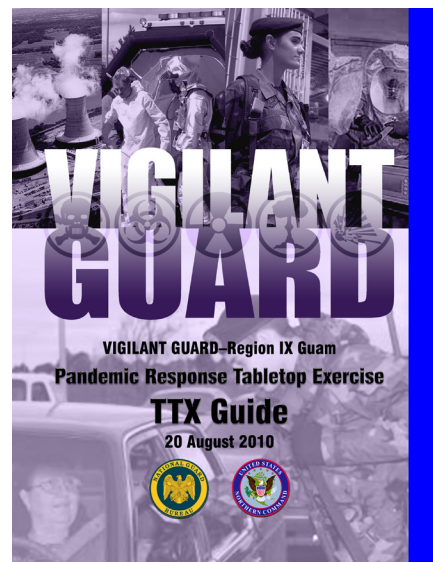
ANSER supported Headquarters, USMC law enforcement contract to provide police advising train-the-trainer course and antiterrorism information support

HSSAI provided major support to DHS's first QHSR

HSSAI assessed FEMA workforce

HSSAI assessed USCIS mission needs

HSSAI studies border fencing and tunnel detection



during catastrophic disaster response. The training provided that environment for state joint force headquarters; joint task forces; civil support teams; chemical, biological, radiological, nuclear, and high-yield explosives enhanced response force packages; expeditionary medical support; and National Guard response forces.

The ANSER team coordinated with participating civil, military, and federal training audiences to produce a full complement of exercise and training materials, including exercise plans, multimedia presentations, situation manuals, simulated news videos, exercise plans, master scenario event lists, exercise scenarios, and after-action reports and improvement plans.

Later Vigilant Guard projects included a regional full-scale exercise involving an earthquake in Alaska, a pandemic influenza exercise in Michigan, a regional full-scale exercise on pandemic influenza and a terrorist event in Guam, and a full-scale regional exercise in Maryland involving a cyber-attack and a domestic, toxic industrial chemical release.

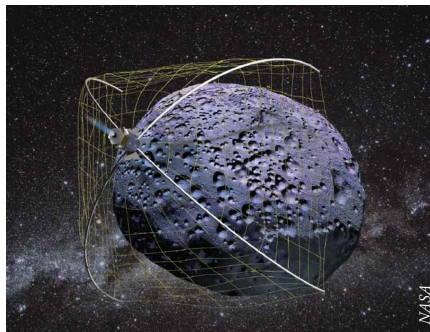
The ANSER team provided on-site and contract-site support to Vigilant Guard host states and U.S. Northern Command, while coordinating with the National Guard Bureau to ensure a continuous synchronization of training and exercise events that benefited the training and exercise requirements of participating organizations.

The ANSER approach improved dialogue not only among local, state, and regional partners, but also among state National Guards and their National Guard Bureau and U.S. Northern Command federal partners. Through in-depth exercising and the associated networking that accompanies realistic training, the local, state, and federal organizations became better prepared to work with one another in the event of future regional or national disasters.

## Support to NASA's Innovative Advanced Concepts Program

The unique NASA Innovative Advanced Concepts (NIAC) Program operates out of NASA's Space Technology Mission Directorate. NIAC funds studies of visionary concepts that offer revolutionary new ways to accomplish NASA missions. A good NIAC concept seeks to "change the possible" or offer revolutionary improvement. NIAC studies engage the public and are well received in the technical community. Recent studies have examined human spaceflight concepts, revolutionary propulsion, advanced in-space manufacturing, imaging distant stars, and innovative ways to explore planets, moons, and asteroids.

The current version of NIAC is a follow-on to the previous NASA Institute for Advanced Concepts, which ANSER supported throughout its nine years (1998–2007). When the Institute ended, Congress directed the National Research



Council to study the value of the program and to recommend whether it should be reinstituted; that review proved highly favorable to NIAC. NASA reached out to ANSER for advice on how NIAC should be reconstituted, and the Agency restarted the program in 2010.

ANSER provided NIAC with a Senior Scientist, Ron Turner, to fill one of the four leadership positions and sustain NIAC and ANSER's association through:

- Supporting the full life cycle from project solicitation through project award, performance review, and closeout
- Contributing to NIAC products describing process and activities that are provided to Congress and to the Office of Management and Budget, the Office of Science and Technology Policy, and other federal agencies
- Upholding both the content and the logistics of a yearly major workshop that features NIAC's funded studies and is open to the public

# 2010

# 2010

## PACAF Active Threat Response Training

ANSER's Mission Security Division Mobile Training Teams (MTTs) have a long history of providing advisory support and training services to the Pacific Air Forces (PACAF). ANSER MTTs have provided flyaway security training for airmen deployed to remote locations, provided combat training for airmen deployed to war zones, and conducted base security assessments for PACAF installations. Every year, the MTTs visit nine PACAF bases: Eielson and Elmendorf in Alaska; Kunsan and Osan in Korea; Yokota, Misawa, and Kadena in Japan; Hickam in Hawaii; and Andersen in Guam.

Following the tragic shooting at Fort Hood in November 2009, in which 13 people perished and 30 were wounded, the Defense Department undertook a comprehensive review of its force protection measures. The gunman, a U.S. Army major, highlighted the importance for the military Services not only to prepare for external threats, but also to consider internal threats—and the complex security scenarios that such threats present. An independent review titled “Protecting the Force: Lessons Learned from Fort Hood” recommended “concrete actions” to “significantly improve the Department’s ability to mitigate internal threats, ensure force protection, enable emergency response, and provide care for victims and families.” Defense Secretary Robert Gates directed implementation of many of the recommendations, including incorporation of civilian law enforcement

best practices for the active shooter threat into training certifications for military law enforcement. DoD also directed base commanders to incorporate the active shooter scenario, lessons learned from Fort Hood, and other workplace violence



case studies into their Installation Emergency Management training programs.

In response, the ANSER Mission Security Division created and implemented the High-Risk Response training. This realistic, five-day train-the-trainer program is geared toward PACAF security forces. The course places first responders in multiple active shooter scenarios to train installation security forces to safely and effectively respond to and stop an active shooter. The Eielson Security Forces operations officer commented, “This was the best training I have received in the Air Force; it will undoubtedly save lives if we are faced with an active shooter situation here.”

ANSER began teaching this course, which exceeds DoD requirements, in 2010. It has since become the basis for Air Force Manual 31-201, Volume 4, High-Risk Response. Following the mass shootings in Aurora, CO, and Newtown, CT, ANSER developed a course for civilian law enforcement based on the PACAF curriculum.



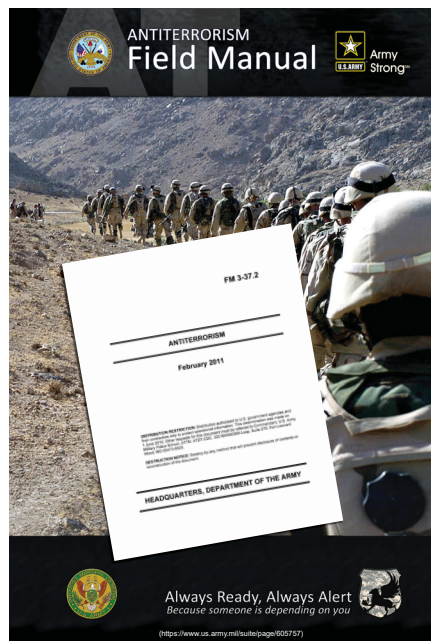
## U.S. Army Antiterrorism Field Manual Development

Modern terrorism has continued to grow and adapt since the end of World War II. In previous decades, terrorists acted with a level of control or as shadow arms of established nations. Recent attacks against the United States and around the world represent terrorist organizations that have broken free from state funding and have ventured out on their own as criminal and radical enterprises.

In 2010, a team of ANSER analysts assessed, researched, reviewed, and provided subject matter expertise on emerging tactics and both DoD and joint policy and doctrine for the development of the first U.S. Army Antiterrorism Field Manual. The ANSER team continued to integrate and capture antiterrorism processes and procedures at the operational and tactical levels and to apply specific related tasks envisioned to support the U.S. Army antiterrorism effort in the operational environment.

To meet the growing and evolving terrorist threat, the ANSER team combined the most important elements of policy with the doctrinal wisdom of operational experiences. The result was a holistic approach that provided commonality between the generating and operating forces, as well as a distinctive focus to mitigate and defeat the violent and nonviolent asymmetric tactics of terrorists. The ANSER team's approach prepared commanders to:

- Integrate antiterrorism thinking throughout the Army operations process and across the full spectrum of operations



- Defend against and defeat violent asymmetric tactics associated with terrorist groups through awareness and protection measures to preserve combat power while in transit and while operating in austere environments
- Reduce the impact of nonviolent psychological tactics that terrorists use to defeat the support of the local populace and the global observer
- Analyze threat, vulnerability, and criticality beyond bases and units and extend antiterrorism protective measures into the local populace, enhancing local support and mission accomplishment—especially during peace operations and irregular warfare
- Empower antiterrorism officers at the tactical, operational, and strategic levels to better support their units

2010

# 2010



## Analysis of SBInet

In January 2010, DHS Secretary Janet Napolitano ordered a reassessment of the Secure Border Initiative network (SBInet) program, including an independent, quantitative, science-based analysis of alternatives (AoA). HSSAI was asked to perform a multiphasic AoA over two years. HSSAI developed a set

of metrics for situational awareness, identified alternative solutions for providing border area surveillance (the original purpose for which SBInet was designed), and compared both the operational effectiveness and the life cycle cost of those solutions. The analysis compared options for using sensor systems and platforms to provide situational awareness along the southwest border of the United States. The study team identified combinations of sensors and platforms that could be deployed within each of several exemplar border areas. For each such area, analysts estimated the 10-year life cycle cost that would be incurred. They also analyzed the operational effectiveness of the various alternatives, using such measures as persistent surveillance, dynamic surveillance, and strategic intelligence value.

Using measurable terms, HSSAI's analysis showed how the choice of solutions depends on multiple factors such as terrain, vegetation, and infrastructure, all of which can vary from one area to another across the southwest border. Our analysis indicated



that the existing SBInet program was not the most cost-effective way to meet the Nation's border security needs. These results directly informed the Secretary's January 2011 decision to cancel the program. The operations analysis we performed as part of the AoA was subsequently used by CBP to design its next-generation plan for acquiring and deploying border surveillance technologies. As recommended in the report, CBP adopted an approach that uses a mix of technology solutions tailored to each individual border region. The AoA itself—DHS's first major AoA—was cited as a model for future DHS operations analysis of this type.

## Support to DHS Quadrennial Homeland Security Reviews

In 2009 and 2010, one of HSSAI's most important efforts involved major support to the DHS Office of Strategic Plans for implementation of the first-ever Quadrennial Homeland Security Review (QHSR). In that effort, they helped DHS comprehensively examine the homeland security enterprise from the viewpoint of long-term resource planning, strategic decision-making challenges, and other critical issues related to improving U.S. homeland security. HSSAI analysts played a significant role in all the major components of the review. They advised the Office of Policy on the structure of the QHSR and assisted in the development of the 2010 QHSR Study Plan and terms of reference. They identified working group members and developed the outreach strategy for stakeholders at all levels. They also proposed areas for follow-up study following the completion of the 2010 QHSR. For all seven working

groups, they participated as leaders, subject matter experts, and analysts. HSSAI performed strategic analyses and created white papers and issue papers. Ultimately, they contributed to recommendations in two critical areas: 1) homeland security strategy and priorities and 2) ways to address the challenges facing key programs, assets, capabilities, budget, policies, and authorities of DHS.

Based on HSSAI's successful involvement with the first QHSR, the DHS Office of Strategy, Planning, Analysis and Risk (SPAR), within the Office of Policy, asked the institute to be a major partner in the second (2014) QHSR. A key goal of the 2014 QHSR was to obtain an overall picture of the homeland security strategic environment, both at the present and in the future, and to identify areas where the Department must shift its strategies to address changes in that environment. HSSAI's participation spanned the preparatory, execution, and decisions phases of the QHSR. They worked with the QHSR team itself, along with the study and outreach teams.

As part of that effort, HSSAI assisted SPAR with strategic and analytical efforts that formed the foundation for the key QHSR documents such as the chief policy and strategy document that was ultimately released. Their analyses helped SPAR assess the homeland security strategic environment and provided a baseline of DHS's major undertakings since the previous QHSR. HSSAI's efforts included the system mapping pilot initiative, the QHSR mission area base, a compilation and analysis of homeland security statistics, and a global survey of cyber security. SPAR leadership lauded HSSAI's engagement and the quality of their work as a major contribution to the 2014 QHSR.

*2010*



# 2011



## HSSAI Summer Internship Program

The HSSAI internship program brought top-tier graduate and undergraduate students to work for 10 weeks every summer on important issues related to homeland security. HSSAI sourced interns through two programs. One was the DHS-funded Homeland Security–Science, Technology, Engineering, and Math (HS-STEM) internship program, which provided undergraduate and graduate students from across the United States an opportunity to conduct research in DHS mission-relevant areas at federal research facilities. The goal of the HS-STEM program was to build and enhance the HS-STEM workforce by engaging a diverse, educated, and skilled pool of researchers working in homeland security to promote long-term relationships between student researchers, DHS, and federal research facilities. HSSAI had participated in other DHS-funded internship programs since 2007, and became a trusted partner in the HS-STEM program in 2011. A second program began in 2014, with HSSAI hosting graduate-level interns from the University of Chicago’s Council on International Relations (CIR) program. The goal of the CIR program was to provide graduating students with real-world experience in public service as they looked to enter the workforce full time.

