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Supporting International Collaboration in Public Health: Selection and Implementation of an International Case Management System at Emory University

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An abstract of
A Special Studies Project report submitted to the Faculty of the
Rollins School of Public Health of Emory University
in partial fulfillment of the requirements for the degree of
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2013

Abstract

Supporting International Collaboration in Public Health:
Selection and Implementation of an International Case Management System
at Emory University

By Stephanie Roberts

Higher education has seen a significant increase in international collaboration, research, and education in the past ten years, and the field of Public Health is no exception. The importance of a global perspective is clearly reflected in the values of the field as a whole as well as in the requirements for accreditation of Schools of Public Health. Several institutions with Schools of Public Health are among those with the largest number of international scholars.

Extensive support is required to bring international scholars to the United States and ensure they maintain legal immigration status during their stay. This support is usually provided by an office of International Student and Scholar Services (ISSS). As the international population increases, and regulations and associated reporting requirements become more complex, the need for a comprehensive case management and reporting system for an international office has become critical.

The purpose of this Special Studies Project was to implement Sunapsis, an international student and scholar case management system, for the office of International Student and Scholar Services at Emory University. Due to resource constraints, only the scholar population was included in this phase of implementation. The project required setting up an appropriate system architecture; creating a data feed from the institutional system; configuring batch and real-time interfaces with SEVIS; understanding and incorporating case management tools and electronic recordkeeping; and creating an electronic scholar request process for departments. Despite technical and contact-related delays, the project was ultimately successful in reaching its required objectives.

Sunapsis has allowed the ISSS office to better support the international scholar population at Rollins School of Public Health and other Public Health programs at Emory University. The success of the Sunapsis implementation at Emory University can be translated to other international offices at institutions with Schools of Public Health. While each office and institution is unique, regulatory and compliance requirements are consistent throughout the country. Schools of Public Health, and by turn the field as a whole, can benefit from an understanding of the system and its benefits to an office supporting a large international population.

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Thanks to my son, Caleb, for tolerating the missed bedtimes and stressed mama. I love you and I promise we'll spend more time playing trains now.

Finally, thanks and all my love to my husband, Zach, for giving me perspective, listening to me vent, and always believing in me. This would not have been completed without his support.

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Chapter 1: Introduction

Background

International education and collaboration are playing an increasingly significant role in higher education in the United States. The focus on a global perspective crosses the boundaries of discipline, and at many schools is inherent to the mission of the institution itself (Columbia University, n.d.; Duke University, n.d.; Emory University, n.d.; Georgetown University, n.d.; Yale University, n.d.). It is only natural that universities across the country are experiencing consistent growth in the numbers of international students and scholars coming to study, work, research, and in many cases, return home with new knowledge to enhance their communities.

Schools of Public Health are seeing the same trends in international engagement. This is likely a reflection of the values of the field as a whole: the vision of the American Public Health Association (APHA) is "A Healthy Global Society" (American Public Health Association, 2013), while the Society for Public Health Education (SoPHE) has a vision of "A healthy world through health education" (Society for Public Health Education, n.d.). To this end, Schools of Public Health in the United States have a vested interest in supporting international education and exchange.

The importance of a diverse education is included in the Council on Education for Public Health's (CEPH) accreditation requirements, which states that "The school shall demonstrate a commitment to diversity and shall evidence an ongoing practice of cultural competence in learning, research, and service practices" (Council on Education for Public

Health, 2013). The criteria includes a requirement for a written plan for promoting diversity within its faculty, staff and student body, as well as an overall focus on cultural competency. At the degree level, the MPH Core Competency Model includes diversity and culture as one of the interdisciplinary/cross-cutting components of an MPH program (Association of Schools of Public Health, 2006). Fostering that diversity is facilitated in part by international exchange and collaboration.

While an emphasis on student enrollment may seem natural for an educational institution, international scholars play an equally important role. Of the top ten institutions hosting international scholars in 2012, six have Schools of Public Health; one additional institution offers an MPH program, and another offers a joint Ph.D. program. These Schools of Public Health are ranked among the top 15 in the United States according to U.S. News and World Report (US News & World Report, 2011).

Table 1: Schools of Public Health at the leading international scholar host institutions

Institution	Scholar Population Rank	Scholar Population	SPH Rank
Harvard University	1	4,548	3
Stanford University	2	3,128	N/A
Columbia University	3	3,094	5
University of California, Berkeley	4	2,876	8
University of Michigan - Ann Arbor	5	2,792	4
University of California, Los Angeles	6	2,603	10
University of California, San Diego	7	2,356	*
Yale University	8	2,327	13
University of California, Davis	9	2,217	**
Massachusetts Institute of Technology	10	2,175	N/A

*Joint Public Health - Global Health doctoral program with San Diego State University
** MPH through Department of Public Health Sciences

Conversely, of the top ten Schools of Public Health for 2012, eight of them are among the top 30 institutions hosting international scholars (Institute of International Education, 2012a, 2012b, 2012c, 2012d; US News & World Report, 2011). The contributions of international faculty and staff increase the cultural competency and provide unique perspectives for students and colleagues alike.

Table 2: Scholar populations at the top ten U.S. Schools of Public Health

Institution	SPH Rank	Scholar Population Rank	Scholar Population
Johns Hopkins University	1	Unknown	Unknown
University of North Carolina - Chapel Hill	2	27	1,225
Harvard University	3	1	4,548
University of Michigan - Ann Arbor	4	5	2,792
Columbia University	5	3	3,094
Emory University	6	23	1,372
University of Washington	6	Unknown	Unknown
University of California, Berkeley	8	4	2,876
University of Minnesota - Twin Cities	8	18	1,596
University of California, Los Angeles	10	6	2,603

It is difficult to deny the benefits of an international student and scholar presence to a Public Health program. However, enabling these individuals to come to the United States and remain legally requires extensive support. This support is usually provided by an office of International Student and Scholar Services (ISSS). ISSS offices navigate the complex and often unclear regulations governing international students, scholars, and employees at institutes of higher education. International student and scholar (ISS) advisors in these offices are tasked with managing the international population, remaining abreast of all changes to rules and regulations, ensuring the compliance of both the individual and the institution, and reporting required information to the appropriate entity of the Federal government.

Problem Statement

After the terrorist attacks on September 11th, 2001 and the resultant passage of the USA PATRIOT Act, the ISSS office began to experience an increasingly heavy burden of reporting and compliance responsibilities (Danley, 2010; Rosser, Hermsen, Mamiseishvili, & Wood, 2006). In 2003, the Student and Exchange Visitor Information System (SEVIS) was launched as required by the PATRIOT Act (Danley, 2010; NAFSA, 2003; Sokol, 2010; United States Government Accountability Office, 2012; Wong, 2006). SEVIS instituted a host of new reporting requirements for institutions who enroll international students (those in F-1 immigration status) and/or host/employ exchange visitors (those in J-1 immigration status). This signaled a shift in the role of the ISSS advisor to one of enforcement (Rosser et al., 2006). SEVIS itself was an unfunded mandate, which left universities struggling to meet the burden of this new requirement without associated additional resources (Danley, 2010).

SEVIS reporting, however, is far from the only compliance concern of an international office. The past ten years have seen increasing scrutiny of every aspect of international education and employment (*e-CFR*, n.d.; Fialkowski, 2010; Hermansky, 2009, 2013; Hughes, Keller, & Hertz, 2010; Immigration and Customs Enforcement (ICE), 2013; Kalmykov, 2009, 2011; Klasko, 2013a, 2013b; NAFSA, 2007, 2008, 2009a, 2010a, 2010b, 2011). Schools must comply with and/or be knowledgeable of regulations set out by multiple government agencies, including (but not limited to): the Department of Homeland Security (DHS), which includes United States Citizenship and Immigration Service (USCIS), Immigrations and Customs Enforcement (ICE), and Customs and Border Protection (CBP); the Department of State (DOS); the Department of Labor

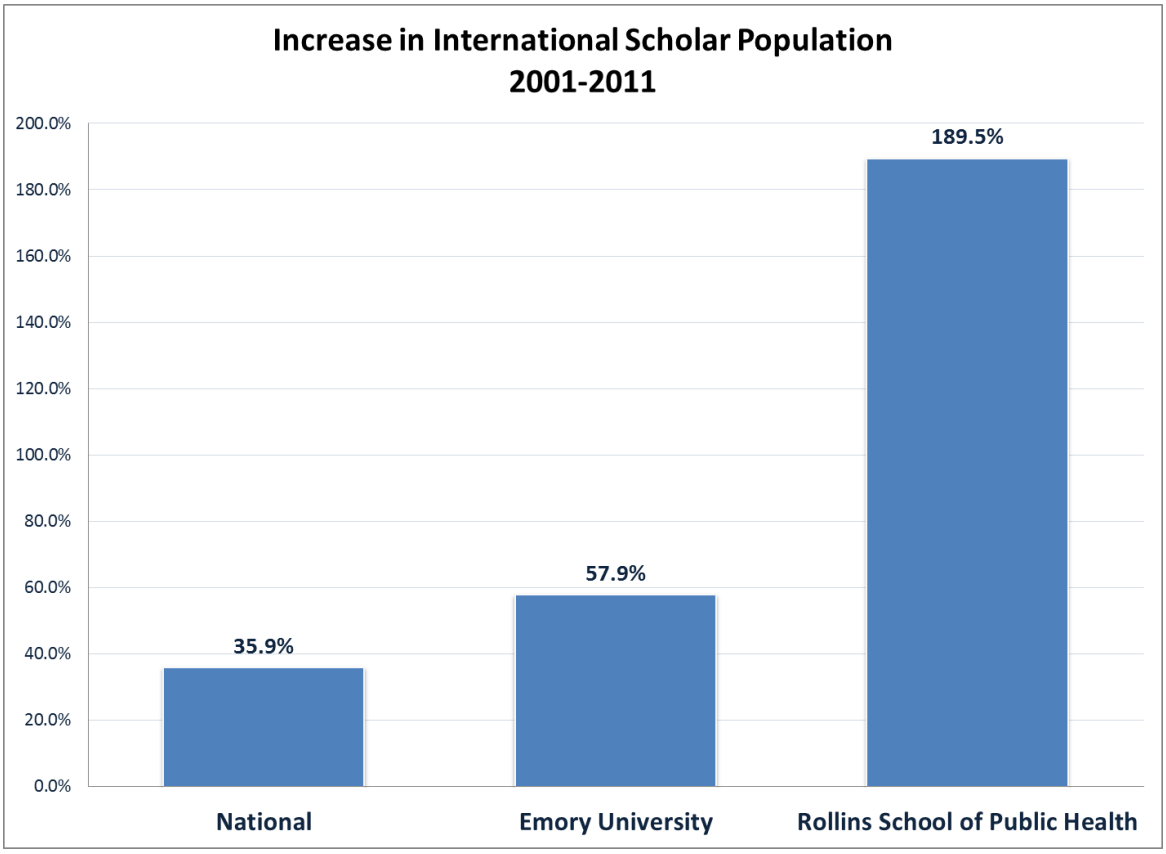
(DOL); the Department of Commerce (DOC); the Social Security Administration (SSA); plus any relevant state and local laws.

