2.0 US-VISIT PROGRAM DEFINITION AND DESCRIPTION

Our integrated border management End Vision brings fresh ideas to meet new challenges. Our lifecycle approach uses an incremental release strategy designed to enhance national security, facilitate legitimate travel and trade, enhance our immigration system integrity, and conform with existing privacy laws and policies, while delivering business value in each increment.

Scope. We have broadly defined our solution scope, shown in Figure 2-1, so the Department of Homeland Security (DHS) can optimize business processes across Customs and Border Protection (CBP), Immigration and Customs Enforcement (ICE), and Citizenship and Immigration Services (CIS). Our definition of scope extends US-VISIT beyond entry/exit to address a virtual border perspective that also includes pre-entry, status management, and analysis. Our definition of scope includes areas where DHS collaborates with other agencies to extend the border and achieve homeland defense. For example, Department of State (DoS) visa approvals process is a collaborative effort, where US-VISIT provides DoS information about the traveler, allowing authorization of travelers to take place well before traveler contact with the physical U.S. border.

2.1 Enterprise Business Process Model

We developed our enterprise business process model by first identifying the
business activities required for the five key
business process areas (pre-entry, entry, exit, status management, and analysis); then

We use the business model results
to define the technology to support
performance of the activities, and as
Our enterprise business model, shown
in Figure 2-2, builds upon

Our enterprise business model also streamlines
processes across agencies. For example,

**Figure 2-2. The operational areas of our US-VISIT solution.**

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This figure also shows our concept for extending the border beyond the physical border: virtual border management includes the business processes of pre-entry, entry, and exit.

Stovepipe solutions are not enterprise solutions. Our US-VISIT solution eliminates tomorrow’s stovepipes by making operational services available throughout the DHS enterprise. For example,

Translation of Desired Business Results into Operational Areas of Focus.
To maintain focus on business outcomes, we use desired business results to drive the definition of operational areas of focus, which we depict in Figure 2-3. This figure highlights our vision for enhancing security and facilitation, as many operational areas have business drivers in both security and facilitation. We are experienced in enhancing both security and facilitation for DHS the work we did for

Figure 2-3. We define operational areas of focus from desired business results to promote business outcomes and improved business processes

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TSA at BWI airport improved the overall security screening process while increasing throughput by 42 more passengers per hour per lane.

**Activities, Operational Functions, and Support Functions.** In defining the US-VISIT enterprise business model, we identified (Figure 2-4). This figure shows how our definition of operational areas lead to a more effective organization by focusing on common business activities across pre-entry,
entry, exit, status management, and analysis.

Technical Solution and Components.
We used our enterprise business model to develop a technical solution that supports the performance of the business activities. Our technical architecture, shown in Figure 2-5, centralizes processing to a primary data center.

A centralized architecture minimizes system development and operations costs while as determined by our preliminary reliability, maintainability, and availability analysis.

Within the data center, our solution provides

We select hardware and COTS software appropriate for each major service.

as we demonstrated on NASA’s Earth Observation System Data and Information System Core System (ECS), the world’s largest non-classified data system. During its 10-year incremental development and evolution phase, it supported yearly releases of new functions and two major technology refresh cycles while not breaking its fundamental architecture.
Figure 2-5. We develop our solution based on direct experience implementing large-scale multi-application data centers resulting in a solution that easily
Our MOC design provides an environment where Government stakeholder organizations can come together to understand the impact of external influences on the border, and develop tactical and strategic plans to secure the border and balance the flow of people and commerce.

The MOC also serves as the nerve center for adjusting policies based on national and regional threat levels and communicating the policy to system users and processes. Our policy-driven and agile solution immediately adapts business rules to the pre-defined set for a specific threat level.

Logical Architecture. Our logical architecture, shown in Figure 2-6, provides a foundation for integrating new COTS while enabling seamless integration with legacy systems. Consistent with the Homeland Security Enterprise Architecture (HLS-EA), Biometrics is an area of rapid technology advancement; our enterprise

Biometrics middleware integrates specific biometrics technologies (2 and 8-print finger, face, and voice) with algorithms for multi-biometrics fusion and thresholds.