The HSSAI internship program was a valuable tool in the development of the homeland security workforce of the future. The program experience provided the interns with knowledge about DHS and its roles and missions. It also educated them as to how they could prepare themselves to join the homeland security enterprise after completing their college education. In return, the students brought a new, fresh perspective on issues facing DHS.

## Operational Support for the New START Treaty

The Strategic Arms Reduction Treaty (START) was a bilateral agreement established between the United States and the Union of Soviet Socialist Republics on the reduction and limitation of strategic offensive arms. The treaty was one of the largest and most complex arms control treaties in history, resulting in the removal of 80% of all strategic nuclear weapons in existence at the time. After expiring in 2009 it was soon followed by the establishment of the New START Treaty (NST), signed in 2010 and entered into action in February 2011. Under the current terms of the treaty, it is expected that the number of strategic nuclear missile launchers will be reduced by half.

### OTHER KEY PROJECTS

HSSAI helped create Small Vessel Security Plan

HSSAI assessed transportation sector security risk

HSSAI analyzed acquisition for DNDO

HSSAI helped FEMA Response and Recovery Directorate develop a doctrine program

HSSAI studied southwest border security





ANSER's International Security Division has supported the Air Force since 1997 by ensuring all aspects of START and NST notification protocol implementation. These protocols specify how information is exchanged between the United States and Russia and can include information on the relocation, addition, and removal of items covered under the treaty. Services provided include:

- Day-to-day operation and maintenance of the START Tracking and Reporting System (STARS)
- Development, testing, and fielding of hardware and software upgrades for STARS
- Providing subject matter expertise to support requirements definition, software development, and functionality/acceptance testing of the Arms Control Enterprise System (ACES) START module

After START expired in 2009, ANSER team members drafted procedures that enabled the Air force to utilize existing capabilities. This was significant because it allowed the Service to exercise effective

oversight of accountable assets, speed the population of the NST database, and significantly reduce the risk of introducing errors. As negotiations on the NST progressed, ANSER provided support to the Air Force and Joint Staff delegation representatives by evaluating the operational impact of proposals and assessing the degree of implementation difficulty.

After the NST was signed, ANSER team members began to develop new procedures and processes to support implementation of NST notification protocols. Efforts included:

- Defining requirements to meet treaty mandates and Air Force implementation goals
- Leading efforts to incorporate comprehensive compliance checks into the NST software
- Developing an NST notification protocol and ACES user familiarization training program
- Preparing a comprehensive handbook containing guidance for reporting of different scenarios that require notifications to be transmitted to the Russian Federation

As policies and guidance evolve, ANSER team members continue to serve as the conduit that ensures timely completion of updates to software, courseware, and reporting aids. The team also accurately monitors all Air Force-originated NST notifications on a daily basis. To date, the Air Force has originated 83% of all U.S. NST notifications to Russia while maintaining an accuracy rate of 99.49%. The remaining 17% of notifications have originated from other U.S. military organizations.

#### OTHER KEY PROJECTS

HSSAI studied export controls for State Department

HSSAI reviewed DHS cybersecurity authorities

ANSER supported to Air Force A10 program

ANSER continued support of DTRA CB, and begin support of DTRA ADOP

ANSER provided ASD (HD & ASA) support

ANSER continued robust support for the OSD CB Focal Point Office, OASD NCB/ CB

2011

# 2011



## ANSER Support to Arizona Department of Health Services

For the Arizona Department of Health Services (ADHS), ANSER coordinated, facilitated, and led multiple exercises and planning efforts. The ANSER exercise team provided exceptional support and unbiased analysis for a large-scale November 2011 exercise that resonated with multiple state and federal participants—integral to ANSER’s planning concurrent agency, state, and regional linked exercises for 8,000 participants with multiple, sometimes divergent objectives. The ANSER team seamlessly wove the training objectives of the Arizona health community and of supporting civil and National Guard response partners into a realistic scenario: responding to a 10-kiloton improvised nuclear device detonation in downtown Phoenix. The exercise challenged the plans, processes, and procedures of every participating health organization and their response partners.

This, the largest exercise ever in Arizona, was successful: All training objectives were met for 81 hospitals, 33 community health centers, 18 county health departments, the Indian Health Service, the Navajo Department of Health, ADHS, 10 businesses, three nongovernmental organizations, 16 federal agencies, and 32 National Guard units from five partner states. The ANSER analysis and after-action report validated the integrated application of organizational plans, policies, and procedures and identified key areas requiring further investigation or improvement.



## FEMA Doctrine Development

In 2011, FEMA identified the development of a doctrine program as a priority for the Office of Response and Recovery. Doctrine consists of authoritative materials that guide and describe FEMA's response and recovery operations at the incident, regional, and national levels. Between 2011 and 2013, the FEMA Response and Recovery Directorate established a doctrine unit and, with the analytical support of HSSAI, developed a doctrine program.

The doctrine program applied analysis and research to identify relevant doctrinal issues and to produce critical high-level documents and procedures that address those issues. These doctrine documents reshaped the way the agency conducts its business and knowledge management practices. As a result, doctrine began to serve as the basis for planning, staffing, and disaster response and recovery. As a close partner with the FEMA Office of Policy and Doctrine, the HSSAI doctrine development team provided deep knowledge in emergency management and extensive experience in the wide range of incident management and support operations, and was well positioned to assist FEMA in building a faster, stronger response system.

*2011*



2012–2015

## Rising to Challenges

As Analytic Services Inc. began this critical three-year period, the government contracting environment provided numerous issues for us to overcome. The federal government faced a time of decreased budgets, an age of sequestration, and a drawdown of U.S. military presence worldwide. Contracts for small business set-asides also increased, squeezing the contracting market for medium-sized businesses. Both operating units—ANSER and HSSAI—felt the pinch. In addition, government turnover of key client influencers and a greater need for efficiency contributed to the company's contracting challenges. However, both operating units continued to take advantage of our significant current contract base, providing exceptional analytic support and winning recompetes and new work.

During this time frame, DHS faced enormous challenges. Its missions—securing borders, enforcing immigration laws, preventing terrorism, safeguarding cyberspace, and preparing for disasters—included some of the most vexing problems facing the Nation. DHS pursued these missions while confronting a shifting operational landscape, evolving threats, and a more austere fiscal climate. Having directly supported the Department for more than eight years, HSSAI provided stability and institutional memory in the midst of uncertainty and change.

As the homeland security environment changed, the Institute adapted to provide analyses that met DHS's evolving needs. Their work included in-depth decision analyses, program reviews, and operations analyses that combine the expertise and objectivity befitting an FFRDC. Responsive analyses to help DHS address fast-emerging issues were a constant mission. Our team of analysts assisted in implementing the risk-based, information-driven approach to security that DHS desired.

The company launched an Analyst Development Program in November 2012 to provide an increased base of strong, young quantitative talent, and to reduce costs to the government through a different, more cost-efficient staffing mix. The analysts applied their fresh-out-of-school thinking and knowledge to the problems our clients were facing. Many were later promoted into ANSER or HSSAI, or found work directly with the client.

As an internal public service mission, ANSER established Banyan Analytics in 2013 as an institute devoted to the study of issues in the Asia-Pacific region. This initiative supported the Obama administration's strategy known as the "pivot to Asia." Banyan provided objective research and analysis to support this concept.

Also in 2013, Analytic Services Inc. relocated its headquarters to the Skyline Technology Center in Falls Church, Virginia. The move provided an exciting opportunity for the corporation, as the building's footprint enabled both operating units to be collocated on a single, open-concept floor. This layout fostered a collaborative work environment for our analysts because traditional workplace barriers were removed. The building added numerous conference and meeting rooms and a modern auditorium seating approximately 120.

At the end of 2014, the ANSER operating unit reorganized to better reflect current and future client mission areas and opportunities, reducing the number of managers within our structure. There were now two Vice Presidents and five Directorate-level mission areas: Homeland Defense, Joint Operations, Science and Technology, Global Threats and Intelligence, and Mission Assurance.

After 16 years as ANSER's President and Chief Executive Officer, Dr. Ruth David retired in April 2015. Ronald Cuneo, Chairman of the Board of Trustees, led an extensive search to select a replacement. In November 2015, Carmen Spencer was selected as the new President and CEO. He became the fifth person to hold that position in the company's 60-year history.

# 2012

## Honoring Our Vietnam Veterans

On May 25, 2012, at “The Wall” in Washington, the Vietnam War Commemoration was launched by presidential proclamation. A 2008 law had authorized the Secretary of Defense to conduct a program, on behalf of the Nation, that would commemorate the 50th anniversary of the Vietnam War. This law also authorized the Secretary to coordinate, support, and facilitate federal, state, and local government commemorative programs and activities. The commemoration was to extend from Memorial Day 2012 through Veterans Day 2025.

ANSER, the sole support contractor for the project, began working on the planning phases of the commemoration when the program office was established in 2010. The company won a re-compete for the work in 2014 when the contract expanded to 14 individuals.

One of the program’s primary objectives is to thank and honor veterans of the Vietnam War for their service and sacrifice, and to thank and honor the families of these veterans. To that end, ANSER has supported the recruitment of over 11,000 Commemorative Partners, who agree to host two or more events per year that honor our 6.6 million living Vietnam veterans and their families. Commemorative Partners include corporations, sports leagues, veteran service organizations, and military and government offices.

### OTHER KEY PROJECTS

ANSER analysts created the public-private National Additive Manufacturing Innovation Institute

ANSER supported Air Combat Command with effort to resolve the F-22’s hypoxia issues

ANSER lead efforts resulting in publication of the NATO Handbook for Pandemic and Mass-Casualty Planning and Response

ANSER performed work for Defense Nuclear Weapons School

ANSER began a 5-year effort support all aspects of strategic analysis for the Defense Security Service

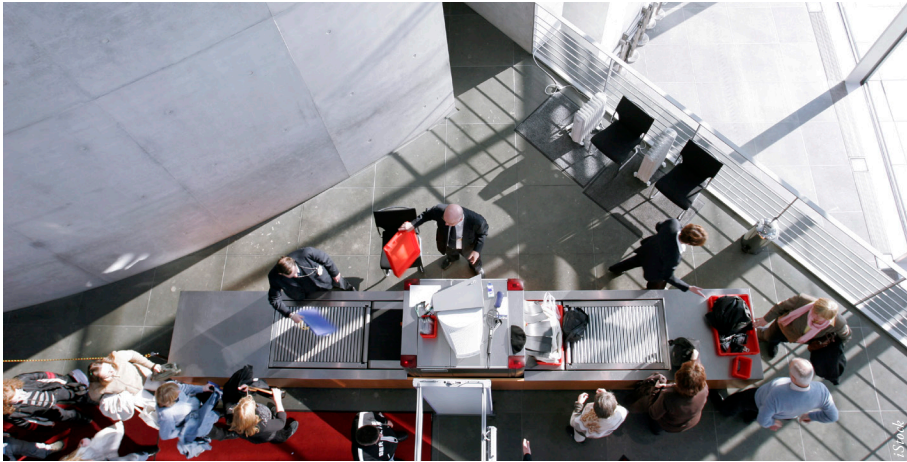
## Commercial Airline Risk Assessment

The Transportation Security Administration’s (TSA’s) Office of Transportation Sector Network Management (TSNM) asked HSSAI to inform TSA policymakers and aircraft operators on the range of notable security measures that may be used to secure air travel against the threat of terrorism. The study, which included an exploration of airline security practices and the development of a proof-of-concept resource allocation and risk self-assessment tool, achieved the following overall objectives:

- Assisting TSA in identifying and characterizing notable airline security practices
- Facilitating information sharing across the airline industry regarding notable security practices
- Enhancing TSA’s insight into airline operators’ risk-based decision-making process, including the challenges and constraints that airlines face in both international and domestic operating environments
- Informing and supporting airlines’ risk-based resource allocation decisions and security self-assessments

The study focused on the security activities of the 67 commercial airline operators based in the United States. As outlined in federal regulations and applicable TSA security directives, these security activities are distinct from those performed by the federal government, airports, or foreign governments (in the case of international locations). Specifically, TSNM tasked HSSAI with identifying notable security practices in specific focus areas, including passenger,





cargo, and checked baggage screening; aircraft access control, and airline employee vetting.

