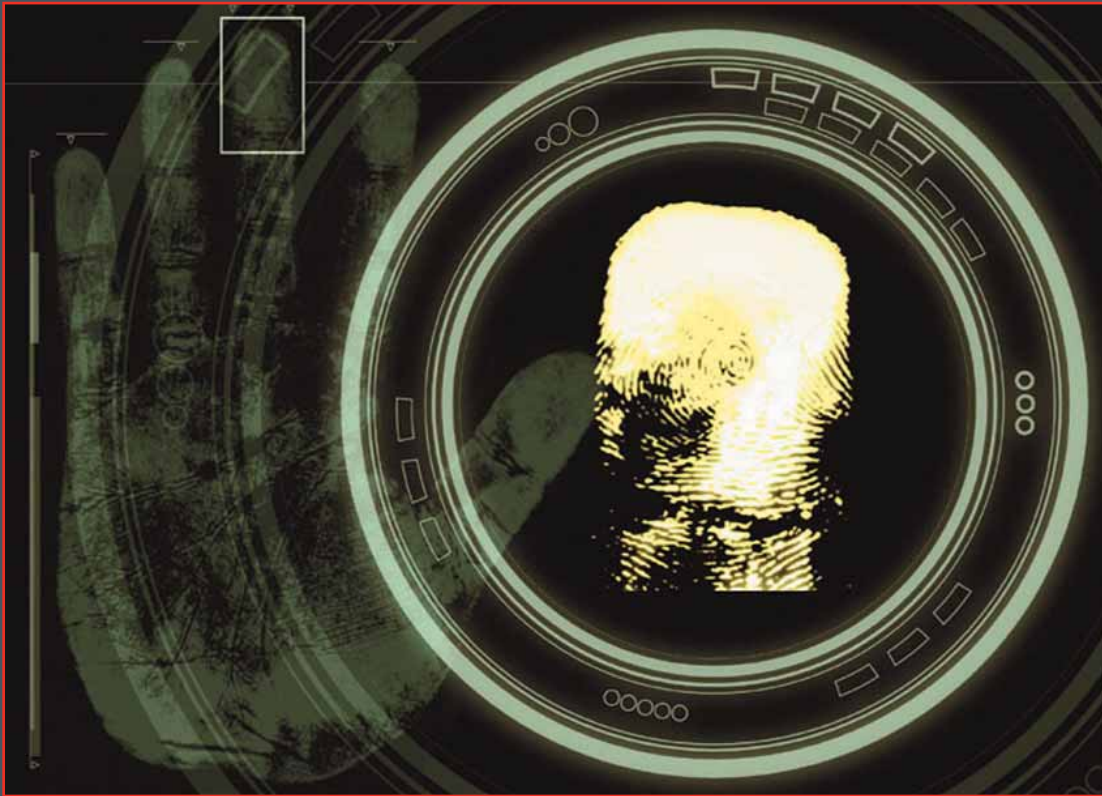# Homeland Security and Homeland Defense IT Solutions

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Rapid Response • Innovative Solutions • Outcomes That Matter

The Importance of IT to Protect Homeland Security

The United States' 21st Century role as the world's only "Superpower" gives the nation the prestige and power to influence countries across the globe. This mantle of leadership also makes our nation a prime target for countries, organizations, and ideologies that oppose America's values, foreign policy and way of life. These new dangers to the nation's homeland security and defense range from small, rogue nations poised for armed conflict with their neighbors to broadly dispersed and well-funded terrorist and criminal organizations. The Department of Homeland Security (DHS) must also coordinate the Federal Emergency Management Agency's (FEMA) activities to respond quickly and effectively to natural catastrophes whose devastating impact on human life and property could severely degrade the homeland's security and defense readiness. While these issues present the Federal government with a formidable challenge in protecting the Nation, the U.S. wields a powerful tool that can aid in the efficient amassing, management, and deployment of necessary resources to prepare for and address man-made and natural threats – technology.

Effective homeland security and defense depends on a network of stakeholders and systems that span all levels of government and the private sector. To leverage these considerable assets, DHS is establishing a clear national strategy and architecture where separate roles and responsibilities for security are properly balanced and fully integrated among public and private stakeholders. This strategy prominently features information technology as a tool for providing DHS with the agility and capacity to implement this national strategy rapidly.