Even had the international population remained stagnant, the workload for an international office would have increased over the past ten years. However, despite increased obstacles and scrutiny, international students and scholars have continued to come to the U.S. at an ever-increasing rate. Between 2001 and 2011, the number of international students at U.S. institutions rose from 582,996 to 764,495 (Institute of International Education, 2012d), an increase of 31.1%. During the same time period, the number of international scholars grew from 86,015 to 116,917 (Institute of International Education, 2012a), an increase of 35.9%.

At Emory University, the growth in population is significantly more pronounced than on the national level. Between 2001 and 2011, the international student population at Emory increased by 165.1%; the increase for Rollins School of Public Health was even higher, at 178.9% . During the same time period, the number of scholars at Emory increased by 57.9%. Rollins School of Public Health saw an increase of 189.5%, far outpacing that of the University as a whole. International office staff, however, has not grown accordingly. As recently as 2007, the ratio of students/scholars to professional staff at Emory was 316:1. As of 2012, that number had increased to 408:1[1]. Advisors at Emory, as well as around the country, are being required to do more with fewer resources.

[1] There is no current industry standard student/scholar to advisor ratio. Differences in institutional populations and office responsibilities make it impossible to determine one standard that will fit all schools. A NAFSA forum post provided a baseline of 300:1 along with variables that would indicate a lower ideal ratio. (NAFSA, 2009b)

Figure 1: Increase in International Scholar Population - 2001-2011



Purpose Statement

The purpose of this project was to implement Sunapsis, an international student and scholar case management system, for the International Student and Scholar Services office at Emory University. The Special Studies Project (SSP) incorporates Phase I of the project; due to resource constraints, only the international scholar population was included in this phase.

Significance Statement

The significance of this project is in the Sunapsis system's ability to facilitate the work of the international office at Emory University. This work is critical to allowing

international students and scholars to remain in the United States, and to allow Emory as an institution to continue enrolling international students, hosting international scholars, and hiring international employees.

Remaining in compliance with immigration regulations is challenging even with a small population; Emory's international population is significant. Tools provided by the system would assist the international office in automating required reporting and drawing attention to potential problems *before* the scholar and/or the institution falls out of compliance.

What does this mean for the Rollins School of Public Health? As of the 2012/2013 reporting period, Rollins employs or hosts 63 international scholars from 25 different countries. They are engaged in teaching, research and service in nearly every department at Rollins.[2] Many more scholars are not hosted by Rollins but are at Emory making contributions to the field of Public Health through the Task Force for Global Health, the Global Health Institute, The Carter Center, and other organizations. Rollins also offers several fellowships that invite international students and scholars. These include the Muskie Graduate Fellowship; the Humphrey Fellowship; the HIV/AIDS and Tuberculosis (EITRP) training program, funded by the Fogarty Foundation; and the King Abdullah Fellowship.

Emory continues to exercise commitment to bringing international Public Health scholars to the United States; that commitment requires support from an international office. The successful implementation of an international student and scholar case management

[2] Due to privacy considerations, information that may allow an international scholar to be personally identified cannot be provided.

system will allow the office of International Student and Scholar Services to continue providing that support at an optimal level.

Definition of Terms

- DHS: Department of Homeland Security. Includes the following relevant entities:
    - ICE: Immigration and Customs Enforcement
        - SEVP: Student and Exchange Visitor Program
            - SEVIS: Student and Exchange Visitor Information System, houses records of F-1 students, J-1 exchange visitors, and their dependents
            - SEVIS RTI: real-time web-based SEVIS interface
            - Batch: SEVIS reporting via XML files containing multiple records
    - USCIS: United States Citizenship and Immigration Services
    - CBP: Customs and Border Protection
- DOS: Department of State, oversees the J-1 Exchange Visitor Program and designates (authorizes) host programs
- International Student: non-immigrant present in the United States for the primary purpose of study at a higher education institution. Generally refers to F-1 and J-1 Student immigration statuses.
- International Scholar: a non-immigrant at Emory in J-1, H-1B, O-1, or TN status whose primary purpose is not study and who is supported by the ISSS office. An

international scholar may be involved in teaching, research, observation, consulting, or any combination of these and other activities.

- ISSS: Office of International Student and Scholar Services
- PeopleSoft: Emory University's records management solution, configured in two separate systems
    - PSHR: the human resources (HR) records system
    - PSSA or OPUS: the student records system
- Reporting: providing required information regarding an international student or scholar and his/her actions to the Federal government. In an international office this is usually done via SEVIS, but may be requested by government entities through other avenues.

Chapter 2: Review of Literature

Introduction

For the five years prior to initiating this project, the ISSS office had used PeopleSoft for international student and scholar management and reporting. PeopleSoft, licensed by Oracle, houses Emory University's student and human resources records in two separate systems (PSSA for student records and PeopleSoft HR/PSHR for human resources). Each system includes a module for SEVIS reporting that provides basic SEVIS record-keeping and batch capabilities. In addition, internal PeopleSoft developers at Emory created a "bolt-on" module for PeopleSoft HR to allow the ISSS office to take online department-initiated scholar requests and create USCIS petitions.

Continued use of PeopleSoft HR was called into question in 2011, when Oracle stopped supporting SEVIS-related updates for the HR system. As a result, most future changes to the SEVIS system would not work with PeopleSoft HR. This included the introduction of new data elements, changes to the batch structure, etc. In addition, Oracle could not guarantee that future PeopleSoft updates would not "break" existing SEVIS functionality, thus jeopardizing Emory's ability to comply with Federal reporting requirements for its J-1 Exchange Visitor program. At this point, the decision was made to seek an alternative solution.

There are few products available in the marketplace that meet the requirements of a comprehensive reporting and case tracking system for an international office, particularly one that serves both international students and scholars. The options considered for the business case included remaining with PeopleSoft; purchasing an alternative software

product, with the two candidates being fsaATLAS and Sunapsis; and moving to a completely manual case management and reporting process.

Requirements

Solutions were measured against the following requirements:

- **SEVIS reporting:** Solution must enable accurate and timely SEVIS batch reporting for both student and scholar F and J populations (**required** for compliance with DHS regulations). Ideally, the selected solution would allow direct interaction with SEVIS RTI (Real Time Interface) via a browser embedded in the software. This would eliminate the need for double data-entry in cases where batching is not possible due to SEVIS limitations, time constraints, or system problems.
- **Data import and management:** Solution must allow import of personal, academic, and employment data from Emory's PeopleSoft systems, both for initial conversion and on an ongoing basis. The solution must accept data from multiple sources to reside in and report from a single system.
- **Case management:** Solution must provide comprehensive case management tools for student and scholar teams to ensure university and constituency compliance with Federal regulations. As part of the case management functionality, the system must be capable of generating forms necessary to file USCIS petitions. The system must also track changes and updates to an individual's file to build a historical record and provide an audit trail.

- **Additional reports:** Solution must support production of vendor-delivered as well as custom reports and statistics as needed for Federal reporting, University business, and other needs.
- **Internationalization:** Solution must support the internationalization principle of Emory's strategic plan (Emory University, 2009) by bringing international students and scholars to Emory and providing quality support for them during their stay.
- **Move to paperless office:** Solution must provide functionality to assist in reduction of paper use within the office; including e-forms, scanned document management, and email services.
- **Department request functionality:** Solution must be able to process online forms for departments at Emory to make requests to bring in an international scholar/employee.

Solutions Considered

PeopleSoft

Aside from the loss of vendor support, there were several other problems with the PeopleSoft system:

- **Case Management:** PeopleSoft provided extremely limited case management tools. The department request module that comprised the case management available to the scholar team was created internally; it provided basic functionality, such as creating PDFs for filing USCIS petitions and viewing a

general case history, but was not robust enough to meet office needs. For the student team, PeopleSoft offered no case management functions at all.

- **Reporting:** The ISSS office had no query writing access in the HR system, so any raw data needs required making a request directly to Human Resources. In addition, when data were provided they were not stored in the system in a way to enable efficient reporting. Query writing access was provided in the student system; however, having records for the international population stored in two separate databases made it difficult to create reports on populations including both students and scholars.
- **Support:** The SEVIS module is a very small part of the overall PeopleSoft system. Support for the module is not a high priority for Oracle. In the five years PeopleSoft was used by ISSS, the only updates made to the module were those necessary to remain in compliance with SEVIS requirements. No new functionality was added, nor were any upgrades announced.