The study proceeded in two phases:

- Phase 1: Conducting surveys and interviews to identify and examine notable airline security practices that go beyond what is required in federal regulations or that meet the mandated requirements in a particularly effective, efficient, or reliable manner
- Phase 2: Developing a proof-of-concept software tool that provides TSNM and airline operators with access to the set of notable practices and guides airline operators through a qualitative and quantitative risk self-assessment and resource-allocation model

For both of these phases, the Institute conducted several types of research and analysis: defining the baseline and context for the study, developing and implementing a data collection plan, analyzing the data to identify notable security measures, and developing a summary report and the proof-of-concept tool. Final products from the task included a report for TSA that describes HSSAI efforts and findings (including a compendium of notable

security measures in each category of interest) and the proof-of-concept tool and accompanying user's guide. The tool and user's guide were provided to both TSNM and 67 aircraft operators in order to promote information sharing of innovative security practices and support risk assessments to enhance national security in the aviation field.

The results of this effort helped address and enhance our Nation's complex public-private partnership as it pertains to airline security. Further, the report helped TSA establish effective airline security policy, while the resource allocation and risk self-assessment tool supported the airlines' risk-based resource allocation decisions.

## Analyst Development Program

The Analyst Development Program (ADP) was initiated in November 2012 in response to a number of corporate requirements including the need to change the corporate demographics, to increase the base of strong quantitative talent, and to reduce costs to the government through a different staffing mix. ADP sought to hire entry-level

### OTHER KEY PROJECTS

HSSAI team studied readiness of the \$5.7 billion BioWatch program

HSSAI reported on critical infrastructure cybersecurity

HSSAI reported on Arab Spring

HSSAI assessed effectiveness of maritime security operations

HSSAI studied educators' perspectives of violent extremism

HSSAI reported on social media in emergency management

2012



# 2012

talent with a history of exceptional performance in school and work/ internships and develop them through training and development programs, diverse project opportunities, and mentoring from senior staff. The program conducted its first interview in March 2013 and made its first hire in June 2013. At first, applicants were required to have a master's or PhD, though later some were admitted with an undergraduate degree. To join ADP, analysts participated in a day-long interview process that included interviews with several officers, a panel of six interviewers (mission area directors, managers, principal analysts), and Dr. David. All candidates accepted into ADP had strong writing skills and came with a background in quantitative analysis. Applicants who signed up for this unique program were asked to commit to 2 years of employment at ANSER.

ADP analysts participated in both direct client work and ADP projects. The ADP work provided the analysts with opportunities to research topics of interest to our clients (e.g., drone policy, security) while simultaneously learning and applying tools and methods from our corporate differentiators of systems thinking and decision analytics. They learned to address fundamental analytical questions such as "How do I decide what data I want to analyze?" and "How do I structure a strong problem statement?"

Analysts in the program also participated in training activities such as webinars, attended a speaker series, and took Pete Champagne's leadership course. Field trip offerings included a visit to ANSER's Colorado site, a tour of a DHS facility (such as a port of entry), a meal at the

Pentagon with a three-star general, and a monthly hosted lunch where ADP participants had the opportunity to ask questions of ANSER executives.

As for direct client work, ADP analysts took part in a number of different projects. In support of ANSER, the analysts participated in a 3-month rotation at DTRA. This exposed them to client site operations and showcased our talent pool to our client base. ADP analysts also provided support to other client tasks as well as to proposal efforts and business development white papers. In support of HSSAI, ADP analysts performed a number of roles, including providing modeling and simulation support and support to development of repeatable methodological approaches to qualitative analysis.

On average, ADP analysts took 9 months to a year to progress out. The program wrapped up in 2016.

## Pilot Institute of the National Network for Manufacturing Innovation



ANSER analysts embedded within an interagency task force took a major presidential initiative from words to reality and created a public-private institute aimed at reinvigorating U.S. manufacturing innovation and making an emerging disruptive technology—additive manufacturing—a source of global competitive advantage.

Five short months is all it took.

On March 9, 2012, President Obama proposed a National Network for Manufacturing Innovation (NNMI) to



create new public-private partnerships that could serve as regional hubs of manufacturing excellence. The critical first step would be launch of a pilot institute funded jointly by the Departments of Defense, Energy, and Commerce and the National Science Foundation. On August 16, President Obama announced formation of the National Additive Manufacturing Innovation Institute (NAMII). NAMII bridged the gap between basic research and product development for additive manufacturing; provided shared assets to help companies access cutting-edge capabilities; and educated and trained workers in advanced additive manufacturing skills.

The successful creation of the pilot institute, on an impossibly fast timescale, served as one measure of the impact of the foundational analytical work conducted by the ANSER team. The most visible impact was the highly successful NNMI Pilot Institute Proposers' Day, held in the ANSER Conference Center. Planned and executed in less than three weeks, this daylong, nationally advertised activity was the largest single client event ever hosted by ANSER.

The team's methodical contributions also:

- Supported mission and vision statements for the President's Advanced Manufacturing Partnership
- Helped develop the concept that would become the NNMI

- Explored the meaning of a private-public partnership in a technology innovation context
- Built policies to govern the pilot institute and the network of innovation centers to follow it

The ANSER team remains involved as a strong presence in Defense Department Manufacturing and Industrial Base Policy activities and as ambassadors in interagency activities to provide real and measurable impacts in programs aimed at reinvigorating U.S. national manufacturing technology. They continue to provide solid analytical underpinnings for government programs in an area of public policy that is vitally important to our future national security and economic well-being—a globally competitive U.S. manufacturing base.

## Support to the Mitigation Framework

In March 2011, President Obama signed Presidential Policy Directive 8 or PPD-8, "National Preparedness." PPD-8 was conceived to strengthen the Nation's security and resilience against a variety of threats and hazards. In particular, it strived to vest equities of the entire federal, state, and local emergency management apparatus. Five major deliverables within PPD-8 were the national planning frameworks, which cover mitigation, protection, prevention, response, and recovery. Each of these frameworks would provide guidance on preparedness roles and responsibilities, core capabilities, coordinating structures, and how each framework integrates into the FEMA's National Preparedness System.

As FEMA was charged with writing the Mitigation Framework, it was required

# 2012

# 2012



to coordinate with mitigation experts at the federal, state, and local levels. This exhaustive process entailed several months of stakeholder cultivation, with a delivery in February 2012 for public review.

HSSAI provided assistance to this endeavor in two ways: First, as a representative of the Program Executive Office, the team supplied guidance and integration oversight to the project as a whole. Second, the team drafted and coordinated actual Framework content while incorporating systems thinking methods to develop sound notional examples.

Because the Framework was the first “doctrinal” document for mitigation, many months were spent developing the mitigation identity and how it fit within the new national preparedness environment. This included understanding new terminology and also core capabilities such as planning, community resilience, and threat and hazard identification.

Furthermore, the team needed to account for previously written documents such as the FEMA Mitigation and Insurance Strategic Plan, the DHS Risk Lexicon, the National Infrastructure Protection Plan, and the Homeland Security Community Resilience Task Force Recommendations. As these guidance documents were essential for execution of existing operational doctrine, they were crucial to the team’s situational awareness.

## A New Focus on Asia and the Pacific

Banyan Analytics was conceived in the fall of 2012, after the Board of Directors solicited ideas for new ways to fulfill ANSER's public service mission. Veteran analyst Dave Hamon made the suggestion to stand up an institute for the study of issues in the Asia-Pacific region. At the time, the Obama administration was pursuing a strategy known as the "pivot to Asia," which involved applying military and diplomatic resources in the Asia-Pacific to foster development that the administration saw as vital to American economic and strategic interests. The concept for Banyan was to provide objective research and analysis to support this policy pivot and help with U.S. government decision making. It was modeled on ANSER's Institute for Homeland Security, Dr. David's forward-thinking venture that had positioned the company at the forefront of homeland security studies in the months prior to 9/11. Banyan's slogan was similar to ANSER's, with a twist: "Informing decisions that shape the Nation's *role in the Asia-Pacific*."

Banyan had a core staff of five personnel, who proved to be quite prolific. One of the group's first reports concerned the 2011 Fukushima disaster in Japan. The U.S. government had provided assistance following the earthquake/tsunami/nuclear accident, but the response effort encountered some critical issues. The Banyan report found that the coordination systems in place were inadequate for a full-scale U.S. response to a foreign disaster, that the government lacked a comprehensive plan to respond to chemical/biological/nuclear/radiological hazards abroad, and that a

better system was needed for managing humanitarian aid and reimbursements between nations following a disaster.

In January 2015, Banyan conducted a two-day tabletop exercise based on an Ebola-like epidemic in the Asia-Pacific. A high-level discussion afterward, involving domestic and international participants, highlighted three main themes for improvement: public health preparedness, coordination and communication, and challenges related to the use of U.S. military assets for response to international health emergencies.

While the Banyan experiment ended in 2015, it is still bearing fruit. ANSER now has an international profile that it did not before, and the Asia-Pacific work revealed potential areas of study where the company could be useful. For example, through the Banyan work ANSER learned that USAID leadership was receptive to systems thinking, which in turn has led to our current work for the USAID Local Work *Local Systems Practice* Consortium, a 3-year activity in which ANSER is providing systems thinking training and mentoring to USAID missions and their partners. Banyan business development efforts also led to work growing our monitoring and evaluation practice for USAID and the Department of State, including an evaluation of ICS training programs in the eastern Asia-Pacific and an evaluation of State's program to counter violent extremism. They also helped ANSER secure work supporting the CDC's Office of Public Health Preparedness and Response's training and exercises as part of the Global Health Security Agenda initiative.

### OTHER KEY PROJECTS

ANSER helped identify requirements and developed the concept of the National Additive Manufacturing Innovation Institute

ANSER developed U.S. Marine Corps Warfighting Lab Counter-Improvised Explosive Device (C-IED) Institutionalization Strategy and Implementation Plan

ANSER supported development of the F-35 Joint Strike Fighter supply chain analysis for the USAF

ANSER provided support to the Office of the Undersecretary for Acquisition, Technology, and Logistics Acquisition Resources Analysis Directorate

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## Antiterrorism and Force Protection Insight

In September 2013, a lone gunman fatally shot 12 people at the headquarters of the Naval Sea Systems Command inside the Navy Yard in Washington, DC. The Department of Defense called on ANSER to provide up-to-the-minute analysis of the incident as it unfolded and to monitor the response by security and law enforcement personnel at the Navy Yard as well as other military installations in the National Capital Region. As facts were obtained, ANSER analyzed law enforcement and civilian employee responses against current tactics, techniques, and procedures and the ANSER-developed training curriculum for workplace violence and active shooter response.

ANSER assisted in shaping talking points and products for DoD leadership before meetings and media events to ensure they provided the most accurate information on the incident and our security programs. Several officials and media outlets drew immediate comparisons to the 2009 Fort Hood shooting. ANSER helped identify the recommendations by the Fort Hood investigation that had been implemented by the Department and those that are still in staffing. While the two events were very different, many recommendations already implemented—such as DoD-wide active shooter training—may have saved lives at the Navy Yard. ANSER also contributed to the Terms of Reference that served as the foundation for two department-wide reviews directed by Secretary of Defense Chuck Hagel:

- Review of physical security and access procedures at all DoD installations worldwide

- Examination of DoD's practices and procedures for granting and reviewing security clearances, including contractors

## Independent Review of TSA's Approach to Low-Risk Air Passengers

TSA's mission involves protecting the Nation's transportation systems while ensuring freedom of movement for people and commerce. For nearly a decade following the 9/11 attacks, TSA approached air passenger screening using a one-size-fits-all approach, which assumed each passenger posed an equal risk of being a threat to commercial aviation. The result was that passengers received largely the same checkpoint screening, except for suspected high-risk individuals.



Low-risk passengers are those whom TSA has cleared, flight by flight, using an intelligence and risk-based analysis. Such passengers are eligible for expedited screening, usually in the form of a special TSA Pre✓ lane. These passengers receive less intrusive screening; they are not required to divest certain personal items, such as shoes or belts.

In mid-2013, TSA asked HSSAI to independently review its RBS concept for passenger screening. The resulting analysis focused on two key questions:

### OTHER KEY PROJECTS

ANSER supported DoD Chief Information Officer, Integrated Risk Management support services program

HSSAI drafted three chapters of the six-chapter 2013 National Infrastructure Protection Plan

HSSAI performed an AoA for DNDO to identify the most cost-effective solution for screening rail cargo

HSSAI performed transportation security sector risk assessment

HSSAI initiated integral support to the second QHSR

1) How is TSA translating its RBS concept for passenger prescreening and checkpoint screening into operational practice? and 2) How is the current RBS approach capable of achieving the TSA objectives for air passenger screening?

In assessing these questions, HSSAI:

- Organized an extensive review of TSA documents concerning RBS, prescreening, and checkpoint screening
- Undertook a broader literature review of passenger screening issues
- Interviewed TSA personnel and observed passenger screening firsthand during research visits to some major airports

Regarding RBS implementation, HSSAI assessed the methods used to identify low-risk travelers. For example, some are enrolled in trusted traveler programs, such as TSA's Pre✓. TSA also uses other approaches to identify groups or populations of low-risk passengers.

In this project, HSSAI gave particular attention to assessing how the RBS approach was intended to achieve TSA objectives, which include enhancing security effectiveness, increasing operational efficiency, and improving the passenger experience of undergoing aviation screening. Quantitative analysis was useful in evaluating TSA's approach to achieving these objectives. In undertaking the independent review, HSSAI aimed to inform senior decision-makers while helping TSA explain the basis for its RBS approach to a broad range of external audiences.