Adaptable IT Solutions For Continually Evolving Threats

Serco supports the implementation of DHS's national strategy with a range of solutions that span the entire information technology (IT) life cycle – from acquisition support and enterprise architecture all the way to outsourced network operations and training. Serco employs a unique Rapid Response • Rapid Deployment® approach in order to satisfy immediate IT priorities for homeland security and defense, while advancing long-term transformational objectives. Serco's IT solutions are adaptable enough to equip the Federal government with the necessary resources to prepare for and combat constantly evolving man-made and natural dangers as they arise.

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"Technology can provide tremendous added value in the quality of security across virtually every sector of the homeland – border enforcement, aviation security, passenger screening, information sharing, and the list goes on. . . . technology is a major part of our strategic plan to achieve success" stated Homeland Security Secretary Michael Chertoff at a speech before the Commonwealth Club of California.

Capabilities Directly Aligned With Homeland Security & Homeland Defense Priorities

Intelligence and Warning

Mission Critical: Terrorism's success relies on using stealth and violence to create an environment of fear, confusion and chaos. When implemented without warning, a terrorist attack can inflict massive damage to the unsuspecting and unprepared public. Without this element of surprise, it is much more likely that the authorities will thwart the terrorists, or, at a minimum, substantially reduce the attacks' damage. The United States is taking every appropriate action possible to avoid a terrorist attack similar to that of September 11th. To protect the Nation, DHS is spearheading the development of a warning system to detect early indications of terrorist activity, so that proper preemptive, preventive, and protective measures are instituted to deter an actual attack.

Mission Accomplished: Serco is designing and implementing the Federal IT infrastructure necessary to enhance the potency of the counterterrorism community's analytic, collection, and operational efforts. Serco's IT solutions provide real-time, actionable intelligence to all pertinent homeland security intelligence and law enforcement agencies – including state, local, and federal – so that they can take effective preemptive or protective action.

eSolutions for U.S. Coast Guard

- In response to the events of September 11th, DHS enacted new security measures involving the timing of when vessels entering or departing U.S. ports must submit advance notice of their arrival or departures to the Coast Guard.

- Serco developed a disconnected data-entry solution that provided vessel operators the ability to work offline and then upload cargo and passenger information in short batch processes.

- Once validated, the data is submitted to the U.S. Coast Guard's XML Web service.

Security Education Training & Awareness (SETA) Support for North American Aerospace Defense Command Headquarters (NORAD HQ)

- Provided systems engineering support to NORAD for an expanded Integrated Air Defense System that includes NORAD fighter aircraft, US Customs helicopters, and ground based Army Air Defense missile systems for the National Capital Region.

- Project included new radar installations, data link connectivity, electro-optical camera tracking systems, ground based visual warning systems using laser systems and a new missile system.

- This major acquisition effort, which would normally take five years or more, was fielded in six months and Serco continues to provide spiral fielding of upgrades and sector system modernization.

Communications Support to U.S. Citizenship & Immigration Service National Customer Service Center (USCIS)

- Designed a complete call flow process for network-based Interactive Voice Response System and provides professional communications consulting on contact center operations and technology.

- Maintains a Data Warehouse of information relating to the National Customer Service Center (NCSC) operations, from network IVR to TIER I Contract Contact Center Operations, to TIER II government-staffed Contact Centers; this information includes a password protected web-based portal that provides a myriad of standard reports, and we also have the capability to provide ad hoc reports on a demand basis.

Border And Transportation Security

Mission Critical: The increasing mobility and destructive potential of modern terrorism requires that the United States take a more proactive stance to border and transportation security. Today, the Nation must view border and transportation security as fully integrated requirements, because virtually every community in America is connected to the global transportation network. To address this challenge, the United States is implementing the institutions, procedures, and systems necessary for promoting the efficient and reliable flow of people, goods, and services across borders, while preventing terrorists from using transportation systems for destructive purposes.

Mission Accomplished: Serco equips the homeland with leading-edge IT to prevent and counter potential threats from abroad. We have performed trailblazing work for DHS and the Department of State, such as visa processing, applications development, records and data management, training, and optical secure card processing. These solutions help secure America's borders and monitor the flow of people and goods coming into the country.

Secure Optical Card Processing for HLS

- Serco produces secure identification cards with an Integrated Card Production System (ICPS) facility in Corbin, Kentucky, which operates at an extremely efficient rate of four million cards per year.

- We utilize a new and emerging technology that uses secure digital data and biometrics for the visual and electronic verification essential for alien registration, border crossing, and employment authorization.

- With this technology, we can process and issue identification cards for DHS within a 24-hour time frame, which enables authorities to immediately pinpoint individuals

without proper identification. These optical cards also satisfy stringent requirements for physical and data security, including counterfeit and tamper resistance.