In addition, to maintain compliance with changing Federal requirements and office needs, continual development and support of the internally created bolt-on module would be required by Emory developers. It was inefficient to continue allocating university-wide development resources to a module used by relatively few end-users.

These issues, combined with the loss of SEVIS support and need for additional product features, made the PeopleSoft system a nonviable option for the ISSS office.

Manual case management and reporting

Due to the size of Emory University's international population, this option was not considered feasible for the ISSS office. A manual process would not be manageable based on staffing levels.

fsaATLAS

fsaATLAS was the industry standard at the time of the original review in 2011. It was licensed by SunGard Higher Education as a standalone product, although it was closely integrated with Banner, SunGard's student information system. It held the largest market share at the time; the vendor stated that more than 300 institutions utilized the product, including most of the institutions with the largest student and scholar populations. Its functionality was fairly comprehensive: it included the necessary SEVIS batch reporting; institutional data feed capability and single-system data storage; case management tools; powerful and flexible additional reporting tools; and paperless document storage.

However, while fsaATLAS provided most of the requirements for an international office management system, much of its functionality in those areas was limited. For example, the program was able to interface directly with SEVIS RTI; however, only a small number of tasks could be completed from within fsaATLAS. The rest would have required double data entry to keep the information updated in fsaATLAS. fsaATLAS also lacked the required department request toolset. Filling this gap would have required a separate solution; this would likely incur an additional cost, and the two systems would need to interface in some way to maintain data integrity.

In addition, the cost of fsaATLAS was relatively high. The price quoted was $45,000 for the initial license fee, $21,600 for implementation, and $6,750 for the first year of maintenance. Maintenance would increase yearly by up to 10%. This did not include any equipment costs.

fsaATLAS met nearly all of the specified requirements with the exception of the department request function. Had it been the only alternate system available, the ISSS office would likely have chosen it over remaining with PeopleSoft or moving to a manual process. However, as there was a more robust option available that met all the requirements, and at a lower cost, fsaATLAS was ruled out.

Sunapsis

Sunapsis's unique benefit was that it was developed by the International Office at Indiana University. Created for internal use in 2005 by a single developer within the office, it was licensed to its first external client in late 2007 (sunapsis International Office Module, n.d.). The team expanded to three developers by late 2008. At the time of product review, the Sunapsis team continued to maintain a close relationship with the IU international office. This gave them the unique perspective of understanding the needs and inner workings of an international office, as well as constant first-hand exposure to changes in the field that might require an update to the software. As of early 2011, it was licensed by Indiana University to more than 20 institutions, including the University of Pennsylvania, Penn State, and Georgia Institute of Technology.

Sunapsis met all of the requirements identified for the ISSS office at Emory University. It provided SEVIS batch reporting with an embedded RTI browser; institutional data feed

capability and single-system data storage; comprehensive case management; the ability to create both delivered and custom reports; and paperless office support.

Despite having a somewhat more desirable feature set, Sunapsis's total cost was lower than fsaATLAS. Two payment options were offered. The first required payment of the full license fee of $51,000 up front and $10,000 in annual maintenance for each following year. The second required signing a five-year initial contract, but allowed the licensing fee to be spread over the first five years. The result would be a payment of $18,300/year for the first five years, followed by the same $10,000 annual maintenance fee from year six onward.

While researching the product, we visited Georgia Institute of Technology's international office to review their implementation of Sunapsis. We also held conference calls with two other institutions to get feedback about the product and the vendor. Some concerns were noted regarding available documentation and slow vendor response time, but the overall opinion of the product was favorable among all institutions consulted.

After a review of the marketplace, Sunapsis was identified as the best solution for Emory University's ISSS office.

Table 3: Feature Comparison of International Case Management Systems

Requirement	PeopleSoft	fsaATLAS	Sunapsis
SEVIS Reporting	○	◎	●
Data Import and Management	N/A	●	●
Case Management	◎	●	●
Additional Reporting	◎	●	●
Internationalization	●	●	●
Paperless Office	○	◎	●
Online Department Requests	◎	○	●

● - Requirement fully supported
◎ - Requirement partially supported
○ - Requirement not supported or supported with unacceptable risk

Chapter 3: Methodology

Introduction

The first step in obtaining approval for this project was to draft and present a business case (see appendices for project documentation). Once the business case was finalized, we proceeded through the Emory IT governance process. Since the project would require resources from both the HR (human resources) and SA (student affairs) PeopleSoft teams, the business case was presented separately to the HR and SA governance committees in February 2012. It was approved by HR governance, but tabled by SA governance to revisit in March.

At this point, the decision was made to proceed to the IT Steering Committee (ITSC) with the HR portion of the project only. As the PeopleSoft HR system was the primary point of concern as far as SEVIS batch reporting, it was considered preferable to implement the two populations separately if necessary. The ITSC approved the first phase of the project – the HR portion – for immediate release. Approval for the second phase – the student portion – was delayed until the SA governance committee reviewed the proposal again. Graydon Kirk was assigned by the Emory Project Management Office (PMO) as the project manager. This student served a hybrid role of business analyst, customer, subject matter expert, tier one technical support, system administrator, and budget manager.

Methodology

The project officially launched on March 1st, 2012 with an initial go-live date of August 10th, 2012. Due to the accelerated timeline, the decision was made at the beginning to crash (compress) the project schedule and proceed using a waterfall methodology. We assembled a project team with representatives from key organizations within Emory as well as a steering committee. The project team met weekly throughout the project, with more frequent meetings when required; the steering committee met infrequently, but generally on a bimonthly basis.

Objectives and associated requirements were defined as follows:

- **System architecture:** Implement appropriately configured test and production infrastructures (servers, databases, backup facilities, etc.) for the Sunapsis application.
- **Data feed:** Build an initial foundation database from cleansed and converted PeopleSoft HR data, and create a daily inbound data feed from PSHR to Sunapsis.
- **SEVIS interface/reporting:** Enable accurate and timely SEVIS reporting, via both batch processing and the web-based real-time interface (RTI), for J scholar population (**required** for compliance with ICE and DOS regulations).
- **Case management:** Provide comprehensive case management tools to assist in ensuring University and constituency compliance with Federal regulations and ease workload on ISSS staff.

- **Department request functionality:** Provide online e-forms for departments to make requests to bring in an international scholar/employee; replicates existing functionality in the PeopleSoft bolt-on module and includes additional features.
- **Paperless processes:** Begin move towards a paperless office by using Sunapsis tools such as e-forms, scanned document management, and email services/logging
- **Reporting:** Support production of delivered as well as custom reports and statistics as needed for Federal reporting, University business, and other needs.

Due to the compressed timeline, most of the requirements were addressed simultaneously.

System Architecture

Platform

The standard Sunapsis system is comprised of three main components:

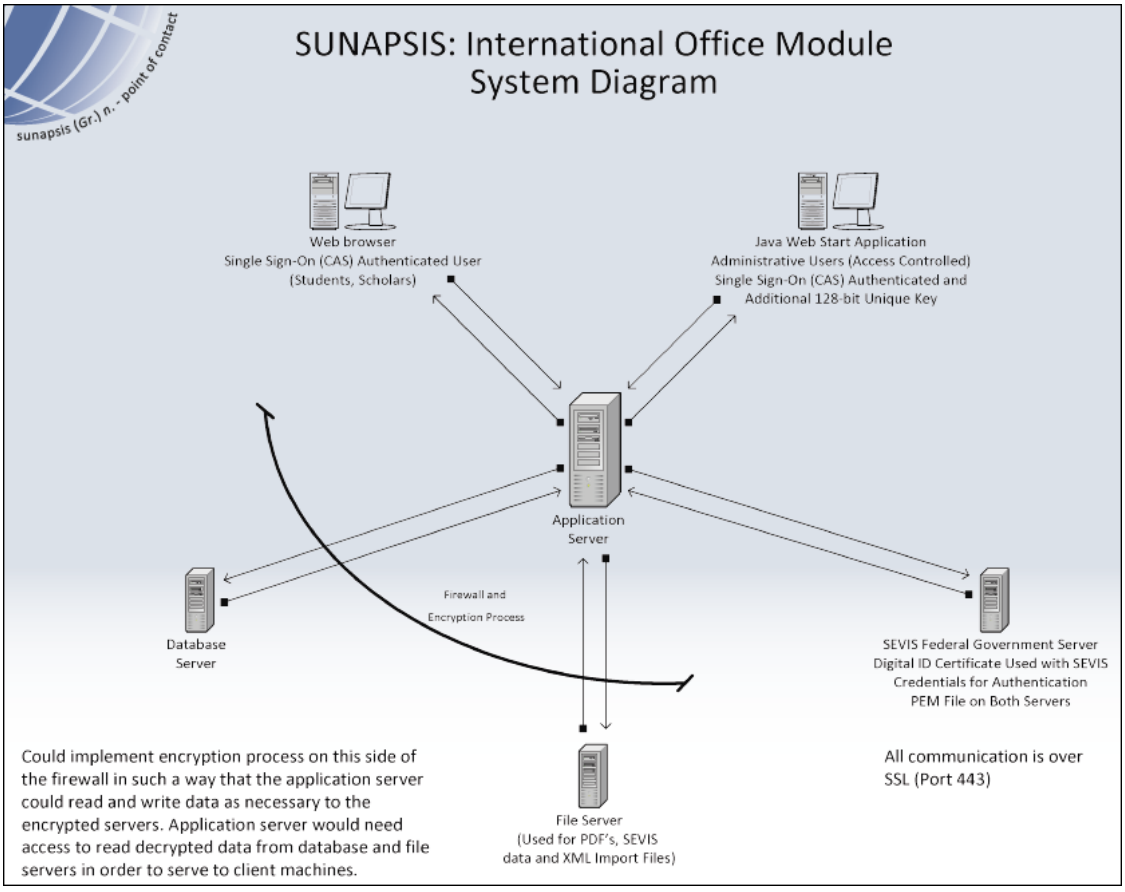
- Application server – hosts the three interfaces to the Sunapsis system:
    - Sunapsis application – a Java and Cold Fusion-based user-facing application to be used by the ISSS office staff. The Java application houses the vast majority of the Sunapsis functionality.
    - Administrative (admin) interface – web-accessible start page from which the ISSS staff launches the Java application. It also offers access to additional information, such as user documentation.
    - Client interface – referred to as ISSS Link, this is a web-accessible start page to be used by University departments and international scholars.