## Operational Support for the Open Skies Treaty

The Open Skies Treaty (OST) was signed by the United States in 1992 and entered into force in 2002. The treaty is supported by 34 participating countries to include Russia, Ukraine, Georgia, and nearly all the NATO states. The treaty is designed to enhance mutual understanding and confidence by giving all participants, regardless of size, a direct role in gathering information about areas of concern to them. OST provides for an active observation regime using unarmed observation aircraft flying over the territorial airspace of treaty countries. Open Skies is one of the most wide-ranging international efforts to date to promote openness and transparency of military forces and activities. The U.S. Air Force provides two OC-135B aircraft in support of the treaty, normally flying over Russian airspace. Similarly, Russia flies aircraft over the United States and European partners, including those hosting U.S. forces.

ANSER has continuously supported the Air Force with day-to-day support in operational and fiscal execution of the Open Skies mission, coordinating implementation orders, advocating for and validating funding requirements, and ensuring the success of flights over territory that is thousands of miles away. Since entry into force, there have been 1,425 observation flights over partner countries, with the United States conducting over 150 flights primarily over Russia and Ukraine. As of June 2018, Russia had conducted 69 flights over the United States.

ANSER contractors have been intimately involved in every aspect of Open Skies Treaty management, supporting

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Air Force clients since day one in technical detail negotiations, aircraft and sensor selection and sensor operations decisions formulation, airfield selection and operational standards criteria, flight and quota management decisions and negotiations, and manpower requirements to ensure Air Force effective management of the treaty infrastructure, aircraft and sensor maintenance, and resource utilization.

In recent years, ANSER contractors have been deeply involved in developing alternatives for the U.S. observation aircraft and upgrades to digital cameras. Since 2013, ANSER personnel have been heavily engaged in efforts to modernize the camera systems on the aircraft, moving from older, wet-film photography to a more efficient digital imaging system.

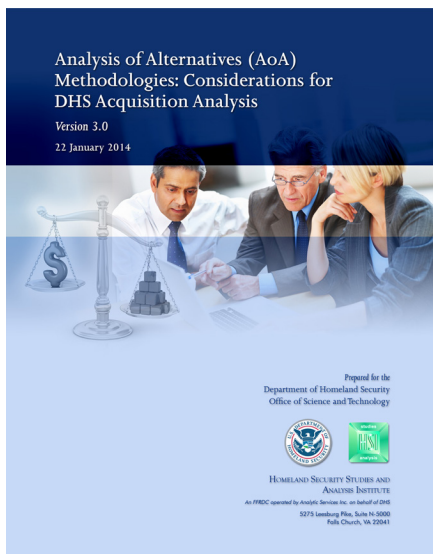
More recently, ANSER experts have been engaged in a robust effort to recapitalize the aging OC-135B aircraft—now more than 50 years old—with two new aircraft. This effort involved a complete study and formal revision of mission requirements that were approved by the Vice Chief of Staff of the Air Force and validated by the Joint Capabilities Board. ANSER followed up this work by providing the Air Force with expertise and analytic assistance in acquiring the new aircraft.

## Helping DHS Make Sound Acquisition Decisions

Like all federal departments and agencies, DHS is under intense pressure to make cost-effective choices and to justify its acquisition decisions. This is not an easy task. The department must acquire complicated systems, which operate in a complex environment and perform tasks for which there are few meaningful performance measures. Nonetheless, the decision to acquire one solution over another must be backed by rigorous analysis and withstand considerable scrutiny. Analyses of alternatives (AoAs) and the closely related alternatives analyses are important parts of a defensible acquisition process.

The potential interest in such analyses among ANSER's client base is enormous. It includes most operating components within DHS and DoD as well as headquarters elements involved in planning, programming, and budgeting processes. Moreover, it is an important part of our larger corporate focus on decision analytics and efforts to evaluate progress toward mission objectives, choose among competing material and nonmaterial solutions, and evaluate costs, benefits, and risks. The techniques applied in AoAs and alternatives analyses support a wide range of decisions.





HSSAI in particular was focused heavily on performing acquisition analyses for DHS in the years 2010 to 2012.

- The institute's Operations Analysis Division directly informed the Secretary of Homeland Security's decision to cancel the SBInet program in January 2011.
- The division also performed three distinct analyses in 2011 and 2012 that helped the Domestic Nuclear Detection Office respond to congressional pressure and refocus acquisition efforts for screening cargo entering the United States to see whether the cargo contained nuclear material.

Based on these and related efforts, the division published an AoA Guidebook that summarized the purpose of AoAs, highlighted important considerations for DHS in structuring these analyses, and listed key guidance documents and other relevant information resources. It was intended to complement DHS-specific guidance describing its acquisition process requirements and other sources such as the Air Force Office of Aerospace Studies AoA Handbook: A Practical

Guide to Analyses of Alternatives. The AoA Guidebook was released publicly in January 2013, and was received enthusiastically by operating components and headquarters elements within DHS.

## Development of the USMC Identity Operations Concept of Operations

Identity Operations (IdOps)—the synchronized application of biometrics, forensics, and identity intelligence to establish identity, affiliations, and authorizations of an individual for the purpose of denying anonymity to the adversary and protecting assets, facilities, and forces—is an evolving concept in the Marine Corps. After 10 years of combat operations in Iraq and Afghanistan, the nature of USMC IdOps capabilities was predominantly ad hoc, due in large part to their development using overseas contingency funding, a scarce resource, with limited doctrinal support. The Marine Corps needed to transform IdOps into an enduring program of record and preserve the invaluable lessons learned and best practices gained.

With the approval of the USMC Identity Operations Strategy 2020 and issuance of Order 5530.17, Marine Corps Identity Operations, in 2012, the Marine Corps faced the need to understand both existing and potential uses for IdOps capabilities, as well as determine how to



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institutionalize this critical and lifesaving capability. The Marine Corps turned to ANSER to develop the IdOps concept of operations (CONOPS).

This Service-level IdOps CONOPS would be read and used by every Marine from the tactical level to the strategic level, from the Marine on the ground to the Marine commander; it would help every Marine to understand how these capabilities could be employed within the mission. It established a broad approach to providing an expeditionary IdOps capability and enabled the Marine Corps to move IdOps forward across the doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) spectrum. The ANSER team CONOPS development included:

- An extensive literature review and numerous interviews of IdOps community stakeholders
- Analyses of the results from multiple perspectives, including mission and capability requirements and DOTMLPF-P implications
- Mission-based vignettes to illustrate IdOps employment possibilities

- Graphical interpretations of IdOps concepts, activities, and relationships, including multiple operational views
- Staffing and adjudication of 334 reviewer comments representing 20 USMC organizations

Major Frank Sanchez, the USMC Identity Operations Program Manager, said: “The Identity CONOPS is a pivotal document enabling the Marine Corps to conceptualize and integrate identity into all aspects of their operations... It established a common understanding and path to successfully integrate IdOps into the Marine Corps mission and to collaborate across the interagency. Thanks to ANSER’s efforts, the Marine Corps has the means to move IdOps forward to ensure it becomes an enduring capability for Marines.”

## Support to DoD: Complex Catastrophe Initiative

Natural and manmade disasters can cause a cascade of failures on interdependent public services, with a catastrophic effect on the Nation’s ability to respond. Decreased funding for state and local emergency management coupled with increasing populations in disaster-prone areas make response more challenging and increase demand for DoD support. The Assistant Secretary of Defense for Homeland Defense and America’s Security Affairs (ASD(HD&ASA)) tasked ANSER to develop solutions for a more active DoD role in domestic response: the Complex Catastrophe Initiative.

ANSER’s support and analysis examined DoD’s response limitations and sought ways to improve the timeliness of the Department’s response. They



prepared OASD(HD&ASA) leaders for engagements with Office of the Secretary of Defense and DoD component leadership. The team applied lessons from past DoD responses and national exercises to validate arguments for the initiative. This led to a Defense Secretary task to develop proposals for improving DoD's posture in a complex catastrophe without additional force structure. The team engaged with over 70 senior leaders to conduct five working group meetings, two general and flag officer panel workshops, a senior leader seminar, three Operational Deputies Tanks, and a Joint Chiefs of Staff Tank. The result was 28 recommendations involving three focus areas:

- Leveraging a broader range of DoD forces and capabilities, such as expediting use of Reserve forces and clarifying use of immediate response authority
- Developing plans, policies, and force management tools for complex catastrophes
- Applying unity-of-effort initiatives to complex catastrophe response.

Much of the team's work was validated in the DoD response to Hurricane Sandy in 2012. During the Sandy response, DoD examined several focus area initiatives, such as immediate response, Reserve call-up authority, and geographical sourcing solutions. Though Sandy was not a complex catastrophe, the storm's impacts gave a glimpse of what a complex catastrophe could look like and what expectations for DoD might be.

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## OTHER KEY PROJECTS

ANSER won re-compete for VWC work

ANSER developed and executed a National Defense University task to determine the future organizational direction of the DoD Chemical and Biological Defense Program

ANSER supported the DoD Joint Test and Evaluation programs on numerous Quick Reaction Tests and 2-year test protocols

HSSAI team wrote DHS-wide agile development methodology guidebook

HSSAI developed methodology for quantifying the threat from “last point of departure” airports for TSA

HSSAI reported on measuring performance of DHS programs

HSSAI reported on unmanned aerial systems

HSSAI reported on cryptocurrency effects on homeland security



## Radiation Portal Monitor Analysis of Alternatives

The Domestic Nuclear Defense Office (DNDO) of the Department of Homeland Security works together with Customs and Border Protection (CBP) to prevent illicit nuclear material or weapons from entering the country. One tool used in this mission is the radiation portal monitor (RPM). People, cargo, and vehicles pass through a detector when entering the country through sea or land ports of entry; if radiation is detected, the RPM alarm will sound. The program's first RPMs, deployed in 2003, were beginning to reach the end of their initially projected useful lifetime. Therefore, DNDO requested that HSSAI conduct an analysis of alternatives to determine the best replacement for these systems.

HSSAI identified two particularly important conclusions:

- The useful lifetime of the RPMs appeared to be much longer than initially projected, based on their

analysis of maintenance records.

This removed the time pressure for this decision, allowing DNDO and CBP to take a longer term perspective in assessing the next-generation RPM. This knowledge also potentially saved the government significant resources.

- A salient feature of the lifecycle of the technology was the nature of the maintenance contract for that technology and the price structure for parts. An acceptable firm-fixed-price contract for maintaining operation of a system at near 100% availability negated the need to replace the system unless the needs of the mission changed.

Due to initial findings, DNDO asked HSSAI to conduct additional tasks. One considered technologies that were less well developed, but perhaps would show some long-term promise. Another considered how to best optimize technologies at high-traffic ports against lower traffic ports.



## Cyber Narratives

The interface of cyber risk and critical infrastructure (CI) is of particular concern to DHS's National Protection and Programs Directorate (NPPD), which has responsibility for working with public and private partners in the CI community to safeguard the Nation's essential services (water, energy, communications, etc.).

The Cyber Narratives project was conducted by HSSAI on behalf of the DHS NPPD Office of Cybersecurity and Communications, with the goal of understanding CI stakeholders' perceptions of cybersecurity risk and any implications for DHS messaging and engagement strategies. The project presented the CI community's perceptions of cyber risk as narratives: stories that groups and communities (in this case CI stakeholders) tell about themselves and their industries.

The HSSAI research team used an exploratory qualitative research approach to identify common themes that comprised coherent narratives about cyber risk. This approach involved:

- Literature review of relevant topics
- Interviews with a diverse range of CI stakeholders and macro-level experts
- HSSAI staff analysis
- Peer review of narratives and analysis

The HSSAI team also identified segments or archetypes of CI stakeholders who subscribe to particular narratives, as well as cyber events, debates, and other contextual factors that informed or influenced the narratives.

Ultimately, the HSSAI team identified seven narratives held by the CI community on cyber risk. These

narratives touched on a broad range of issues and implications for CI cybersecurity, including information sharing, regulation, enterprise risk management, adaptive adversaries, skepticism about cyber threats, and resource constraints.

The final Cyber Narratives report informed the Office of Cybersecurity and Communications (and DHS more broadly) on the views of the CI stakeholder base, as well as potential impacts of cybersecurity messaging and engagement strategies. The report codifies common cyber risk perceptions in the CI community and, by presenting them in narrative style, makes them more accessible to U.S. Government officials.

## 24-Month Challenge for Chemical and Biological Defense

The 24-Month Diagnostics Challenge was one of the Defense Threat Reduction Agency's Focused Innovative Technology investments to foster visionary, innovative ideas for the Chemical and Biological Defense Program. The



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challenge was to develop an inexpensive, fast, reliable diagnostic tool that could be used by untrained personnel to bridge the gap between fast, unreliable data streams (such as Twitter) and slow, reliable data (such as clinical diagnostic tests) to identify outbreaks earlier.