- Serco has received numerous accolades from DHS for setting production records, cutting costs and implementing technical improvements to the ICPS.

Web-based Solution for Department of Agriculture

- The Veterinary Accreditation System was integrated into the Veterinary Services Processes Streamlining system, so Veterinary Services (VS) can maintain records on all federally-accredited veterinarians who are instrumental in assisting with disease surveillance and monitoring.

- Serco was tasked to define and recommend an electronic means of capturing, maintaining and analyzing information related to thirteen specified forms associated with the animal import/export process and the Veterinary Accreditation Program.

- We recommended and are now building an automated, Web-based system that records and traces all animals and animal products being imported into and exported from the United States and all domestic animal movement state to state.

Secure Credentials for the Transportation Security Administration (TSA)

- In response to a request from TSA, Serco designed a new standard credential with embedded security features for all baggage screeners and security screeners.

- Once approved, we produced 55,000 of these credentials for personnel at 450 airports around the country. In January of 2006, Serco will deliver another 45,000 credentials to TSA in support of airport screeners.

Securing Our Borders With State-Of-The-Practice IT

Domestic Counter Terrorism

Mission Critical: The September 11th attacks have redefined the roles of federal, state, and local law enforcement authorities. While law enforcement agencies will continue to investigate and prosecute criminal activity, they are also focused on preventing and interdicting terrorist activity within the United States. To counter domestic terrorist activity, the federal government is instituting measures to increase information sharing and the coordination of operations throughout the law enforcement community.

Mission Accomplished: Serco creates and deploys IT solutions that support the federal government in the pursuit of both the individuals directly engaged in terrorist activity, as well as their sources of support – the people and organizations that knowingly fund the terrorists and those that provide them with logistical assistance.

Counter-Narcoterrorism for the HQ/ACC

• There are two separate, but related types of Narcoterrorism that exist: Narco-driven terrorism, which is conducted by drug traffickers to further drug trafficking; and Narco-supported terrorism, which benefits from or uses drug trafficking to further terrorist individual or group activities.

• Serco currently supports the USAF HQ Air Combat Command (HQ/ACC) in the area of Counter-Narcoterrorism (CNT).

• Serco provides policy management, engineering analysis, logistical support, and financial management services to support HQ/ACC in their coordination of the comprehensive CNT efforts of the unified combatant Commands of USCENTCOM, USNORTHCOM and USSOUTHCOM Joint Staff Enterprise Portal (JSEP).

United States Citizen and Immigration Service (CIS) Centers

• Serco supplies mail management services for DHS's four CIS service centers, which consists of coordinating incoming and outgoing mail operations and courier services.

• We also assemble receipt files after data entry of applications or petitions, electronically enter data, process fees, and produce relevant documents, including scanning documents, fingerprints, and photos according to DHS Standard Operating Procedures (SOPs), as well as real-time fee collection and processing.

Infrastructure Design and Installation for U.S. Citizen and Immigration Service

• Serco is involved in the development of the agency's structured cabling standards and the migration from Token Ring and early generations of Ethernet to a standard topology consisting of UTP horizontal cabling with Fiber-optic backbone connecting the Main Distribution Frame to all Remote Wiring Closets.

• We provided structured cable plant installations at over 350 government field locations; ranging from small four drop networks to District Offices, to large Service Centers, some of which have over 2000 cable drops.

• Our personnel routinely received a '5' rating on structured cable plant installations, with a '5' rating being the highest rating that can be given by the customer upon completion of a project.

Records Operations Centers (ROC) Contract

• Serco is responsible for for tracking and accounting for more than 50 million immigration files

• Serco provides real-time data entry into Government systems, along with providing a variety of report preparation and analytical support

• We maintain large-scale file rooms and oversees the timely processing of incoming and outgoing file

Interagency Data Exchange Application (IDEA) for the Immigration and Naturalization Service (INS)

• Developed the IDEA system with capabilities that included electronically linking regional INS Service Centers with the National Visa Center (NVC) in order to produce Immigrant Visas. IDEA also provides interfaces between NVC and the U.S. Customs Service Interagency Border Inspection System.

• Reengineered IDEA with encoded data, including biometrics consisting of a photograph and fingerprints, to support Immigrant Visa and Non-immigrant visa issuance data to accommodate data from the Border Crossing Card (BCC) Project.

• Serco added the capability to processes student and exchange visitor data received from Student and Exchange Visa Issuance System. The system typically processes over one million transactions each month.