We appreciate the challenge of how to present information across the diversity of user types (e.g., inspection officers at primary, other law enforcement officers, MOC users) and access methods (PDA-sized mobile inspection devices, portable inspection laptops, and fixed large monitors).

Our system of systems approach extends beyond the user to how we integrate with legacy and external systems.
We applied this approach at the Defense Logistics Agency, where we successfully integrated and modernized five legacy systems supporting 30,000 users in 27 countries.

One problem with today's stovepipe legacy systems is redundant and inconsistent data. Today a traveler address may exist in six distinct systems, with the most current address not likely to be in each system. To solve this problem and make better use of the data in today's legacy systems, we developed an architecture that integrates the data and provides a single point of access.

To give DHS a best-value and low-risk solution, we use COTS whenever there is a good product fit from a viable vendor. We understand that DHS is not a commercial business and a traveler is not a customer, but fundamentally, the agency-traveler relationship is similar: the agency collects extensive information during first interaction with the traveler, and

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**Figure 2-7.**

optimized US-VISIT system architecture
then records each subsequent interaction. A CRM solution organizes data around the customer, with open interfaces to support integrating analysis and reporting products. Accenture, the #1 worldwide integrator of CRM solutions, has extensive experience with leading CRM products. We estimate that using a CRM solution, within vendor-allowable configuration and customizations, could satisfy much of the core requirements for the entry/exit application, including the most difficult requirements involving transaction integrity and relationship-oriented data schema, with the remaining delivered as custom software.

2.2 Incremental Release Strategy

In this section, we first describe how we use Decision Economics to determine the best-value allocation of business functionality for each increment. We then discuss our overall approach for assessing legacy systems; how we determined which should remain, and which should be retired, modernized, or enhanced as part of our US-VISIT solution. We then provide the summary overall incremental release picture and a detailed description of each increment.

We deliver our US-VISIT End Vision solution over [redacted] increments. New capabilities are delivered each year, the desire to rollout a new capability as soon as it is developed with the pragmatism of gathering enough substance in an increment to make a national deployment and training drive cost-effective. Our yearly incremental release strategy also helps

Allocation of Business Functionality.

Figure 2-8 shows how we use [redacted] Subject matter experts to evaluate the inputs, and the output provides a framework for evaluating which capabilities bring the most business value to DHS for a specific incremental release. [redacted] incorporates the following elements:

* Our strategy to first secure, then expand the U.S. border
* The need to facilitate the flow of legitimate travel and trade
* The deployment of functions in accordance with existing privacy laws and policies
* The legislative requirement deadlines to be met

Our incremental release strategy approach also delivers value in each increment, enabling continued funding of future increments.

Legacy Transition Strategy. US-VISIT evolves as an integrated system-of-systems, capitalizing on existing legacy capabilities while introducing new technology and business processes over time to deliver a common, integrated view
Considerations
- Security
- Facilitation
- System Integrity
- Privacy
- Legislation
- Operational Acceptance
- Operational Cost
- Risk

Resource Mgmt. Privacy Facilitation Security Immigration Integrity

Figure 2-8. Our release strategy is to deliver each increment of traveler activities. Through the applications, data, workflow, disparate systems and operations are aligned and integrated within the HLS-EA.

To support this vision, our legacy transition plan builds for the functionality to be delivered in year 2010, while focusing on delivering improved performance and value early. As shown in Figure 2-9, our plan addresses the key drivers for integration success.

Our team has the collective capabilities to meet the significant legacy integration challenges US-VISIT presents. We know how to integrate and modernize large, complex legacy systems for Government agencies, including DoS, INS, Customs, DLA, and USPS. In addition, we have direct working experience with virtually every US-VISIT legacy system, including ADIS, IBIS, IDENT, CLAIMS, SEVIS, ENFORCE, CLASS and CCD. As an example, AT&T, a key partner in our Alliance, designed and built the CLASS name checking application for the DoS.