As a part of this effort, DTRA demonstrated an integrated biosurveillance (BSV) system that linked highly distributed point-of-need multiplexed diagnostic systems to the BSV Ecosystem in a relevant, austere test environment. The BSV Ecosystem is a cloud-based surveillance and epidemiological prediction information system that uses traditional and nontraditional (for example, earliest signals of outbreaks via social media, citizen crowd-sourced) data in an application-controlled architecture. The approach was demonstrated at or below the medic and decentralized clinic operational level in Africa, Southeast Asia, and South America. The demonstration occurred using clinical studies (approved by the Institutional Review Board) of differential diagnosis of severe acute systemic febrile illness.

ANSER personnel led the identification of 12 candidate molecular and immuno-diagnostic devices, developed the test plan, and analyzed data for the multisite alpha evaluation of these devices. The result was downselected to one molecular and two handheld immunoassay platforms. ANSER drafted the beta test plan for verifying the analytical performance of the platforms. Tests were processed at two evaluation centers and two medical infectious disease institutes for live agent testing under biocontainment. The ANSER team lead, Mr. Jerry Blutman, with experience managing diagnostic device and assay development programs cleared

by the Food and Drug Administration, adapted a standardized demonstration protocol to evaluate diagnostic device analytical performance for the 24-month demonstration outside the continental United States.

Explosive ordnance disposal teams use robotic systems to enter, assess, and neutralize explosive threats. In the same way, hazmat and chemical, biological, radiological, and nuclear operations would benefit greatly from a system that limits the need to don protective gear and enter dangerous environments. The goal is to have devices capable of operation in austere environments and have the devices upload diagnostic information directly to an information cloud. This platform would collaborate with hazmat or chemical, biological, radiological, and nuclear personnel to execute low-level tasks for the human operators.

## Performance Measurement Methodology Development

HSSAI developed an “executive primer” describing results-oriented performance measurement, including key principles and well-accepted, repeatable practices, approaches, and methodologies suited to the unique conditions of DHS and its components. HSSAI based this document on a thorough, analytical review of academic literature and industry best practices, past efforts in federal government and DHS components, guidance at all levels of government, and lessons learned from prior HSSAI tasks.

The final report for this task, *Measuring for Results: Key Concepts for Understanding the Performance of DHS Programs and Activities*, provided:



## MEASURING FOR RESULTS

- A high-level overview of the challenges and approaches to this topic specific to the DHS environment
- The authoritative foundation of a long-term research agenda for HSSAI on the art and science of performance measurement
- Shorter overviews and presentations, deeper dive pieces, and training guides as well as topical case studies in particularly thorny measurement areas

The project helped to capture and focus a wide variety of similar efforts conducted as individual studies over the decade of HSSAI support to DHS as the sole studies and analysis federally funded research and development center. It was both a survey and a practical guide, written for an audience of program managers and executives who face tough choices about what to measure and how to measure it. Performance measurement is the key to government accountability as stewards of the public trust and public resources. Outcome-based performance measurement is absolutely critical to DHS and the larger homeland security

enterprise, because policy makers and the general public know what is spent on these missions but don't often get a clear idea of what is accomplished as a result.

This task set the stage for future in-depth analyses of difficult issues in homeland security measurement, including resilience, preparedness, information sharing, cybersecurity, intelligence gathering, deterrence, and other similarly challenging measurement issues.

### Defense Nuclear Weapons School

The core mission of the Defense Threat Reduction Agency (DTRA) is safeguarding the United States and its allies from weapons of mass destruction. To address this mission, the Defense Nuclear Weapons School (DNWS) was established in Albuquerque, NM, to provide training in nuclear weapons; chemical, biological, radiological, and nuclear (CBRN) incident command, control, and response; and CBRN modeling for the DoD, national

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laboratories, and other federal, state, and local agencies.

ANSER supported the requirement of DNWS to provide quality instruction in nuclear weapons core competencies and response training, while considering a constrained funding environment. The ANSER team resolved one particular challenge of training emergency responders who are located around the globe, particularly fielded units, where the task of meeting mission needs outweighs the need for Service members to be away from their units for training. The solution was a hybrid of condensed curriculum presented by small mobile training teams and a new robust distance learning methodology for online training.

To address the requirement for new robust distance learning, ANSER worked with subject matter experts and instructors to:

- Redesign and develop a series of online courses that allowed the flexibility and cost saving required by DTRA
- Through a systematic approach, create interactive courses that presented the training material at the appropriate level, with effective evaluation techniques varying from knowledge check quizzes to comprehensive scenario-based interfaces that tested understanding, application, and analysis of the material
- Identify improved courseware development tools, transforming each online class from PowerPoint to interactive presentations using Articulate Storyline and Adobe Captivate software

The ANSER team's efforts resulted in a more engaging experience for students,

with a course completion rate of 76% as compared to the previous year's 64%. The courses developed ran the range from very simple topics such as "Basic Scientific Calculator" to the 40-hour course "Weapons of Mass Destruction in the 21st Century." The ANSER team developed and maintained 10 online courses, which had 3,191 students register, accounting for 31% of the school's student load.

## Joint Capability Technology Demonstration Program Support

The mission of DoD's Joint Capability Technology Demonstration (JCTD) program is to find, demonstrate, and transition the best operational concepts, technology, and prototype solutions to address joint and coalition warfighting needs. There are approximately 20 JCTDs directly addressing the joint and coalition operational needs of nine combatant commands (CCMDs). The activity also includes the Enabling Technologies program, comprised of a number of shorter-timeframe exploratory advanced technology projects.

ANSER and its teammates on the JCTD program project provided scientific, technical, analytical, financial, and administrative support to enable capability solutions for the CCMDs and operations. Requirements analysis, system engineering, acquisition, and programmatic assistance and support were provided during execution of the program, from system concept definition through technology transition activities. The team also engaged in cooperative and collaborative partnerships with OSD, CCMDs, Joint Staff, Defense agencies, Services, industry, and academia.

## Arizona Department of Health Services Exercise Training Team Support

Since 2011, ANSER's Homeland Defense Division had been supporting the Arizona Department of Health Services (ADHS) on multiple statewide events. Efforts focused on meeting CDC Hospital Preparedness Program and Public Health Emergency Preparedness requirements as well as integrating participation from hospitals, community health centers, local public health agencies, and county, tribal, and state emergency management. In 2015, the team supported two high-interest requirements:

- Development of crisis standards of care (CSC) guidance
- Creation of a training program for ADHS Health Emergency Operations Center (HEOC) staff

ANSER supported ADHS development of state guidance for CSC that is today held up as a model for other states to emulate. The plan establishes a common framework for statewide CSC during catastrophic disasters, targeting allocation of scarce healthcare resources and enabling optimal community resilience across the statewide healthcare system. This collaborative, two-year project included strategic planning sessions, interagency workgroups, and a public engagement campaign. Creation of the plan involved cooperation between public health, emergency management, first responders, healthcare, legal, and other response partners. Stewardship of resources, duty to care, soundness, fairness, reciprocity, proportionality, transparency, and accountability were the guiding ethical elements of the plan.

The ANSER team assisted with design and development of the CSC workshop and tabletop exercise targeting attendees from ADHS, healthcare facilities, emergency response organizations, and emergency management agencies across the state. This event provided the opportunity for participants to vet the plan against an explosion scenario with thousands of injuries and an influenza-like illness scenario resulting in a high volume of hospitalizations. Participant feedback was incorporated in the ANSER-developed after-action report and used to modify the plan.

ANSER also developed a series of training modules to train ADHS HEOC staff in their EOC duties during emergency response. The 90-minute training modules enabled ADHS to self-administer training designed for each health EOC staff section: Operations, Planning, Logistics, and Finance. The training modules focused on EOC activities from a health perspective, highlighting standard National Incident Management System and Incident Command System principles as well as health-specific tasks and functions. Each module was designed around two scenarios, giving the instructor the option of choosing which to follow at training startup. Exercise activities were interspersed and were based on the type of disaster addressed in the scenario. The activities were used to elicit specific actions and ensure hands-on training for the student's specific EOC position. The modules integrated existing EOC web tools such as WebEOC, Arizona Health Alert Network, and the ADHS Health Services Portal for a more realistic training environment. This tool was the first of its type used by ADHS to train health EOC staff and improve their

### OTHER KEY PROJECTS

ANSER enabled the successful establishment of seven National Network for Manufacturing Innovation Institutes for the DoD Manufacturing Technology Office

ANSER began providing the USAF Global Strike Command with programmatic and subject-matter expertise support

HSSAI analyzed airport employee screening operations

HSSAI studied the link between human trafficking and terrorism

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ability to effectively support real-world emergency response operations.

ANSER's connection with ADHS became a pathway to work with the Centers for Disease Control and Prevention that continues today.

## Detection, Diagnostic, and Threat Surveillance Technology Portfolio Review

The Director of DTRA's Chemical and Biological Department requested an in-depth look at the Department's diagnostic, detection, and biosurveillance technology portfolio. The ANSER team responded by developing a Strategic Portfolio Review that examined investments in key technical areas from 2003 to 2015 while mapping future division performance in these areas through 2021.

The goal of the strategic review was to maximize DTRA's return on investment by determining the point at which technical area investments no longer yield significant advancements. The review helped determine if future funding should be redirected to new areas that could produce larger technical improvements. For example, increasing funding to develop technology in growth areas such as wearable monitoring technologies while decreasing investments in diagnostic areas saturated by industry may be one strategy for strengthening Department performance.

## U.S.–Cuba Normalization Workshops

On December 17, 2014, President Barack Obama announced a new chapter in

U.S.–Cuba relations by normalizing diplomatic and economic relations between the two countries. As part of this announcement, President Obama highlighted U.S. initiatives to formally establish diplomatic relations, cooperate on public health matters, continue human rights and democracy efforts, remove Cuba from the list of states that sponsor terrorism, and increase travel, commerce, money, and information flows between the two countries.

HSSAI assessed the impact of normalization on U.S. homeland security with full support from the DHS Science and Technology Directorate and the U.S. Coast Guard. HSSAI held three workshops with government stakeholders to solicit input from senior leadership. The first workshop examined the six main dimensions of homeland security impacted by normalization: transportation, people movement, law enforcement, commerce, environment and health, and intelligence and national security. The second workshop used tabletop exercises and other elicitation techniques to examine the equities and responses needed to manage opportunities and mitigate risk associated with the identified implications. The final workshop briefed senior leaders on the analytic results. Each workshop included representatives from across the government, including the Departments of Homeland Security, Treasury, and State.

Starting from the data collected in the first two workshops, the homeland security implications of U.S.–Cuba normalization were evaluated and developed into a report offering recommendations for mitigating future risk. The report was intended to influence homeland security decisions

makers responsible for policy, risk management, and operations.

## Risk-Based Analysis in Support of the Committee on Foreign Investment in the United States

The Committee on Foreign Investment in the United States (CFIUS, pronounced “sifius”) was established in 1975 and empowered to evaluate the national security implications of foreign investments in American companies that result in a foreign entity gaining a controlling share of an American business. CFIUS was strengthened by the Foreign Investment and National Security Act of 2007, which standardized the review process and expanded the scope of investments that could be scrutinized. CFIUS is chaired by the Department of the Treasury and includes the Departments of Defense, Justice, Homeland Security, Commerce, State, and Energy and the Offices of the U.S. Trade Representative and Science & Technology Policy.

From 2010 to 2014, ANSER personnel supported the DoD CFIUS program by researching, analyzing, drafting, and coordinating risk-based analysis (RBA) within the Office of the Deputy Assistant Secretary of Defense, Manufacturing and Industrial Base Policy. RBA addresses the risk (threat, vulnerability, consequences) posed by a CFIUS transaction, as well as the requested mitigation or a request by the President to block a foreign investment.

RBA development originates in the Director of National Intelligence, Office of National Intelligence Threat Analysis, with a classified summary

of the Intelligence Community’s position on the threat posed by the CFIUS transaction. The ANSER team spearheaded the format and section layout of the RBA used by the Committee on Foreign Investment. The threat section of the RBA reviews the threat posed by the transaction, which consists of three elements: capability, intent, and access.

The CFIUS ANSER team was instrumental in perfecting DoD’s RBA process, leading to more than 20 critical National Security Assessments, one Presidential block, and several threats of a Presidential block, which caused the Parties to either abandon or withdraw their transaction as filed with the Committee. In the end, the ANSER team directly supported efforts that helped protect the national security of the United States.

## USMC Counter-IED Strategy

Improvised explosive devices (IEDs) have proven to be an accessible, flexible, and effective asymmetric weapon. Over the course of the conflicts in Iraq and Afghanistan, more than 80% of Marine casualties have been caused by IEDs. In response, the Marine Corps purchased millions of dollars of counter-IED (C-IED) equipment, established CIED training programs, and reorganized personnel and organizations in order to counter the threat. Anticipating that future enemies will learn from the successes of recent enemies’ use of IEDs and aggressively employ them in the future, it was imperative that the Marine Corps institutionalize all that it had learned and done to ensure future success on the battlefield.