Departments use this interface to submit requests to host/employ international scholars. Scholars use the interface to complete required e-forms and view information about their record as well as correspondence from the ISSS office.

- Database server
- File server (can be bundled with the application server)

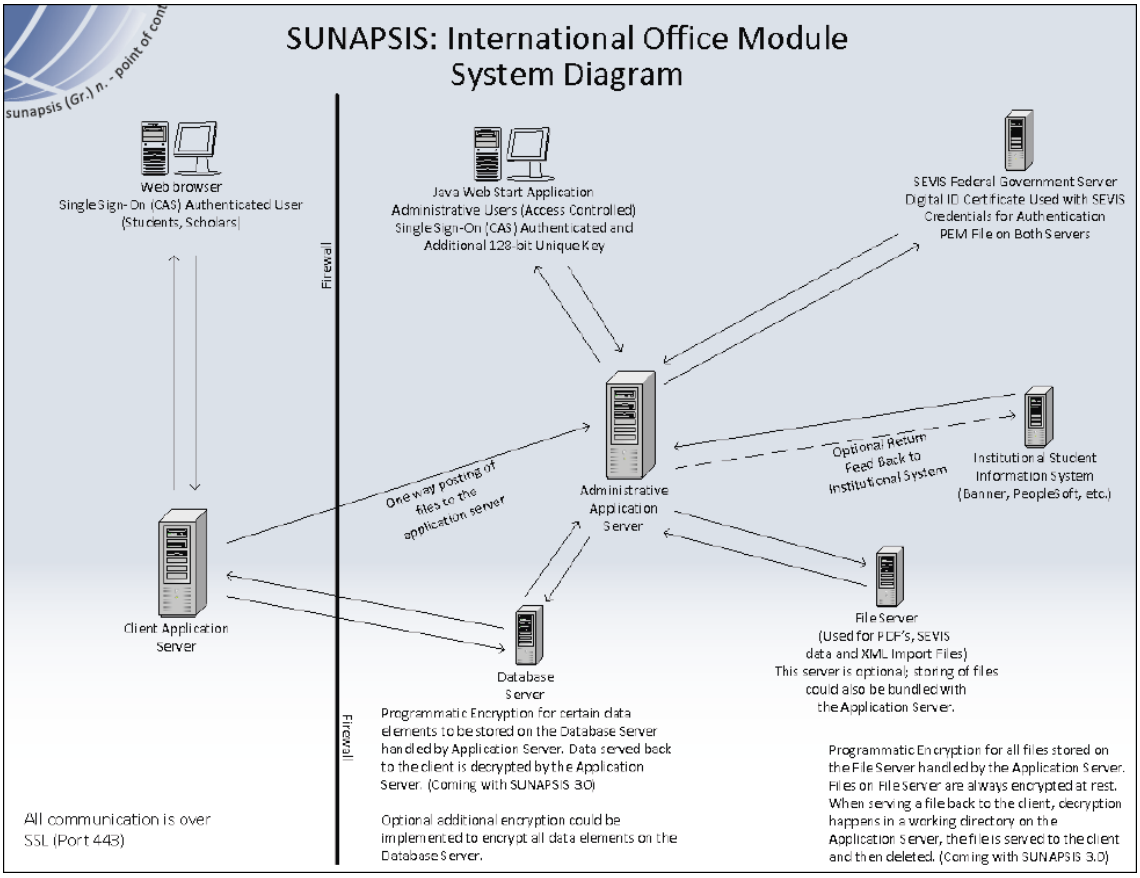
The standard configuration suggested by the vendor was comprised of a single application server hosting both the admin and client interfaces, to which the end users connect directly, and a database server and file server sitting behind the firewall (see Figure 2: Single Server Model).

Figure 2: Single Server Model



This configuration was presented at the first ART (Architecture Review Team) review in early March. However, the architecture review determined that the standard configuration presented a security risk in that it left the application server exposed. After discussion with the vendor, the team opted for a configuration that split the client interface and admin interface onto two different servers. This configuration placed the bulk of the system behind the firewall, with only the client application server exposed (see Figure 3: Two Server Model).

Figure 3: Two Server Model



The decision was also made to house the file server on the administrative application server. The final configuration consisted of separate development and production

environments, each requiring three servers (client, admin, and database) running on VMs (virtual machines). This configuration was approved after a second ART review in May.

Once the architecture specifications were finalized and hardware configured for the development environment, the OIT (Office of Information Technology) technical team began the initial installation of the Sunapsis application.

Authentication

At this time, we encountered a significant delay in the project. User access to Sunapsis is controlled via the Emory University single sign-on solution, powered by Shibboleth. Users log in with their Emory ID and password. The only regular users who can access the system without an Emory login are incoming scholars who do not yet have an Emory NETID; they are issued a temporary login and PIN to use. Second approvers are also issued a temporary login and password, but the login only allows access to the specific form that created it and expires once the form has been completed.

While Shibboleth was already being used in other applications across Emory University, the Sunapsis project was the first time the Emory team had installed Shibboleth on a Windows-based server. We encountered several difficulties that required consultation with other teams at Emory as well as the Sunapsis vendor. This resulted in a delay of more than a month, and the development environment was not turned over until early August. Once the development environment was available, we completed the system setup, including assigning user roles, configuring SEVIS batch and RTI integration, and

loading translate tables. Due to the delay with Shibboleth, the go-live date was postponed to November 2nd[3].

Data Feed

Two separate data feeds were required for this project. The conversion data feed would be run once at the beginning of system implementation to complete the initial data load and bring over one-time data from the legacy system. A list of employee ID numbers (EMPLIDs) was provided to the PeopleSoft HR tech team to identify the records to be included in the conversion feed.

In addition to the standard HR data, we also included in the conversion feed all records from the tables related to the custom ISSS bolt-on module. These records were pulled into custom tables created in Sunapsis to hold the legacy data. Because the bolt-on module was created to accept department requests, and each scholar may have more than one request entered on his/her behalf, many records had multiple rows coming from the ISSS module tables.

The daily data feed is run nightly and dropped onto the Sunapsis administrative server via automated secure FTP (file transfer protocol) from the PeopleSoft HR system. Information from the feed is compared to data already in Sunapsis and used to alert the ISSS office to significant changes in an international scholar's status. Examples include address updates, which must be reported to SEVIS for those in J-1 status, and changes to

[3] Go-live had already been postponed from 8/10 to 9/21 due to delays with contracts and other internal concerns.

employment conditions, which may require filing amended petitions with USCIS or may not be permitted at all due to limitations of the scholar's immigration status.

The population to be included in the daily feed was defined as any employee meeting the following criteria:

- USA citizenship status of Alien Temporary
- Company of EUV (Emory University, to exclude hospital-only employees)
- Any visa/permit status except F-1 (to exclude student employees)

Data fields from PeopleSoft were mapped to the equivalent Sunapsis fields based on the xsd schema provided by the vendor. Most record types in the schema were not relevant to the scholar population and therefore were not required in the data feed. Identification of the required record types and detailed schemas for each are provided in the appendices.

Once the required data fields were identified, the Peoplesoft team drafted the functional and technical specifications document with input from the ISSS office. This document was used to create the final data feed.

SEVIS Reporting

Communication with SEVIS (Student and Exchange Visitor Information System) is a critical component of Sunapsis. One of the key reasons for approval of the Sunapsis project was the decision by Oracle to stop supporting SEVIS in PeopleSoft HR, ISSS's previous solution. Failure to report information as required in SEVIS carries penalties up

to and including the revocation of Emory University's authorization to host J-1 exchange visitors.

SEVIS reporting can be done using both batch processing and the SEVIS RTI (real-time interface). Batching is generally used for updates to multiple records at a time and/or updates that require review by the ISSS office but are triggered by a change coming from the data feed. A change to a scholar's U.S. addresses is an example of an update that would be processed via batch. The Sunapsis system creates these batch events based on information from the PeopleSoft data feed and places them into a holding queue for review by the international office. Once each event is reviewed and cleared, it is added to an outgoing batch file. Batch files are sent nightly to SEVIS via secure FTP and are returned each morning and fed into the system.

Unlike batch processing, which has an overnight delay, updates made via the SEVIS web-based RTI are saved immediately in SEVIS itself. However, these updates were not captured simultaneously in PeopleSoft. Any updates made in SEVIS RTI had to be manually back-entered into PeopleSoft, requiring a great deal of double data entry. An ISS advisor had to weigh the benefits of making an immediate update to a SEVIS record with the drawbacks of tracking and recording information multiple times and the associated risk of records falling out of sync between PeopleSoft and SEVIS.

In Sunapsis, the SEVIS RTI interface is housed in an embedded browser within the application. Each record is linked via SEVIS ID to its counterpart in Sunapsis. As long as they are done through the embedded browser, all actions taken on a record in SEVIS RTI are automatically captured and recorded in a scholar's Sunapsis record. This saves a

significant amount of time for advisors and benefits scholars by allowing their records to be updated quickly and new immigration forms to be generated as needed, rather than waiting overnight or longer for a batch to be processed and returned.