Protecting Critical Infrastructure And Key Assets

Mission Critical: Terrorists are opportunistic, so they exploit security vulnerabilities wherever and whenever they find them. As the security of a particular type of target, such as an aircraft or building increases, terrorists are more likely to focus on a new target or use a different tactic. To protect critical infrastructure and key assets, America is fostering an unprecedented level of cooperation throughout all levels of government, private industry and institutions, and the American people.

Mission Accomplished: Serco delivers the necessary IT support for the federal government to use critical financial, human resource, procurement, and information technology resources wisely and effectively for the protection of the Nation against terrorist activity.

Information Technology Solutions for the U.S. Secret Service

- Serco was tasked with implementing an enterprise-wide, multi-platform security framework designed to interface with existing and future client-server and Intranet applications.

- Our system furnishes services that allow administrators to define users and groups, and assign each their respective permissions and monitor in real-time.

SmartBuilding Design for NORTHCOM and NORAD Headquarters

- Serco was selected as the prime contractor for all communications systems at the new 150,000 square foot NORTHCOM / NORAD headquarters.

- To meet the unique challenges of this facility, Serco employed proprietary SmartBuilding methodology – a communications development plan that incorporates optimum communication solutions using equipment and distribution

systems that converge data, voice, video, security, and environmental systems though common conveyances.

- Using Serco's SmartBuilding methodology, the NORTHCOM / NORAD headquarters incorporated the latest proven technologies for high speed network systems, optimized communications system performance and accomplished the transition and cutover plan without any disruptions. The completed facility successfully supports the mission critical needs of NORHTHCOM / NORAD with the latest technology and scalable systems that will accommodate future growth.

IT Security Awareness Training

- *Serco* provided Information Security (INFOSEC) Subject Matter Expert (SME) and training expertise to develop DHS IT Security Awareness Training.

- The project was performed by Serco's SMEs and briefed 1000+ employees at DHS headquarters

- We continue to develop Information Systems Security Officer (ISSO) and user awareness training for DHS

Intelligence Community, Cryptologic Mission Management Systems

- Manages the SIGINT mission across the entire Intelligence Community (DoD, FBI, NSA, CIA, etc.)

- Provides all facets of program office support, including acquisition planning, solicitation package development and source selection support, systems engineering, DoD 5000 documentation development, and contract management

- Manages and reviews deliverables from contractors and ensures the program meets cost, schedule and performance metrics using techniques such as Earned Value Management
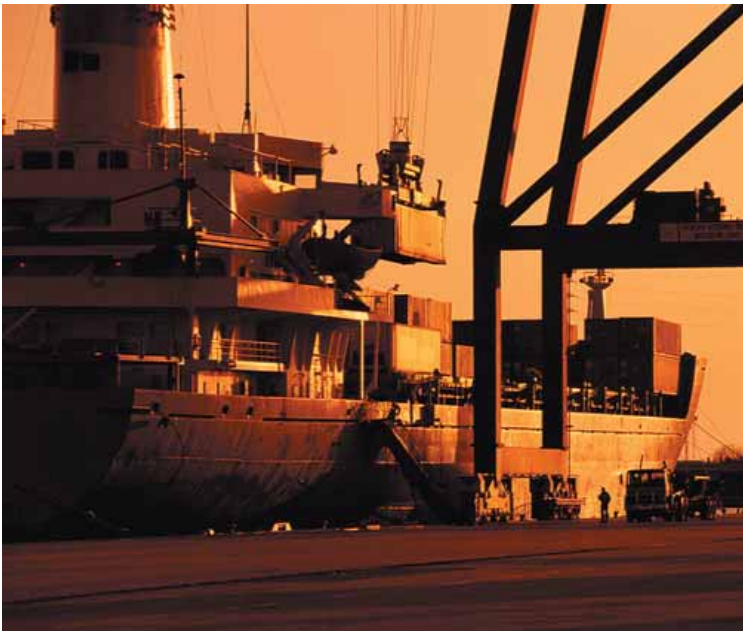
Defending Against Catastrophic Threats

Mission Critical: The knowledge, technology, and material for building the most deadly weapons known to humankind are proliferating at an outstanding rate. In addition, natural disasters, such as earthquakes, hurricanes, and tsunamis, have demonstrated their ability to wreck severe havoc on nations. The consequences of a natural disaster or terrorist attack on our Nation could be far more devastating than those of Hurricane Katrina or September 11th – including larger numbers of casualties, mass hysteria, widespread contamination, and the inundation of local medical capabilities. The federal government is formulating a coordinated national effort to prepare for, prevent, and respond to these natural and man-made threats.