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ANSER assisted the Marine Corps in developing a USMC C-IED Institutionalization Strategy and Implementation Plan. Together, these two documents would provide unified strategic direction to develop and sustain enduring USMC C-IED capabilities. The documents established the C-IED mission, vision, objectives, goals, direction, strategic linkages, and specific actions necessary to institutionalize CIED capabilities that enable Marine Forces to operate seamlessly in an IED-saturated environment. The ANSER team:

- Used a proven strategic planning and facilitation process to prepare, design, accurately capture and analyze data, and create professional planning products
- Employed a systems thinking approach that linked strategy development to strategy execution through the implementation plan and enabled the team to manage the complexity of structured inquiry into C-IED planning and its many stakeholders

This approach employed decision analytics to inform choices about goals, objectives, and strategies and to develop products that would effectively guide future C-IED decisions. A primary analytic challenge was how to institutionalize C-IED processes and capabilities that will continue to effectively adapt to future threats. To meet this challenge, the team conducted an enterprise-wide, all-mission-sets analysis to institutionalize adaptive change.

Strategy development considered all aspects of complex IED threat networks (including people, funding, and cyber components) and research and analysis of all facets of the USMC C-IED capability (doctrine, organization, training, material, leadership, personnel, facilities, and policy). The resultant strategy contains a coherent set of C-IED goals and targeted objectives that form an institutional perspective from which to integrate USMC enterprise and external C-IED activities. The strategy fills a significant doctrinal gap and enables the Marine Corps to institutionalize all that





it has learned and done to ensure future success on the battlefield.

## Standards Integration for DHS

At the inception of the Department of Homeland Security in 2003, the Department's Science and Technology Directorate established an Office of Standards (STN). STN helps the homeland security enterprise (HSE) community to identify standards and conformity assessment systems to meet its needs. This community includes federal, state, local, and tribal governments and the private sector. The goal of STN is to improve the science and technology of the products and processes used by the community to "accelerate the delivery of technologies, ensure performance requirements are met, and reduce the development risk."

STN requested HSSAI to investigate how other, more established federal agencies handled standards and conformity assessment issues. The goal of the HSSAI task was to find useful ideas and activities from these established standards programs that STN might use to advance the use of standards and conformity assessment systems in the HSE community, particularly within DHS components.

With input from the task sponsor, the HSSAI team selected the Departments of Defense, Transportation, Justice (including the National Institute of Justice), and Energy as the focal points for the study. The team conducted interviews with the standards professionals, including the Standards Executive, in each of the four departments. In addition, the team conducted exhaustive research on each



agency's standards and conformity policies, assessment directives, guidelines, and other documents and process descriptions.

HSSAI found that the other federal agencies took very different approaches to standards and conformity assessment systems. The team analyzed these approaches considering the needs of the HSE community, and made four recommendations to STN:

- Expand STN's outreach to DHS component operational programs by engaging directly with program managers
- Communicate standards success stories throughout the Department using newsletters or other appropriate vehicles
- Consider instituting an awards program for the successful use of standards or conformity assessment systems
- Update the STN website with products such as standards policy and process documents, guidebooks, newsletters, and other materials as they become available

2015



2016–2018

## New Frontiers

During this timeframe, Analytic Services Inc. experienced a number of significant personnel, organizational, and client losses and additions.

In December 2016, ANSER won the OSD DASD(NCB/CBD) recompetes, a five-year prime contract. When the period of performance of this new contract is completed in 2021, our support to the OSD CB office and the CB Defense Enterprise will represent the longest string of competitively won work to a particular government client in ANSER's history—28 years, from 1993 to 2021—surpassing ANSER's competitively won work for the Air Force Acquisition Executive, which covered the 24 years from 1976 to 2000. Since 1991, many people have worked hard to expand this work, so that today we support nearly every aspect of the CB Defense Enterprise as well as many counter-WMD initiatives. Numerous ANSER analysts have spent all or portions their careers working on this foundational series of ANSER contracts. In addition to the OSD CB work captured and won, in June 2016 ANSER won a new five-year prime contract to support the Office of the Deputy Assistant Secretary for Threat Reduction and Arms Control (DASD(TRAC)).

A month earlier, ANSER had been informed that the HSSAI recompetes contract would be awarded to a different company. Despite the disappointment associated with this loss, our HSSAI team of dedicated analysts stepped up to the plate and completed dozens of deliverables on time to end the contract. With the loss of the FFRDC, Analytic Services Inc. renamed its two working groups. Our remaining HSSAI analysts became members of the Homeland Security Group (HSG), whose goal was to use our 12 years of DHS experience to develop and win new work. The HSG worked closely with their ANSER counterparts in the National Security Group to provide an all-ANSER approach to a series of DoD and DHS opportunities.

Over the course of the year, the HSG (later the Studies and Analysis Group) lost most of their leadership and analysts and needed to reorganize again. In

October 2017, further reorganization allowed ANSER to become more flexible and streamlined in our approach to managing our remaining assets and contracts, and to position ourselves to be more resilient and proactive toward future business development efforts. The company placed more of the business development mission into the hands of the operating-level Program Managers. Under this construct, the analysts divided into two groups—Policy and Security Analysis, led by Phil Skains from our Colorado Springs office, and Science and Technology, led by Jessica Albosta. The portfolio of Skains’s group consists of Security Policy, Mission Security, Homeland Defense, and International Security. The portfolio of Albosta’s group consists of Chemical and Biological Matters, Innovation Analysis, Threat Reduction and Response, and Intelligence and Information Systems.

The “ANSER West” office in Colorado Springs, home of the Policy and Security Analysis Group, experienced big changes in 2018. For starters, they moved to a new office space in March. Like ANSER’s headquarters in Virginia, the new space in Colorado features a blend of executive and private offices with open workstations as well as an exclusive conference room and server room. The new location provides them with proximity to the U.S. Air Force Academy, teammates, and potential partners while maintaining a direct route to Peterson Air Force Base. This space has witnessed some further growth, with new hires on the NORAD and USNORTHCOM/J723 National Guard Joint Training Exercise and Readiness Support contract and expansion of the PACAF Integrated Defense Risk Management Process contract.

In January 2017, ANSER acquired a new company to augment our capabilities: Advanced Technology International (ATI) of Summerville, South Carolina, a not-for-profit company that organizes and manages research and development consortia on behalf of the federal government. And in June 2018, ANSER made a second acquisition: Maryland-based Innovative Analytics and Training (IAT). IAT’s staff provide advanced analytic methods for data collection, information analysis, and decision making to the U.S. Intelligence Community, giving ANSER potential access to a new business sector and client base.

During this period, ANSER provided highly skilled subject matter policy experts under the Intergovernmental Personnel Act (IPA) Mobility Program to support several federal organizations. Agencies use the IPA program to source “hard-to-fill” senior government positions that demand specialized skills and/or experience. Private sector individuals serving in this capacity are considered to be “on loan” to the government, since they will be performing “inherently governmental” duties. ANSER currently has nine analysts assigned to IPA positions. These are one-year contracts that can be renewed annually for a maximum of three or four years, depending on the agency. ANSER recently renewed contracts for two IPAs supporting the NGB/J-8 and three IPAs supporting WHS Manpower.



# 2016

## OTHER KEY PROJECTS

ANSER designed DTRA's capstone continuity of operations exercise

ANSER Arms Control Team worked complex arms control issues for USAF and DoD

ANSER supported the Deputy Assistant Secretary of Defense for Threat Reduction with expertise in threat reduction and chemical demilitarization

ANSER initiated exercise support to the CDC's Global Health Security Initiative exercise program

ANSER initiated support to the Defense Governance Management Team program, with critical support to the Jordan Border Defense Symposium

ANSER was awarded National Institute of Justice grant to build strategies for prevention of domestic radicalization and violent extremism in the U.S.

ANSER supported Department of State Biosecurity Engagement Program to institutionalize bio risk management best practices and secure life science institutions and dangerous pathogens



## Vietnam War Exhibit Unveiled

In December 2016, a ribbon-cutting ceremony marked the opening of a permanent exhibit at the Pentagon honoring American military personnel who served during the Vietnam War. ANSER employees were part of a dedicated team responsible for writing and editing content; researching and selecting artifacts, photographs, and film footage for the exhibit; and providing input on the artistic design. The display includes replicas of aircraft and equipment used in the conflict as well as a timeline of events. The exhibit has been integrated into the official Pentagon tour and is a favorite among visitors. It will be seen by more than 100,000 people who visit the Pentagon each year as well as the estimated 23,000 employees who work in the building daily.

The collaborative effort to create the exhibit, led by the History and Legacy Branch Chief and team historians, resulted in the Society for History in the federal government selecting it as one of two projects to receive the 2017 John Wesley Powell Prize for outstanding achievement in the field of historic exhibits and interpretive products.

## F-35 Joint Strike Fighter Support

Hardly a day goes by without the F-35 Joint Strike Fighter (JSF) in the headlines. It's an extremely high-profile, expensive, and complex program that ANSER staff are supporting with their diverse, experienced set of engineering and support skills. The JSF is the most complex acquisition program in the history of the DoD, and it is expected to cost the Department \$1.3 trillion over its lifetime (out to 2070).

The JSF Joint Program Office (JPO) manages the delivery of a stealthy fifth-generation, multi-mission aircraft that has three variants to U.S. and international partners. Those variants are:

- Conventional takeoff and landing for the Air Force
- Short takeoff and vertical landing for the Marine Corps
- Carrier variant for the Navy

A small ANSER team is providing engineering and knowledge-based services to JSF's JPO in Crystal City. This diverse team is assisting the JSF JPO to complete the System Development and Design phase and follow-on

acquisition milestones. ANSER staff support software development, requirements (both joint and service-specific), fuselage production, and future threat intelligence.

The F-35 software suite is composed of approximately 8 million lines of code. ANSER supports the software Integrated Product Team by providing technical analysis and organizational support for the air vehicle systems software. ANSER also provides guidance to the JSF operational test team and Air Force Research Lab leads as they prepare to perform critical cybersecurity demonstrations on the air vehicle. These efforts have been recognized by the JPO, resulting in being named the 2016 Team of the Year for Innovation.

ANSER assists in the requirements development and management process ultimately affecting DoD and its international partners. Our expertise is used to support the JPO's requirements working group, operational advisory group, and other JSF requirements boards. Additionally, support staff articulate USMC-specific interests through requirements and concept of operations development as the transition from legacy Harrier and Hornet aircraft continues.

ANSER also provides oversight of the production of the F-35 forward fuselage. These duties include executing the assessment and improvement of production and manufacturing of the forward fuselage. Monitoring and pursuing to resolution supply chain issues affecting the forward fuselage are also ongoing tasks.

Finally, ANSER keeps the JPO aware of future threats. Emerging weapons systems in development by near-peer

states require the JPO to incorporate F-35 systems to counter and overcome these threats. Adversary emerging technologies are assessed against F-35 capabilities, and countermeasures are inserted into follow-on modernization programs.

## Verification and Validation of TSA's Risk-Based Framework

HSSAI provided independent evaluations of TSA's analytic approaches to assessing aviation security issues. These evaluations focused on the verification and validation of TSA's analytic efforts to support its risk-based approach to operations. HSSAI's verification analysis determined whether these efforts were performing as designed by TSA risk managers. The validation analysis assessed whether these efforts were providing the analytic outputs that TSA needed to support the objectives of its risk-based decisions for operations. Upon conclusion of its analysis, HSSAI provided practical recommendations for improving TSA's analytic efforts.

TSA's ongoing analysis and analytic tool development was particularly important given the complex issues and tradeoffs related to implementing the agency's risk-based approach to operations for aviation security, which included developing and implementing TSA's Pre✓® program and other measures.



## OTHER KEY PROJECTS

ANSER initiated support to USAID with efforts evaluating the Office of Disaster Assistance incident command system and countering violent extremism in East Africa

HSSAI created a component-driven joint requirements process to improve the way DHS plans, programs, budgets, and executes its missions

HSSAI assessed major DHS acquisition program breaches to identify ways to strengthen the acquisition process

HSSAI assessed the risk model used by DHS to evaluate potential use of general aviation aircraft from foreign locations in a U.S. attack

HSSAI supported creation of a master plan for future development at FEMA's Mt. Weather Emergency Operations Center

HSSAI assessed value of several proposed digitization strategies for U.S. Citizenship and Immigration Services

HSSAI team estimated costs and benefits of tactical communications system alternatives for CBP, ICE, and USCG

# 2016



# 2016

A critical element in the risk-based approach to operations is the ability to prescreen passengers to assess their risk levels and assign them to the appropriate screening at the airport. TSA uses individual evaluations like trusted traveler programs and evaluations based on group characteristics. Group characteristic screenings use secure flight rules such as age-gender-itinerary, frequent flyer code words, association-based rules, and a computer aided passenger pre-screening system. They also use frameworks such as the low-risk population framework. These individual and group characteristic risk assessment tools are used collectively in the Secure Flight system to determine a combined risk assessment and appropriate screening.

The verification and validation of TSA's risk-based framework provided a system-level assessment of the analytic tools and how they are used to measure security effectiveness, operational efficiency, passenger experience, and cost. This assessment helped TSA:

- Understand the impacts these tools had on the overall Secure Flight system
- Gain insight into how these group characteristic risk assessment tools could be included into existing TSA risk models
- Defend its analytic methods and provide a foundation for TSA to move forward with more advanced security concepts such as the Dynamic Aviation Risk Management System or the distributed security checkpoint

This work enhanced our Nation's aviation security by verifying and validating TSA's analytic efforts that support a risk-based approach to complex

operations. This work also positioned HSSAI to assist TSA with potential future integration of existing security models and adaptation of new models into a true enterprise capability.