Once the development system was available, we tested it in the SEVIS beta environment by creating and updating multiple records. Both batch processing and the embedded RTI browser worked extremely well. The only issue we encountered was with security related to opening the correct ports to allow batch files to be sent and returned via FTP; otherwise very little troubleshooting was required.

Case Management

The framework for case management was created in three parts:

- E-Forms (incorporated the department request functionality requirement)
- Alerts
- Case Tracker

E-Forms

We created several e-forms to be in place at go-live. These included all forms necessary for department to make requests to host/employ J-1 and H-1B scholars. These e-forms replaced the department request function in the PeopleSoft custom module. In addition, we created forms for departments to report changes in employment conditions and a form for J-1 scholars to submit updated evidence of health insurance. These reports had previously been done manually or not at all.

E-forms in Sunapsis provide many options beyond simply submitting information. Key functions we utilized at the time of go-live are:

- **Second approvers:** E-forms can be split into two parts. The first part is completed by the individual initiating the form, such as a department administrator. At the time of submission, the individual identifies a "second approver" – a person who must review the form, provide additional information (if required), and approve the submission. For the purpose of department requests, the second approver was generally a scholar's supervisor.
- **Emails:** An e-form can be configured to send emails based on actions taken on the form. These emails can be automated – i.e., an email to a user confirming form submission – or manual – i.e., a template email to be customized by an advisor requesting additional information or clarification of something on the form.
- **Document upload:** Documents can be accepted via e-form in JPG or PDF format. When the form is configured, the document upload fields are mapped to a document type in a client's record. Upon form submission, the document is correctly filed for future reference and can be accessed via the Sunapsis application.
- **Alerts:** An alert (see below for further information) can be triggered by an e-form to notify ISSS users of a required action. This may include notification of a form submitted for processing, alert to a form that has been waiting for a second approver's completion for a specific amount of time, etc.

- **Templates:** Templates are predefined mappings of data elements and/or values to fields in an individual's record. When a template as created, a value can be set to a default or pulled from an e-form or another field in the record. We used templates to move information from e-forms that were submitted to the related fields in a scholar's record, as well as to create the required PDF documents for filing a USCIS petition.

Alerts

Alerts are generated to notify the ISSS office of items in a scholar's record that require attention. Alerts appear in a tree and are categorized by severity; the longer an alert is pending, the higher it will rise in severity level.

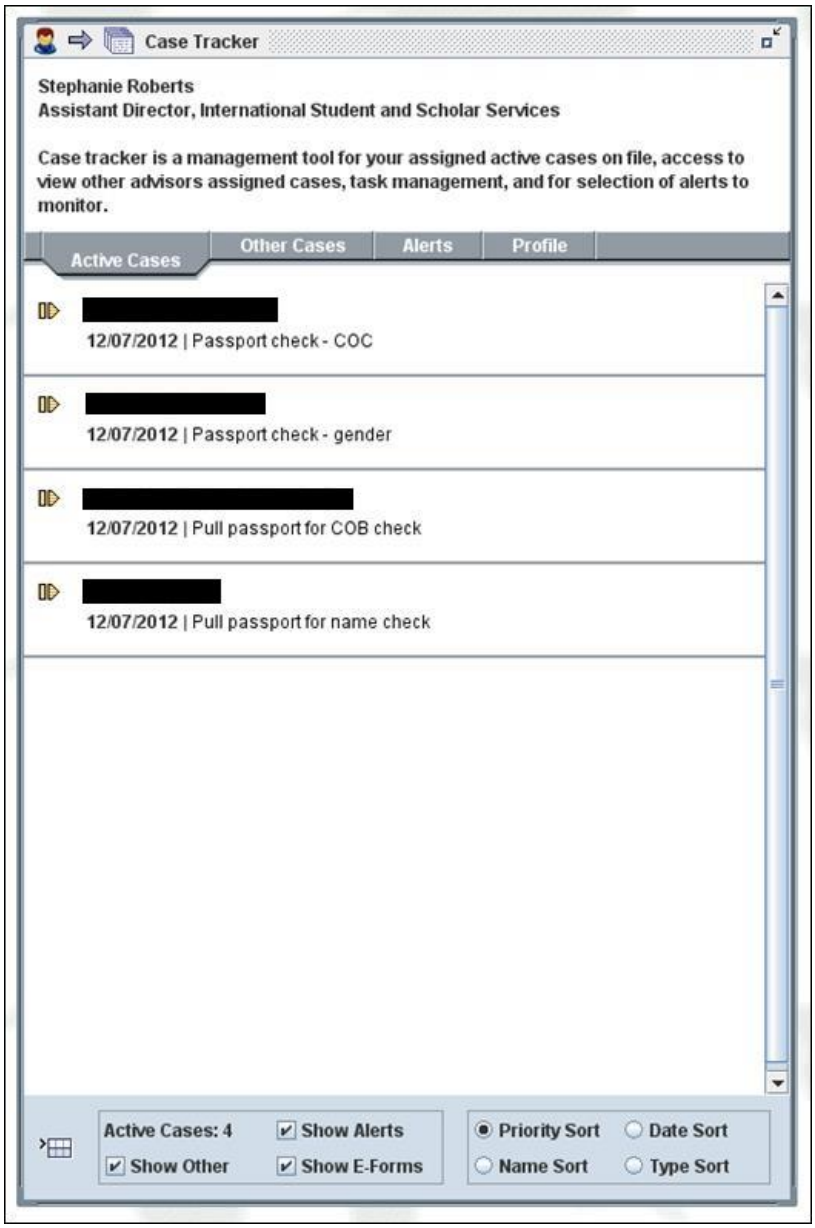
In order to facilitate ease of use for the ISSS staff, we created three alert groups. The first, to be used by the system administrator, included all alerts. The second, to be used by international scholar advisors, included all alerts related to scholars for which the advisor may need to take action. The third, to be used by support staff, included all alerts related to a department request. Using alert groups ensures that system users are not overwhelmed by information they have no need for and thus miss information they *do* need (see Figure 4: Alert Tree Comparisons).

Figure 4: Alert Tree Comparisons

Case Tracker

Upon logging in to Sunapsis, users are taken automatically to an individualized case tracker (see Figure 5: Case Tracker). The case tracker displays information about cases that are assigned to that user, as well as allowing a user to view cases assigned to others and alerts that have been directed to him or her.

Figure 5: Case Tracker



Initially, the case tracker was used primarily for support staff to assign requests submitted by departments to a particular scholar advisor. Once users grew comfortable with the system, the case tracker housed cases advisors had been assigned (or assigned to themselves) for follow-up. The case tracker essentially replaced passing around a paper file.

Department Request Functionality

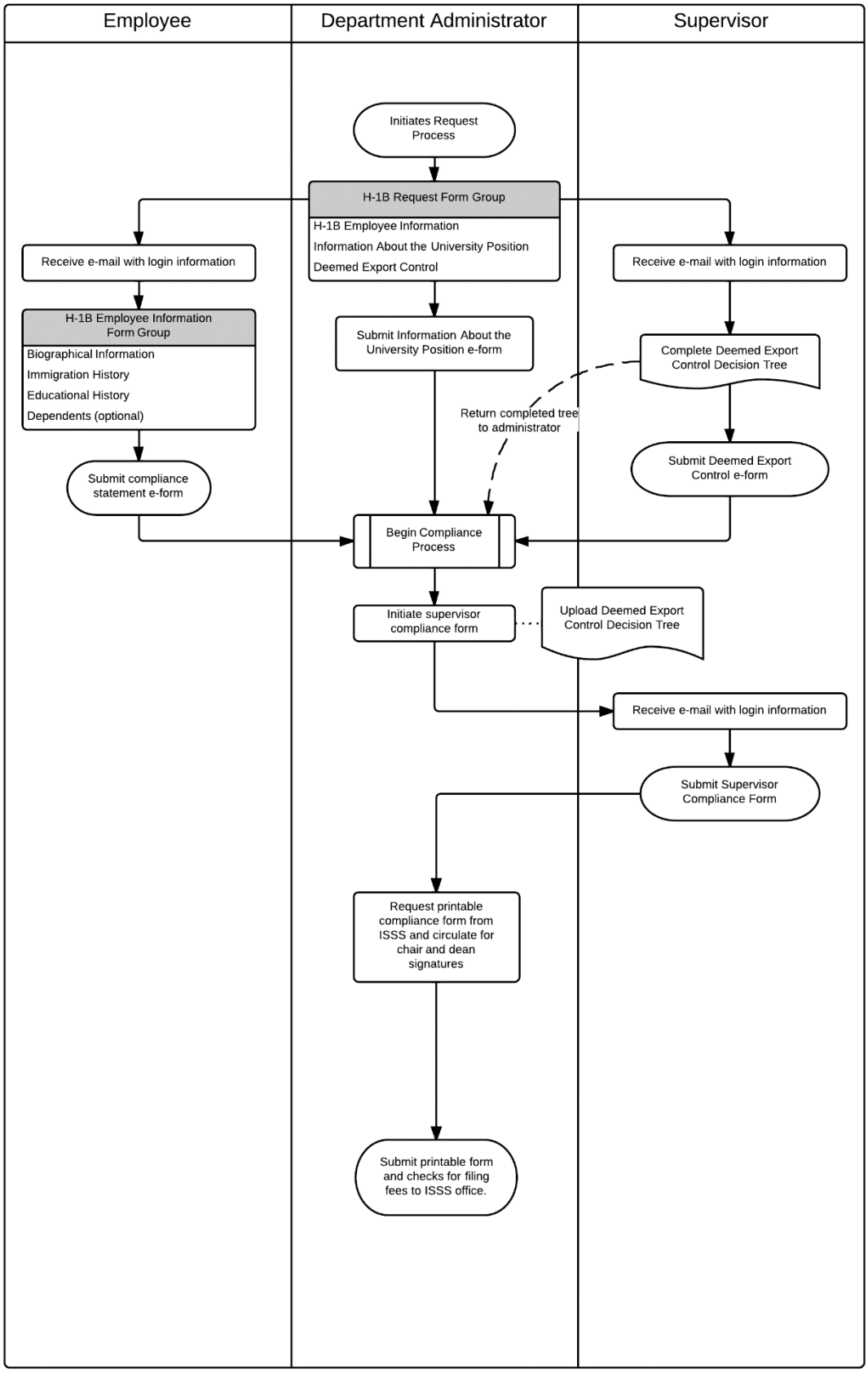
The department request functionality in Sunapsis was a significant departure from the previous PeopleSoft-based solution in several ways. Under the PeopleSoft framework, everything was submitted by the department administrator who initiated the request. Only one form was used for all requests and thus frequently included information that was not required for a particular request type. Department administrators were responsible for contacting scholars, gathering documents and information, and ensuring everything was entered correctly into the system. Supporting documentation had to be submitted in paper format and passed to the ISSS office, along with a compliance form that had been printed and signed by the supervisor, Chair of the department, and Dean (in some Emory schools).