Reduced Risk Through Teamwork.
Our legacy transition approach reduces risk by utilizing current legacy contractors, Government Subject Matter Experts, and former Government executives on our team as key team resources. We also use our existing relationships with virtually every systems integrator, software, and hardware vendor currently working on US-VISIT. For example, today, through our DHS STARS contract, we are working with Lockheed Martin and CSC to support US-VISIT legacy systems.

Legacy System Selection Rationale.
Our rational for how to handle legacy systems, born out of lessons learned across our Alliance in similar integration projects, first focuses on determining whether a legacy system is required to support a current or future US-VISIT business process. Figure 2-10 includes an overview of the rationale including the methodology and scale behind the selection process. If a legacy system is required, detailed cost benefit analysis determines whether the legacy system is a candidate for retirement, replacement, integration, or enhancement. The analysis focuses on the technical quality of the legacy system (e.g. scalability, extensibility, and support for the HLS-EA) and its support of the US-VISIT business case (operations and maintenance costs) and new business processes.
Figure 2-9. US-VISIT evolves as an integrated system-of-systems, achieving the goals of legacy integration through reuse, modernization and retirement.
Figure 2-10. Our methodology for selecting legacy systems to integrate, rewrite, enhance or retire emphasizes improving operational value.

Legacy Transition Plan Overview. As shown in Figure 2-11, our legacy transition plan...

At the same time, our plan stays aligned with our End Vision and the HLS-EA, while maintaining operational continuity across DHS and collaborating agencies.

The plan reduces implantation risk and maintains operational continuity by reusing...

These systems are used long-term, maximizing their Return on Investment (ROI) in their as-is state, or through incremental enhancement and modernization (technology refresh).

Incremental Release Picture. Figure 2-12 summarizes the overall incremental release strategy and projects summary investment benefits. Figure 2-13 extends the summary to include additional detail and projections such as operational and technical descriptions, legacy system updates, and changes to business processes and policies within each increment.
Our legacy transition plan targets the 21 legacy systems listed in Section C.5.3 of the RFP (shown in red), plus additional systems (shown in green):

ADIS, APIS, CCD, CIS, CLAIMS, CLASS, GES, IAFIS, IBIS, IDENT, INSPASS, NAILS II, NEXUS, NIFS, OARS, PALS, SENTRI, SEVIS.

Our End Vision dictates the necessary functions, and places the functions into the appropriate increment. For example,
Figure 2-13. Our incremental release strategy incorporates security, facilitation, privacy, and legislation to deliver business value and success in each increment (sheet 1 of 15)
Figure 2-13. Our incremental release strategy incorporates security, facilitation, privacy, and legislation to deliver business value and success in each increment (sheet 2 of 15)
Figure 2-13. Our incremental release strategy incorporates security, facilitation, privacy, and legislation to deliver business value and success in each increment (sheet 3 of 15)
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Figure 2-13. Our incremental release strategy incorporates security, facilitation, privacy, and legislation to deliver business value and success in each increment (sheet 10 of 15)
Figure 2-13. Our incremental release strategy incorporates security, facilitation, privacy, and legislation to deliver business value and success in each increment (sheet 11 of 15)
Figure 2-13. Our incremental release strategy incorporates security, facilitation, privacy, and legislation to deliver business value and success in each increment (sheet 12 of 15)
Figure 2-13. Our incremental release strategy incorporates security, facilitation, privacy, and legislation to deliver business value and success in each increment (sheet 13 of 15)
Figure 2-13. Our incremental release strategy incorporates security, facilitation, privacy, and legislation to deliver business value and success in each increment (sheet 14 of 15)
Figure 2-13. Our incremental release strategy incorporates security, facilitation, privacy, and legislation to deliver business value and success in each increment (sheet 15 of 15)