## Statistical Analysis Support for the Defense Forensic Science Center

The Defense Forensic Science Center (DFSC) provides a variety of services to Army, DoD, and other federal entities throughout the world. This includes full-service forensic support, specialized training activities, and forensic research capabilities. Within the DFSC, the Office of the Chief Scientist is tasked with providing Research, Development, Testing, and Evaluation support in order to meet current and future forensics demands for military and law enforcement applications.

The continual improvement and refinement of analytical techniques is essential to maintaining the integrity of the forensic science field. To support these efforts, ANSER has worked with the DFSC on two areas of research: 1) the analysis of lubricants related to sexual assaults and 2) refining the standards used in drug sample analysis. Specifically, the team has focused on developing and improving experimental design and using statistical analyses to reevaluate the quality thresholds associated with complex samples.

Crime scene samples can often become contaminated or degraded and can result in important details being obscured by additional data that may or may not have any bearing on the relevant questions being asked by criminal investigators. In the words of the research team,

“It’s a big philosophy change to go from focusing on target compounds to incorporating every feature.” Extracting the desired information from these types of results can be a challenging and even game-changing part of the forensic analysis process. By taking data from typical analytical methods such as gas chromatography/mass spectrometry and applying a variety of data analysis methodologies, the ANSER team is working to provide additional insight into:

- Examining how personal lubricants are degraded in the human body, with the goal of establishing what quantities and timeframes are relevant in regards to building a timeline in sexual assault cases
- Reviewing libraries of previously analyzed drug samples to provide a statistical overview and establish improved guidelines for necessary sample quality thresholds

Thus far, the ANSER team has completed initial investigations into both topics and work is underway on developing new experimental methods for more thorough testing.

## NOAA “Hurricane Hunters” Analysis of Alternatives

NOAA’s Office of Marine and Aviation Operations (OMAO) operates two Lockheed WP-3D Orion “Hurricane Hunters.” These aircraft conduct tropical cyclone reconnaissance and research during hurricane season. They also support a wide range of national-priority atmospheric research. The aircraft, approximately 40 years old, underwent an upgrade and service life extension in 2016 and 2017 in which they were refitted with newly



refurbished wings, more fuel-efficient engines, and state-of-the-art avionics. These upgrades will prolong the retirement date of the aircraft from 2019 until approximately 2030. As part of its plan to have a replacement operational by January 2028, OMAO tasked ANSER to perform a formal analysis of alternatives (AoA) for the replacement platform.

The alternatives included various replacement aircraft, a second extension to prolong the life of the current aircraft past 2030, and the “do nothing” option (i.e., simply retiring the WP-3Ds). ANSER’s analysts compared the effectiveness, cost, risk, and benefit of each alternative system. Important questions they needed to answer included: What’s the technology going to be in 2030? Will you need manned aircraft then? What will be the observational requirements be? Will we have space-based instruments that can do all this? What will we have solved by then, and what new problems will need to be solved?

2016

# 2016

## Critical Infrastructure Security and Resilience

From 2014 to 2016, HSSAI worked with the DHS Office of Infrastructure Protection (IP), providing wide-ranging analysis on topics such as economic incentives to promote infrastructure security and resilience, and proposed content revisions to the National Infrastructure Protection Plan. They assisted with the standup of a new function within IP: the Infrastructure Development and Recovery program. HSSAI performed several quick-turn studies for the new program. In one, they explored the situational awareness needs of the National Infrastructure Coordinating Center, analyzed available data sources, and identified critical gaps. In another, HSSAI examined the impact of regulations on the ability of critical infrastructure owners and operators to rapidly respond to and recover from disasters. During 2016, the Institute helped develop and refine the Community Infrastructure Resilience Toolkit, a collection of guidance, planning tools, and information resources that provides an end-to-end process for critical infrastructure resilience planning at the community level. HSSAI also developed a series of five case studies concerning communities and organizations that had taken proactive approaches to enhance their resiliency.

## DHS Joint Requirements Council Analytic Support

The Joint Requirements Council (JRC) is an executive-level body that oversees the DHS requirements generation process and makes prioritized funding recommendations for validated requirements. It seeks to mitigate redundant capabilities, fill capability gaps, and harmonize capabilities and requirements. Over the course of two years (2014–2016), HSSAI provided a wide range of analytic support to the JRC—from the stand-up of the original portfolio teams through their mature functioning; from initial reviews of legacy capability documents to the development of a streamlined document review and staffing process; and from advising JRC leadership on organizational process improvement to the development of specific analytic tools and databases to help the JRC track trends and impacts. In addition to the analytic tools and quick-turn studies they provided, HSSAI also helped foster relationships across DHS, expanding the JRC’s engagement with DHS components, enhancing the development of requirements culture within the components, and increasing the analytic capabilities of the JRC.





## ANSER Acquires ATI

In January 2017, ANSER acquired Advanced Technology International (ATI) of Summerville, South Carolina, a nonprofit company that organizes and manages research and development consortia on behalf of the federal government. The company was created by the South Carolina Research Authority; ANSER purchased it from the state of South Carolina.

ATI has a network of 700 businesses through membership in the consortia it manages. The company supports federal R&D programs that include participation from a diverse range of industries, such as shipbuilding, metal parts manufacturing, composite applications, healthcare, Department of Defense prototypes, and electromagnetic spectrum. Through these relationships, ATI builds and manages industry-government-academia teams to address the Nation's technological challenges.

ATI's first R&D program developed an on-demand manufacturing system for the U.S. Navy. The just-in-time manufacturing method replaced an outdated model of producing and warehousing lots of parts in case they were needed later for critical repairs. ATI's system is still in use at multiple military depots to this day. The second large program developed data standards that share product information among supply chains. These standards are now used worldwide in the manufacture of hundreds of thousands of products in virtually every industry. Today ATI leads federally funded programs with a combined contract value exceeding \$16 billion.

Through the acquisition, ANSER gained approximately 180 employees, bringing its total headcount to 515, and increased its revenue to \$500 million per annum. Keeping all positions intact, ATI has continue to provide its successful leadership of R&D collaborations

## OTHER KEY PROJECTS

ANSER provided analytical expertise to the Office of Organization, Management, and Planning to support DoD organizational transition from end of Obama administration into start of Trump administration

ANSER team conducted Air Force Mission Assurance Assessments that include pre-site survey analysis, integration of local threats and hazards, and training for installation personnel

# 2017

# 2017

from its base in South Carolina. The acquisition has diversified ANSER's offerings and made them available at a much lower and more competitive price point by leveraging economies of scale.

## Defense Security Service Counterintelligence Analysis

DoD's Defense Security Service (DSS) oversees the protection of U.S. and foreign classified information and technologies in the hands of cleared industry by providing professional risk management services. The DSS Counterintelligence (CI) Directorate identifies threats to U.S. technology and programs residing in cleared industry and articulates those threats to stakeholders.

ANSER's DSS CI team provides subject matter expertise and analysis to DSS CI. The team has two key tasks:

1. Generate approximately 3,333 Suspicious Contact Reports (SCRs) annually from assigned DSS CI Special Agents (CISAs). SCRs are the basis of DSS referrals to other government agencies to initiate investigations and operations; these operations are a vital part of securing the cleared industrial base.
2. Generate approximately 100 finished intelligence products annually, including various threat assessment reports. The team's products enable CI to provide a clear "threat" picture for DSS's risk-based management framework and decision process.

The ANSER team developed new tactics, techniques, and procedures (TTPs), templates, and methodology that restructured the efficiency of the DSS CISAs in assessing reports from industry, and the team generated SCRs

in a timelier manner. The team's TTPs, templates, and methodology are now the new DSS CI standard operating procedure because of the demonstrated improvement to the supported CISAs' efficiency and productivity. One CISA in the program reported that the increased time with industry contributed to a 150% increase in the number of reports from assigned facilities. The CISA stated: "The more I interact with industry, the more reports I receive." These reports are vital to achieve faster identification and interdiction of threats to classified U.S. information and technology in cleared industry.

## Combating Human Trafficking

The United Nations defines human trafficking as the "recruitment, transportation, transfer, harboring, or receipt of persons, by means of the threat or use of force or other forms of abduction, of fraud, of deception... for the purpose of exploitation." In addition to the human rights violations that define the issue, human trafficking props up organized crime, drug and arms trafficking, terrorism, and even labor markets that affect our daily purchases. Because of this, diverse organizations are involved in countering human trafficking. In the United States, DHS, DOJ, local law enforcement agencies, nongovernmental victim services organizations, and academia are just a few of the actors involved. ANSER provides critical support to these organizations in defining, measuring, and combating human trafficking.

ANSER's current support of U.S. anti-human-trafficking efforts began with a 2015 study evaluating the connection

between human trafficking and foreign terrorist organizations. The study used criminal network modeling to show how ISIS, the FARC, Boko Haram, and al-Shabaab used human trafficking to subjugate populations, control territory, recruit and retain fighters, and meet battlefield objectives. The resultant report was shared with multiple U.S. government stakeholders. The Department of State's Office to Monitor and Combat Trafficking in Persons commended the report's findings and the recommendations were deemed "truly excellent." DOS also socialized the report with foreign counterparts, such as the United Nations Office of Drugs and Crime in Kenya.

Measuring the scale and prevalence of human trafficking continues to vex both domestic and international groups. ANSER's most recent study, sponsored by the DHS Science and Technology Directorate, identified a methodology for credibly estimating the number of human trafficking victims in the United States. This study involved collaboration with multiple U.S. stakeholders, primarily the Human Smuggling and Trafficking Center, along with DHS, DOJ, DOS, Health and Human Services, and the Department of Labor. The study team also collaborated closely with scientists and practitioners from the United Kingdom's Home Office to better understand that nation's methodology and its applicability to the U.S. problem. The published report was briefed to National Security Council staff members, who agreed to pass ANSER's recommendations for conducting a prevalence study to the President's Interagency Task Force.

ANSER is uniquely positioned for work in the anti-human-trafficking space.

Through previous research, the company developed a broad and deep network of domestic and foreign government entities, NGOs, and academics in the field. Additionally, ANSER brings the right people with rigorous methodology to a field still struggling to measure the scope of the problem.

## Supporting DoD's National Preparedness Efforts

Presidential Policy Directive 8, National Preparedness, directs federal agencies to work together with the whole of community to strengthen "the security and resilience of the United States through systematic preparation for the threats that pose the greatest risk to the security of the Nation, including acts of terrorism, cyber attacks, pandemics, and catastrophic natural disasters." PPD-8 also directs DHS, through FEMA, to "coordinate a comprehensive campaign to build and sustain national preparedness."

ANSER is supporting DoD efforts to implement PPD-8 through sustained national preparedness campaigns that aim to raise the awareness of Service members, DoD civilians, contractors, and their families to the hazards they are likely to face. The campaigns seek to mitigate the impacts of potential hazards by encouraging preparation through drills, exercises, emergency plan development, and building emergency kits to prepare for hazards such as power outages, winter storms, hurricanes, floods, wildfires, tornados, earthquakes, tsunamis, or active shooters. ANSER's support of DoD's national preparedness efforts strengthens the disaster resiliency of the DoD workforce and helps ensure it will be ready when called upon

2017

# 2017

to execute their essential duties and functions.

ANSER assisted the Office of the Assistant Secretary of Defense for Homeland Defense and Global Security in implementing a sustained national preparedness campaign tempo within the Department, through close coordination with the National Security Council staff, FEMA, and DoD's emergency management stakeholder community.

ANSER also helped develop questionnaires for participating CONUS and OCONUS installations, which use the feedback to prioritize hazards for DoD consideration during campaigns. ANSER staff analyzes questionnaire feedback and consolidates the actions and activities undertaken to understand participation levels and identify the hazards of greatest concern. The information is shared with the Deputy Secretary of Defense, FEMA, and National Security Council staff.

The Department's preparedness campaigns make a difference. As noted in the fall 2016 DoD National Preparedness Month Campaign feedback questionnaire from Shaw Air Force Base, the installation's participation in national preparedness campaigns "has been instrumental for two years in preparing the base populace to survive during the 1,000-year flood of 2015 and Hurricane Matthew in 2016."

## Planning for Public Health Drill in Vietnam

ANSER analysts served as the lead exercise planners for the 2017 Vietnam Public Health Drill Series, sponsored by the U.S. Centers for Disease Control and Prevention (CDC) in partnership with the Vietnam Ministry of Health.

The purpose of the series of drills was to test Vietnam's public health emergency response capabilities across the functional areas of surveillance and reporting, laboratory, and emergency management in response to a reported human case of avian influenza A (H7N9).

CDC gave ANSER planning responsibility for the seven-day exercise, conducted consecutively in four locations. The ANSER team developed and coordinated exercise goals and disparate objectives for 17 organizations at the village, provincial, and national levels. They also developed all exercise materials to include a scenario, participant guides, patient cards and scripts to enhance realism for participants, and an exercise communication plan. All this was done in a short, fast-paced four-month period.