In Sunapsis, requests are submitted through multiple e-form groups. Each request type has its own set of forms, and conditional logic is used to further customize requested information based on answers to previous questions. With the exception of the Chair and Dean's signatures on a compliance form, all documentation is submitted electronically. Scholars are required to submit their own information and documents; this engages the scholar in the process and requires them to take responsibility for things that, due to

technology limitations, had previously been left in the hands of the department. This new process required revising existing workflows both for department users and within the ISSS office (see Figure 6: H-1B Request Workflow for an example of a department request workflow).

We had initially planned for the entire request process to be electronic; however, at the time Sunapsis did not support routing e-forms to multiple approvers. This required that we retain a paper compliance form for the last two signatures. Since we did not have the internal capability to develop the paper forms ourselves, we contracted with a Cold Fusion developer to create the forms. While this was an unexpected expense, it was covered by the contingency built into the project budget and did not cause us to run over budget.

Figure 6: H-1B Request Workflow



Paperless Processing

Sunapsis supports the move toward a paperless office in several ways. First, the utilization of e-forms replaces the requirement for paper forms. Second, supporting documentation can be submitted and stored electronically rather than in a paper file. Finally, paper files no longer need to be passed around the office when action is needed; cases can be managed within the Sunapsis system.

Due to time and financial constraints, it was not possible to scan all of the existing paper files into the system. However, after go-live all work on a file was done electronically and paper files were scanned in as they were pulled for action or reference. All scholar records that were created after go-live are entirely electronic; no paper files are created for new scholars.

Reports

Sunapsis included several canned reports that were available at go-live, including lists of H-1B or J-1 scholars that could be filtered by department, country of citizenship, profile status, etc. We also created several custom reports to be used as needed for identifying data that needed to be corrected after conversion.

Go-Live

The Sunapsis system was originally scheduled to go live on August 6th, 2012. Due to technical and other delays, go-live was delayed multiple times resulting in a final go-live date of December 7th, 2012. The system launch was a week-long process for which the vendor was present.

The first two days were scheduled to be dedicated to the initial data load and screen scraping. We began by loading a SEVIS ID-to-EMPLID translate value table to provide the baseline population definition. After the data were loaded and verified, the screen-scraping process was started. As there is no way to directly extract information from SEVIS, this was the only way to bring SEVIS data into the system. The software combed through every page of each active and initial SEVIS record through the RTI interface and loaded the data into Sunapsis over a span of several hours. Using the screen scraping ensured that that data in Sunapsis matched what was in the SEVIS record.

Once the SEVIS data were in Sunapsis and verified, we did the conversion data load. SEVIS is considered the system of record by the Department of Homeland Security; doing the data load after screen scraping ensured that all the initial data in the system reflected what was in SEVIS. Any changes that were loaded from Peoplesoft, then, generated alerts in Sunapsis for our review. Even if the Peoplesoft value was ultimately correct, it would need to be reviewed and reported to SEVIS.

The second two days of the site visit were scheduled for user training. The vendor provided hands-on training to the ISSS scholar team on the primary functions they would be using in Sunapsis, and then opened the floor to allow the ISSS staff to ask individual questions or request demonstrations. We also conducted initial internal training on processes specific to the ISSS office.

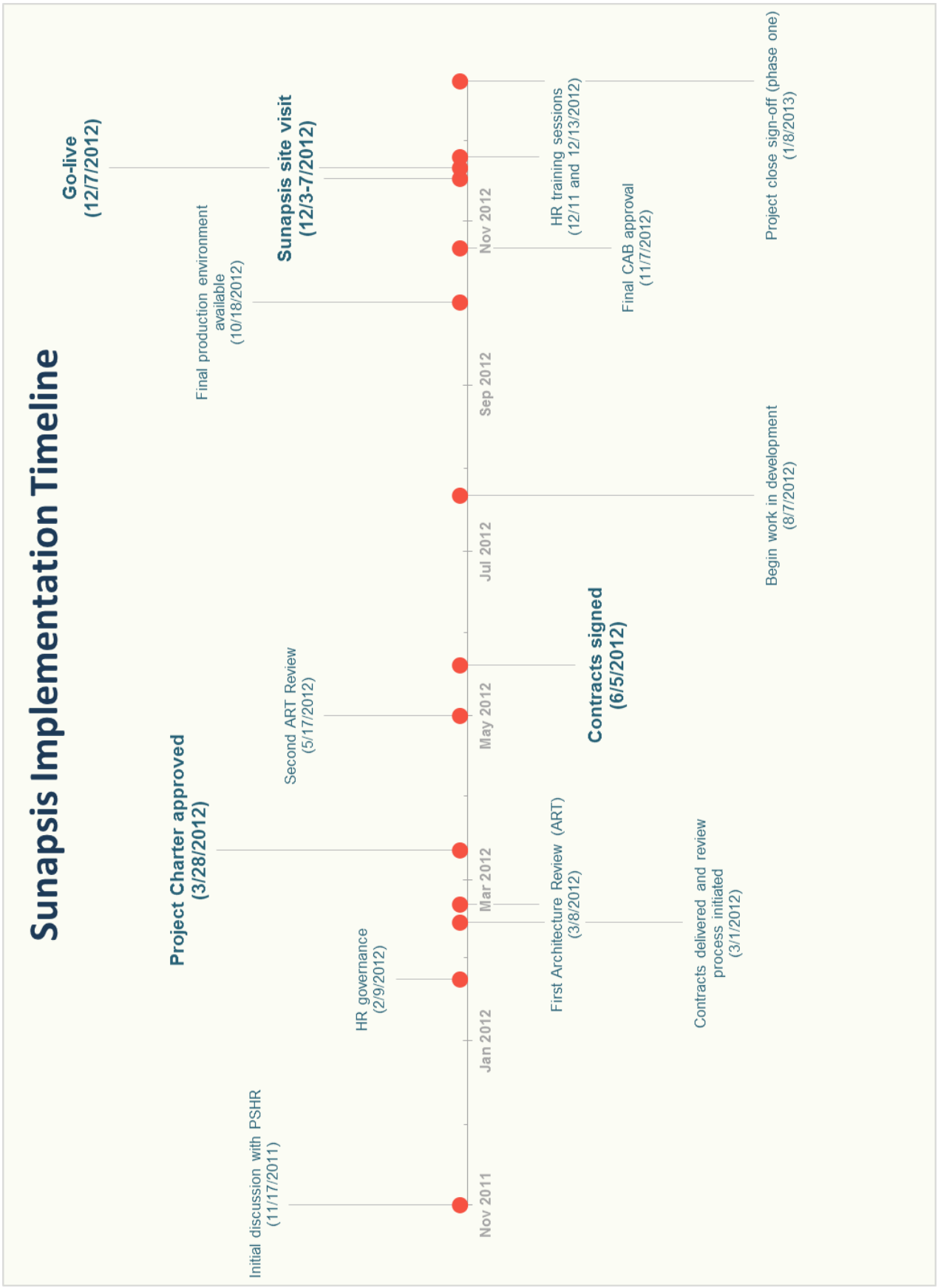
On the final day of the site visit, the schedule called for the users to begin working in Sunapsis and for the vendor to be present to assist where needed. However, during the previous two days, we had become aware of an issue with the data conversion that had

not occurred in development. To save time, the import script brought records in through a threaded process. This worked well in development; when reviewing records in production, though, we found that records were being skipped. Therefore, the final day of the site visit was spent troubleshooting the data feed. The issue was resolved late that night by changing the import from a threaded process to a sequential process, and the system was cleared to go live (see Figure 7: Sunapsis Implementation Timeline).

User training and documentation

Once Sunapsis was live internally, we instituted training for our department users on the new department request process. We held two in-person training events the week after Sunapsis was launched. If a user was unable to attend one of these sessions, or simply preferred to learn the information on his/her own, a detailed presentation was made available for download. All department users were required to undergo training and pass a brief quiz in Blackboard to ensure a basic level of understanding of the request process. As new users request access to ISSS Link, they must complete the online training and pass the quiz before access will be granted.

Figure 7: Sunapsis Implementation Timeline



Limitations

Implementing only the scholar portion of the system was the primary limitation on the Sunapsis project. This was imposed due to resource constraints. In addition, certain limitations were inherent in the Sunapsis system and the environment in which it was implemented. These included fixed alert triggers and data structures, desired e-form functions that were not available, limitations on the number of positions per individual that could be included in the data feed, and the institutional requirement to use Shibboleth as the authentication system.