Mission Accomplished: Serco designs and deploys advanced technology solutions that detect the presence of chemical, biological, radiological, or nuclear weapons materials that threaten the homeland. Also, our Rapid Response • Rapid Deployment® approach supports the federal government in responding quicker to impending natural disasters.

Rapid Deployment of Joint Operation Center in Advance of Hurricane Katrina

- When U.S. Northern Command Headquarters (USNORTHCOM HQ) contingency operations and emergency support functions were activated by the government on September 1, 2005, Serco needed to accelerate completion of the new Joint Operations Center in Colorado Springs, Colorado. USNORTHCOM HQ provides command and control of Department of Defense (DOD) homeland defense efforts and coordinates defense support of civil authorities, including disaster relief operations.

- Although Serco was still eight days from scheduled completion of the operations center, we mobilized a surge team of engineers and technicians to bring the new facility up to operational capability in less than 24 hours. The new Joint Operations Center supported DHS and the Federal

Emergency Management Agency (FEMA) in disaster relief efforts in the aftermath of Hurricane Katrina and preparation of Hurricane Rita.

Rapid Response • Rapid Deployment™ Solution for 2004 Summer Olympics

- Serco assisted the U.S. Department of Energy's National Nuclear Security Administration's Second Line of Defense Program in identifying, prioritizing, and implementing enhanced security measures for the 2004 Summer Olympics in Athens, Greece.

- We engineered, integrated, and installed radiation monitoring equipment and related software at several locations in Greece to detect, deter, and interdict dangerous nuclear and other radioactive materials, such as those that could be used by terrorists to manufacture a "dirty bomb."

- Our solution incorporates a Central Alarm Station (CAS) that obtains radiation data from stationary and portable detectors and photographic images from cameras, so that security personnel can then analyze this data to determine within seconds if there is a potential threat, and whether to scramble a response team.

Emergency Preparedness And Response

Mission Critical: The United States must be prepared to minimize the damage of and recover from any potential future terrorist attacks. In light Hurricane Katrina's devastation to the Gulf States and disruption of the Nation's oil supplies, it is obvious that a natural catastrophe can severely damage the homeland security as much, if not more, than a terrorist attack. National preparedness is key to providing an effective response to major terrorist incidents and natural disasters. The United States is formulating a comprehensive national system to bring together and command all necessary response assets quickly and effectively to handle terrorist attacks and/or natural disasters. The Nation is equipping, training, and exercising many different response units to mobilize for any emergency that occurs without warning.

Mission Accomplished: Serco delivers IT and training and learning support to federal agency personnel to ensure that the homeland is prepared to respond quickly and effectively to terrorist attacks or natural catastrophes:

Training Solutions for DHS

• Serco has provided training support services to Immigration and Customs Enforcement (ICE), Citizenship and Immigration Services (CIS), US-VISIT, and US Coast Guard (USCG), as well as other DHS components. We have trained more than 400,000 students, including inspectors, border patrol agents, investigators, detention & removal officers, adjudicators, records personnel, IT professionals, information security officers, and human resources personnel.

• Our training methodologies include hands-on, instructor-led training, Web-based training, train-the-trainer programs, on-the-job training, and performance support systems in a blended learning environment.

• Through our many years of supporting DHS, Serco has been involved in rapid deployment activities in support of system deployment efforts, changes to the law, and mandates from Congress.

TOPOFF II & III Command Post Exercise and the Forward Challenge Exercises

• Serco designed and implemented the interface access to the Global Broadcast System (GBS) system for TOPOFF II & III exercises.

• We installed a satellite video downlink from the GBS dish on the roof of the USNORTHCOM headquarters building and developed a communication system adaptation, on short notice, to connect USNORTHCOM to key government agencies through secure connections.

• Serco configured the system to provide service via Internet Protocol TV (IPTV), which broadcasts the Virtual News Network (VNN) channel on the local USNORTHCOM NIPR-NET IPTV and allows any user with access to view this information on any desktop computer system wide.

Serco North America is a leading provider of professional, technology and management services focused on the federal government. We advise, design, integrate and deliver solutions that transform how clients achieve their missions. Our agility, customer-first approach, robust portfolio of services and global experience enable us to quickly respond with solutions that achieve outcomes with value.

For more information about Serco's IT Solutions for Homeland Security and Homeland Defense, please contact:

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