By translating ideas and decisions into action, the work of our analysts strengthened CDC's Global Health Security Agenda (GHSA) efforts and Vietnam's undertaking to be a GHSA leader. They built an effective planning and execution team and established trusted relationships by delivering quality products that increased Vietnam's preparedness to meet health response challenges. During the after-action review, officials from CDC and the host country praised the exercises as a huge success in validating newly established plans, processes, and procedures and in identifying shortfalls to be addressed. Vietnam invited CDC and ANSER planners to start the planning process for a larger-scale exercise to be executed the next year.



## ANSER Acquires IAT

In June, Analytic Services acquired Maryland-based Innovative Analytics & Training (IAT), a company that provides advanced analytic methods for data collection, information analysis and decision making to the U.S. Intelligence Community. Through this acquisition, ANSER gained additional analytic depth and breadth as well as access to a new business sector.



IAT provides the Intelligence Community with the operational support and training needed to define issues, identify alternatives, and make critical decisions. Their extensive experience and advanced analytic methods and training help clients successfully develop creative and sustainable data collection, information analysis, and decision-making processes. Clients are also able to utilize IAT's proprietary validation methods and global network of data sources to enhance their independent research findings. With this acquisition, ANSER blended its government problem-solving heritage with IAT's data and information analysis expertise to advance the company's "for-purpose public service" mission.

## Ongoing Risk Management Program for PACAF Installations

Since 2002, ANSER's Mission Security Division (formerly the Asymmetric

Threat Division) has supported the Pacific Air Forces security forces' move toward the vision of integrated defense for all installations in PACAF. Mission Security does this by applying a risk assumption-based methodology to develop enhanced security postures. The methodology being applied at each installation is known as the Integrated Defense Risk Management Program (IDRMP).

This program is a complete cycle of risk assessment applied throughout the base security zone, extending beyond the base boundary to ensure unhindered Air Force operations. By applying the IDRMP, commanders shape the defensive effort to the operational environment and mission requirements. Ultimately, the IDRMP aims to ensure that the level of effort required by threat forces is too costly to pursue—thereby assuring unimpeded Air Force operations in support of campaign efforts across the area of operations.

ANSER developed and outlined an IDRMP application that focuses on the initial risk-assessment cycle and developing an effects-based format that compiles information required for an effective risk analysis. This requires blending antiterrorism, critical infrastructure protection, and integrated defense principles to reduce impact and ensure synergy between critical protection programs. The IDRMP is modeled upon the principles described in the DoD antiterrorism handbook, the Air Force policy directive on IDRMP, and the DoD directive on the Defense Critical Infrastructure Program. These are applied in all aspects of implementing and planning the IDRMP, including operational plans and decisions,

### OTHER KEY PROJECTS

ANSER awarded contract with the JRO for CBRN Defense to provide operational and risk analysis to counter WMD

ANSER awarded contract to assist in collecting, compiling, and analyzing environmental data for the Air Force Civil Engineer Center

# 2018

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developing risk mitigation measures, and prioritizing and allocating resources.

The essential components of the IDRMP are threat assessment, criticality assessment, vulnerability assessment, risk assessment, and countermeasures. The desired end state is a flexible, responsive integrated defense operation that effectively transitions from high- or low-threat environments and is capable of meeting changing conditions with minimal emergency adjustment to set plans. When successfully conducted, integrated defense will ensure that Air Force commanders retain the freedom of action and movement to effectively execute missions in all levels of threat environment.

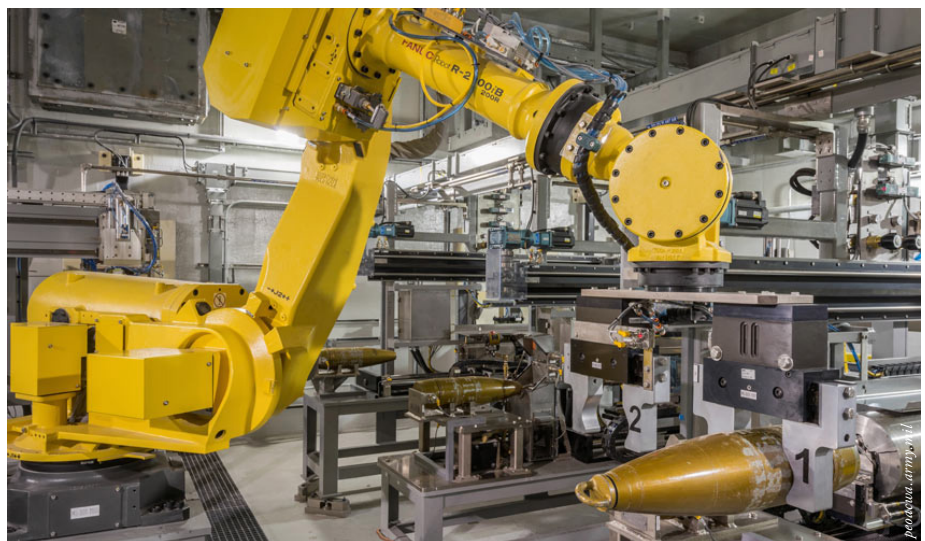
## Support to the U.S. Chemical Demilitarization Program

For nearly 25 years, ANSER has provided time-critical analytical support to the Office of the Deputy Assistant Secretary of Defense for Threat Reduction and Arms Control as it exercises governance of the United States

Chemical Demilitarization Program. The program, with life-cycle cost in excess of \$35 billion, is comprised of the Assembled Chemical Weapons Alternatives Program, the Chemical Stockpile Emergency Preparedness Project, and the Recovered Chemical Warfare Material Program.

In September 2016, DoD began destruction operations at the Pueblo Chemical Agent-Destruction Pilot Plant with the goal of destroying over 780,000 mustard agent-filled projectiles located in the State of Colorado. The ANSER team assisted in the successful start of destruction operations by ensuring all safety, security, environmental, and operational readiness requirements were met. The team worked directly with the program leadership responsible for destruction operations in Pueblo to inform Congress and the Organization for the Prohibition of Chemical Weapons of the startup and to secure approval from the Defense Acquisition Executive to commence operations.

Most recently, technological challenges associated with the first-of-its-kind facility at Pueblo led to a pause in



destruction operations. Team ANSER assisted in the successful restart of destruction operations in June 2018. The team's institutional knowledge, problem-solving capabilities, and development of strategic time-sensitive solutions enabled critical leadership decisions and mitigated programmatic issues that had the potential to increase cost and delay completion of the U.S. stockpile destruction mission.

## Analyzing Resilience of U.S. Manufacturing and Industrial Base

On July 21, 2017, the President signed Executive Order (EO) 13806, "Assessing and Strengthening the Manufacturing and Defense Industrial Base and Supply Chain Resiliency of the United States." This EO directed the Secretary of Defense to conduct a whole-of-government study to identify risks and recommendations related to support of a healthy manufacturing and defense industrial base. DoD led an interagency task force with 16 working groups and more than 300 experts and submitted a presidentially signed report on risks and recommendations that will shape U.S. strategy.

When the Deputy Assistant Secretary of Defense (DASD) for Industrial Policy undertook this project, ANSER staff were already performing duties at the office under a different task. While continuing to perform their normal functions, ANSER staff promptly pivoted to make EO 13806 their top priority. As a result, the DASD appointed ANSER staff as secretariats for 13 of the 16 sectors. These responsibilities included facilitating meetings among stakeholders with competing agendas and intellectual

approaches. In each sector, ANSER developed defensible analytic frameworks for identifying risks and mitigation strategies. These included economic and trade policies, capability requirements, and warfighting futures in crucial sectors (e.g., machine tools, cyber, shipbuilding, and aircraft). ANSER distilled data to produce tight narratives for consumption by White House staff and signature by the President. The massive analytic deep dives and the synthesis and production of findings, in forms consumable by audiences at varying levels of sophistication, were conducted in a compressed timeline of only 6 months.

ANSER analysts were given the opportunity to make an impact by developing long-term, national-level strategic vision in economic and trade policy, industrial policy, and technology development. Our staff were at the forefront of an effort that recommended substantive changes to trade, tax, and export policies and regulations. Consequently, ANSER's analysis will influence policy, resource, and technology decisions across the whole of government for years to come.

## HDCC Client Support Team

In 2016, the Office of the Secretary of Defense created a new mission in response to the growing threat posed by small unmanned aircraft systems (sUAS). The Director of Homeland Defense Capability Development (HDCC) was tasked with this mission. HDCC prepares DoD for the sUAS threat in the homeland in collaboration with numerous interagency partners. The ANSER team represents two-thirds of HDCC's non-administrative staff and handles technology counter-sUAS (C-sUAS) issues. This includes

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identifying and articulating C sUAS challenges and presenting defensive solutions in light of technological constraints and legislative barriers.

The ANSER team designed and executed the first ever C-sUAS simulation experiment (SIMEX) for the National Capital Region. The experiment brought together operators from organizations such as the U.S. Coast Guard, FAA, Secret Service, FBI, Capitol Police, and NORAD. The SIMEX demonstrated the need for cooperation in addressing C sUAS operational gaps. The after-action report was briefed to the White House Deputy Chief of Staff and later to the Secretary of Defense and Secretary of Homeland Security.

The team responds to questions from the House Armed Services Committee on operating C sUAS technologies overseas. ANSER's briefing detailing constraints on U.S. operation of C sUAS equipment is a foundational document for all Services working the C sUAS issue and has impacted overseas C sUAS initiatives.

The ANSER team also ran a DoD-wide symposium on C sUAS technologies and their legal uses. The symposium reshaped understanding of C sUAS options at

DoD installations and provided legal options for commanders.

The team's work on numerous projects has influenced installation commander investment decisions and OCONUS C sUAS operations and has garnered White House attention, with far-reaching influence in this domain, including cross-agency implications.

## ANSER Acquires DXT

At the end of October, Analytic Services purchased Domain X Technologies (DXT), a small modeling and simulation firm with existing contracts in the counter-WMD community and client-site work in Edgewood, Maryland. DXT's highly motivated and knowledgeable staff were seamlessly integrated into the ANSER family.





## CONCLUSION

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As ANSER reflects over the past decade, we can take great pride in our resilience, successes, and ability to move forward as a valued, unified team performing as a not-for-profit research institute. This timeframe has been an immensely difficult period for the entire corporation. With a tight fiscal environment, government leadership uncertainty, and decision paralysis taking hold of many of our customers' offices, getting new ideas funded, money flowing, and contracts executed have been major challenges. Congress has contributed to unstable appropriations over the past decade, creating additional uncertainty in DoD's procurement plans and sending unreliable demand signals to industry. Congress has enacted more than 30 continuing resolutions since 2009, with an average of 127 days each year under a continuing resolution, thus inhibiting long-term planning and postponing multiyear funding obligations to new programs. In addition, the competitive landscape has been an unforgiving one, where wins and losses are separated by pennies.

To face these challenges, ANSER began the decade with energized business, organizational, personnel, and client changes. As documented in our project summaries for the decade, we continued our exceptional A&AS support to a wide variety of clients. In 2017, ANSER was named to Bloomberg's Top 100 ranking of federal companies based on prime contracts awarded in the past fiscal year. As we look forward to the next decade, invariably change will continue to impact how we operate and succeed. Our approach to business and client operations is fundamentally tailored to face new challenges, but the same guiding principles—public service through objective analysis and thought leadership independent of commercial or financial influence—will drive our success in the future.

Our major asset and product continues to be our people. As a not-for-profit, our main advantage and selling point is the tremendous experience of the company, which is resident in the employees. Our personnel have a public service mind-set, and a primary goal of making an impact within the national security environment. With the acquisition of new companies bringing additional capabilities and client bases, we have begun the process of extending the ANSER brand into new stretches of mission and opportunity. Quality of staff and strength of reputation will push ANSER into positive territory not previously explored.



As Steve Hopkins wrote in his March 2018 message to employees:

“Over the past year we have successfully changed how ANSER approaches our demanding competitive environment. In the past we set goals and operating budgets in a stovepiped, ad hoc, once-per-year process. Today we have the tools and techniques to continuously assess progress. Today the company works as one unit. Those of us who strive—regardless of location—to make our clients successful better understand and appreciate the important work done by those of you in Finance, Contracts, IT, HR, Media Services, Security, and elsewhere. In the past we focused only on the very near term. Today we are planning for work we will start two to three years in the future. We are evaluating our strengths and weaknesses, where we can win and where we are apt to lose. This understanding is helping us build growth goals based not on what we wish we could do, but on what is achievable. We are building into our plans alternatives, so that we are no longer dependent on any single element or contract opportunity. And today we are pushing responsibility and authority lower down into the organization than ever before, so that you who work closest to the clients can make decisions to deliver the very best.

“These changes—some small, some large—are working. ANSER is thriving and growing. To you, as a member of the ANSER family, our changes now and in the future will mean greater stability and more opportunities to serve the country, to do work that makes a difference, to do work that interests you, and to do work that grows you as a professional. Through these endeavors you become a more resilient person and thereby make all of us, as ANSER, a more day-to-day resilient company.”



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