Chapter 4: Results

Introduction

Sunapsis was launched at Emory University on December 7th, 2012, and has been in use since that time. All of the objectives set forth for the project were met. We have not developed a quantitative measure of increased efficiency and better workflow, but reports from advisors, departments, and scholars suggest satisfaction with the new system and a belief that our office processes have improved.

Description of Outcome

System Architecture

Despite some performance issues, the split server model that was chosen for Emory has proved a good balance between accessibility and security. ISSS office users who need to access Sunapsis from off campus and/or outside the admin core are required to connect via VPN, but this has not been problematic. External users (departments and scholars) can access ISSS Link from anywhere. This was particularly important for our scholar population, as many of them are logging into ISSS Link from overseas, sometimes from locations where websites can be blocked or filtered. While Shibboleth authentication posed significant challenges during implementation, it has worked well since go-live. Emory users with NETIDs have not experienced problems logging on to Sunapsis as long as the correct permissions were configured.

We have frequently experienced somewhat sluggish system performance, particularly on the client server. The technical team has not been able to isolate a single cause; sufficient

resources are available on both servers and performance tuning has been completed. The slowness may be related to splitting the application between servers in a way that, although supported by the vendor, was outside the original system design. It may also be due to inefficiencies in coding and the system design itself. The slow performance is not enough to seriously affect system utilization.

Data Feed

The data feed has run smoothly since implementation. No significant issues have been experienced and no modifications have been required to date.

SEVIS Interface/Reporting

The SEVIS integration was the smoothest part of the implementation process and has functioned almost flawlessly since go-live. Based on experience with previous systems, we were prepared for extensive troubleshooting. With SEVIS reporting at the heart of Sunapsis, though, most potential issues had already been anticipated and addressed by the Sunapsis development team. Any problems with SEVIS that we have experienced have been related to the SEVIS system itself.

The RTI embedded browser has proven to be one of the best features of Sunapsis for our advisors. Under PeopleSoft, keeping records in sync between the institution and SEVIS was a cumbersome, error-prone process. Using batch, which allowed information to be entered into PeopleSoft and sent to SEVIS, advisors were required to make the update, wait overnight for alerts to run, review the alerts, then wait overnight again for the records to be sent to SEVIS and processed and a new form returned (if needed). The alerts themselves were difficult to manage and the interface could be confusing.

In addition, not all SEVIS-reportable events can be batched. Any updates that were made through RTI, whether for the sake of time or due to SEVIS limitations, had to be manually back-entered into PeopleSoft. Using the RTI browser has made SEVIS reporting both easier and more accurate. Updates can be made in one place and are captured in both systems.

Batch functionality is still used, but not for the primary purpose of keeping records in sync. The only scholar events that are regularly batched are address updates. These come over in the data feed and are grouped together for quick review and approval; this is more efficient than opening each SEVIS record and updating the addresses individually. Any update to a record that SEVIS allows via batch is supported by Sunapsis, so the option is available to adjust our business processes later if necessary.

Only one SEVIS update has been released by SEVP since go-live (NAFSA, n.d.). This release did not require any changes to Sunapsis; therefore, we have not seen first-hand how well Sunapsis would handle major changes to the SEVIS system. SEVP does put updates into its beta environment for testing well before they are implemented in production, and historically Sunapsis has been actively engaged in that process.

Case Management/Paperless Recordkeeping

The benefits of the Sunapsis case management tools center around better access to information, workflow enhancements, and improved compliance support. For the first time, ISSS is able to maintain a comprehensive electronic record for each international scholar. An electronic file by nature increases efficiency if well implemented and we have seen this reflected in our office. It is easier to share information (both internally and

outside the office), keep records and correspondence together, and maintain a history of actions taken to a record that can be analyzed or audited if necessary. Electronic records also eliminate some of the access problems related to paper files; we no longer have to search for missing files, retrieve keys to find a file locked in someone's desk (required by Emory security policy), or pass stacks of paper files between offices. One of our advisors has physical limitations, so not having to retrieve paper files throughout the day has been particularly beneficial to her.

Beyond simply having an electronic record, we are receiving information that was not previously available or would require an unreasonable amount of time to review and process. The information comes from e-forms and the data feed (reflected through the alerts).

E-Forms

We currently have several active e-forms in addition to the department request forms (which will be addressed below). These include forms to report:

- **Changes to employment conditions** (transfer, promotion, etc.): In order to ensure compliance with USCIS and Department of Labor regulations, departments are required to report any changes in employment conditions to our office **in advance** to ensure that the change is permissible and no new petition/form is required. Prior to Sunapsis, we used paper forms to collect this information.
- **J-1 insurance updates**: J-1 exchange visitors are required to maintain health insurance at all times during their exchange program. While Emory is not

required to verify insurance, regulations do require that we make the exchange visitor aware of the requirement and terminate their exchange program if we learn that they do not hold valid insurance. We provide an e-form for J-1s to submit their insurance information to our office to be saved in their record. This allows us to be proactive in supporting our exchange visitors in meeting the insurance requirement; Sunapsis monitors the end date submitted through the e-form and sends a notification email to the exchange visitor when their insurance is near expiration.

- **Notification of reportable events for J-1s**: E-forms are available for departments to notify us if an exchange visitor is ending his/her program, will be out of the country for an extended period, and to request permission to participate in an occasional lecture/consultation. All of these events must be reported in SEVIS. Capturing the information electronically lets us transfer the information directly into SEVIS and keep a detailed record of the request.

Creating a basic e-form is simple and the integration of vendor-delivered form actions, automated emails, and alert triggers is well implemented. The e-form creation screens, however, are one of the primary places we experience the system slowness mentioned earlier. This can be frustrating when trying to create and test forms. Customizing the form's appearance can also be challenging. The tool includes a WYSIWYG ("What You See Is What You Get") editor which does not always accurately reflect how the form will display. We also have the option to edit the HTML, but this is for the individual fields only. We are limited to inline CSS to format the form overall.

It is possible to edit forms at the code level, including adding scripts and custom extensions. While we currently do not have the technical resources to do this, it is an option that we plan to explore further at a later time.

Alerts

The alerts in Sunapsis have been critical to improving our compliance with Federal rules and regulations. Sunapsis uses information gathered from the data feed, e-forms, and manual record updates, as well as a time-sensitive review of the scholar's program, to create alerts. We are able to use this information both proactively (i.e., notifying a scholar that his/her program will be ending soon) and reactively (i.e., receiving HR information about a promotion or transfer that was not cleared with our office first). The alerts also make it easy to keep data clean by notifying us of missing information, required updates, and discrepancies within the record (such as a mismatch between the immigration status in the data feed and the one already in the electronic file).

While the alert tree seemed overwhelming at first, it has been fairly simple to use. By creating alert groups, we eliminated the "information overload" and only showed users the information they needed. The alerts themselves have generally been accurate; when errors have occurred, they are usually alerts triggering when they are not needed as opposed to missing alerts. In the future, we would like to take advantage of the ability to customize existing alerts and create new ones. Sunapsis does support custom alerts, but does not provide tools for their creation and we have not had the required tech resources to create the ColdFusion scripts that drive the alerts.

Case Tracker

Advisors have found the case tracker helpful in managing active cases and routing files through the office. It has not been associated with increased efficiency, but it has replaced old methods of managing files as we move from paper to electronic records. The case tracker can be customized in several ways, so each advisor has developed his/her own uses for its various features. We have not experienced any difficulties with the case tracker itself.

Department Request Functionality

Feedback from departments has been positive overall. Most users appreciate the convenience of the electronic submission process and having scholars submit their own information, although some department administrators have expressed frustration at not being able to view all information submitted by a scholar (despite not needing access to that information). We have experienced occasional difficulty with second approvers accessing e-forms; these difficulties can usually be traced to an incorrect email address, email being misdirected and/or caught in a spam filter, and forms being cancelled after submission by the department administrator but before being completed by the second approver.

At the time of go-live, active department users of our PeopleSoft module numbered 115. Of these, 69 (60%) completed the initial in-person training offered the week after go-live. An additional four completed the online Blackboard training; a total of 73 (63%) users passed the quiz and were granted access to Sunapsis shortly after go-live. As of June 30, 2013, 103 department users had access to Sunapsis, including 30 new or re-

activated users. Department users who have previously submitted requests through PeopleSoft but have not participated in the Blackboard training are required to do so in order to submit a request in Sunapsis. Requiring users to pass a quiz before granting access to ISSS Link has been helpful in ensuring understanding of the system and reducing the time spent providing technical support. We also developed a detailed user guide that is sent to international scholars along with the email requesting that they login to complete their portion of a request.

Other Findings

Support Challenges

Vendor support has continued to be a source of frustration since go-live. Sunapsis is essentially a homegrown system; this was and continues to be part of its appeal, as the developers are still in touch with the needs of an international office and can direct future development efforts accordingly. However, it has also proven to be a drawback in that support and resources have not kept pace with the growth of the client base. Sunapsis has more than doubled its number of clients over the past year; yet until March of 2013, there was no formal support structure in place and no business manager in the office. Everything was done by the developers. It was not unusual to take more than a week to get a question answered or a problem resolved; in one case, we waited over a month for a resolution. System documentation was strong in some areas, but spotty and sometimes out of date in others.

Sunapsis added two support people and a business manager in March. This has led to some improvement in response time and organization, but not much improvement on

overall resolution time; all questions now need to pass through tier one support who are new to the product and may not have the knowledge to answer a question that could be addressed quickly by a developer. Promised documentation has also not materialized due to overwhelming demand for support from over 50 total clients.

The growing client base, though, has brought a more active user community. Sunapsis holds an annual users conference; this year, for the first time, sessions were presented by other schools in addition to those presented by the Sunapsis team itself. Sunapsis is putting into place tools to allow the user community to share information and resources, including forms and other tools that can be downloaded into Sunapsis and modified to fit an individual school's needs. The community has an associated listserv and a defined process for reporting bugs and feature requests. While the user community cannot take the place of better vendor support, it does help in filling the gap.

Version 3.0

Sunapsis released version 3.0 in June of 2013. The upgrade from 2.7.4 was incorporated into the second phase of our implementation, which also brought in our student population, and is outside the scope of this special studies project. However, it is important to note that improvements and changes in the new version have been highly beneficial to the scholar team. Most significantly, we have been able to make our department request processes completely electronic by using a new feature that allows chaining of e-forms. We have therefore been able to entirely eliminate circulation and storage of paper documents from scholar records. The ISSS office has a goal of becoming a paperless environment, and this is a significant milestone in that effort.

Summary

Sunapsis implementation in the ISSS office has brought overall improvement to workflow, reporting capabilities, and overall efficiency. While not without its challenges, the project as a whole can be considered a success.

Chapter 5: Conclusion and Implications

Conclusion

The purpose of this project was to implement the Sunapsis system in the Office of International Student and Scholar Services (ISSS) to manage the international scholar population at Emory University. This required setting up an appropriate system architecture; creating a data feed from the institutional system; configuring batch and real-time interfaces with SEVIS; understanding and incorporating case management tools and electronic recordkeeping; and creating an electronic scholar request process for departments. Despite technical and contact-related delays, the project was ultimately successful in reaching its required objectives.

Since launching Sunapsis, the ISSS office has seen improvements in workflow and efficiency, benefited from electronic record-keeping, and been able to take a more proactive approach to maintaining compliance with Federal regulations. Additional enhancements were introduced with the upgrade to Sunapsis 3.0 in June 2013. In the year since Sunapsis launched, international scholars have been active in every department at Rollins, as well as at the Global Health Institute, the Carter Center, the Center for Comprehensive Informatics, the Emory AIDS International Research and Training program, and the Emory Vaccine Center. By supporting the ISSS office, Sunapsis has been of benefit to the international scholar population at Rollins School of Public Health and other Public Health programs at Emory University.

Implications

The growth of the international population at U.S. educational institutions shows no signs of slowing down. This is particularly true for institutions with Schools of Public Health and Public Health-related programs, where the importance of international collaboration is well-recognized within the field. The combination of greater raw numbers and ever-changing regulatory requirements places an increasing burden on the offices that support international students and scholars. Institutions are looking for ways to manage their populations and support growth while maintaining compliance with Federal rules and regulations.

The success of the Sunapsis implementation at Emory University can be translated to other international offices at institutions with Schools of Public Health. While each office and institution is unique, regulatory and compliance requirements are consistent throughout the country. At the time of this writing, Sunapsis is still the best option for reporting and case management for international students and scholars. Schools of Public Health, and by turn the field as a whole, can benefit from an understanding of the system and how it fits into an international office supporting a large international population.

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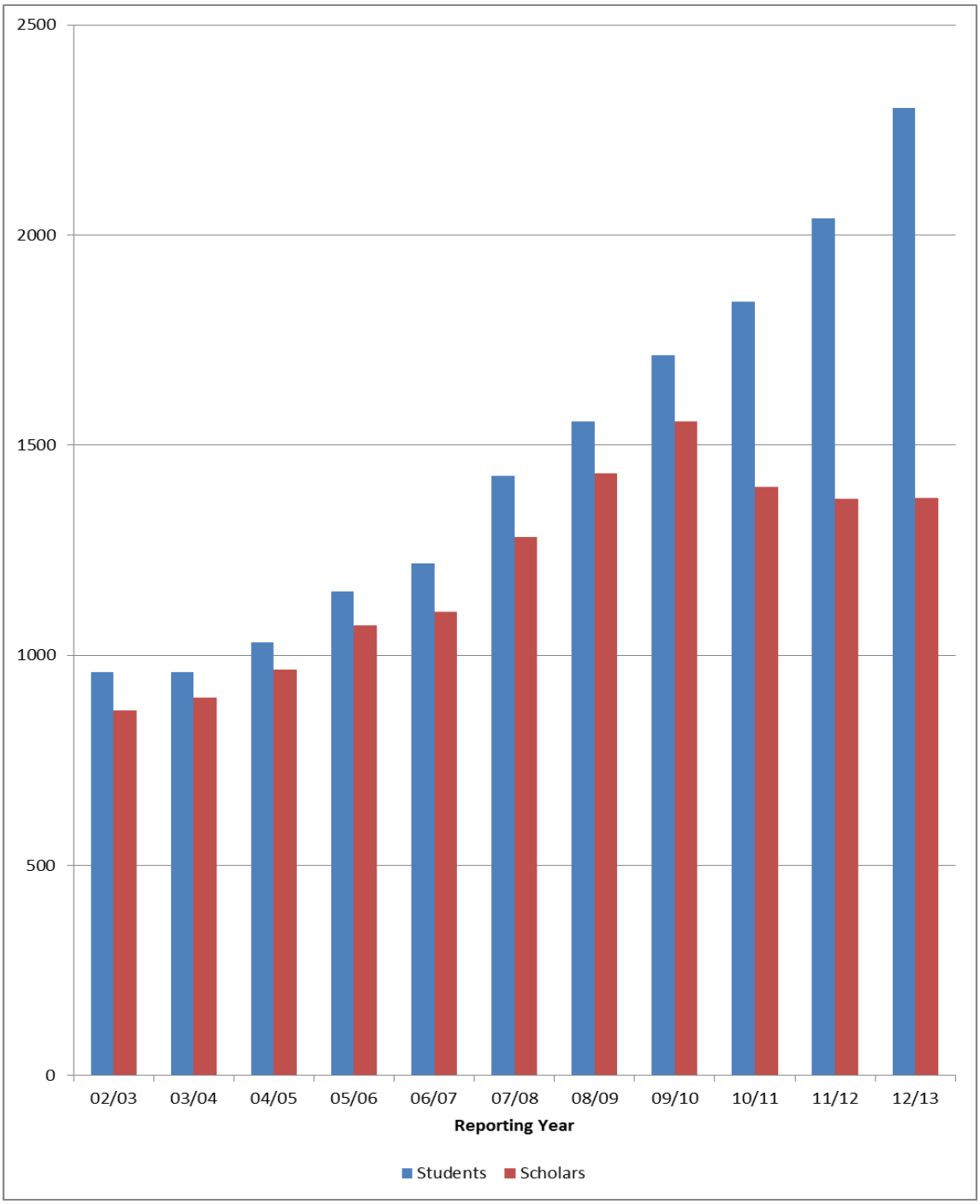
Appendices

A. International Population at Emory University: 2002/03 – 2012/03



B. Project Documentation

Business Case

Business Case

EMORY UNIVERSITY EMORY HEALTHCARE | Office of Information Technology

Project Name:	Project Number:	Date Submitted:
Sunapsis Implementation	279	1/27/2012
Customer/s Affected:	**Requestor:**	**Prepared by:**
International Student and Scholar Services (8 professional staff, 4 support staff); DSOs outside ISSS (4); Department representatives from all schools/divisions (approx. 75); PS SA and PS HR team representatives (relative to project load related to ISSS)	Stephanie Roberts Assistant Director, International Student and Scholar Services (ISSS)	Stephanie Roberts

INTRODUCTION

All projects that require more than 10 person days of effort OR have an estimated budget greater than $20,000 must begin with a business case. This document is not the final description of customer requirements nor the final budget quote. A business case is a high-level description that aids governance bodies, advisory councils, and/or OIT leadership in approving and prioritizing work.

OVERVIEW

DESCRIPTION (what you want to do)	*Describe what the project will accomplish; highlight the overall business goal or purpose.*

ISSS currently uses PeopleSoft to manage international student and scholar information. This includes government-mandated reporting as well as case management. We are seeking to transition to the Sunapsis international office management system.

JUSTIFICATION (why you want to do it)	*State the problem, issue, or opportunity to be resolved or created by this project*

The most immediate concern is that Oracle has discontinued support SEVIS updates for PeopleSoft HR. As a result, most significant changes to the SEVIS system will not work with PeopleSoft HR. This includes the introduction of new data elements, changes to the batch structure, etc. In addition, Oracle cannot guarantee that future PeopleSoft updates will not break existing SEVIS functionality. This jeopardizes our ability to comply with Federal reporting requirements for our J-1 Exchange Visitor program. While reporting can be done via SEVIS Real Time Interface (RTI), this is not a feasible long-term solution due to the size of Emory's international scholar population.

Sunapsis will provide full SEVIS reporting compliance as well as reduce workload for ISSS staff with an embedded browser allowing simultaneous data entry into Sunapsis and SEVIS RTI. The Sunapsis system was designed specifically for international offices and is ideally suited to support such an office. It was created within the international office at Indiana University and continues to be developed, licensed, and supported by individuals who have day-to-day involvement with that office. Since the product is still used by Indiana University as well as more than 20 additional institutions, they are committed to providing timely updates in response to changes in SEVIS and USCIS. These updates, as well as support related to the product, are included in the annual maintenance fee.

Another significant concern is that poor case management functionality in our existing software suite increases the time necessary and margin of error for regulatory compliance, resulting in significantly increased workload for the ISSS staff. PeopleSoft SA has no case management functions. PeopleSoft HR has a custom case management module that is a bolt on to the system. It provides basic case management, but is not robust enough to meet the needs of our office. Sunapsis provides a complete case management toolset for both student and scholar populations. It monitors cases and alerts advisors to necessary actions and potential problems. This is particularly important for scholar services in light of increasingly complex Federal regulations and potential audits. It also has many additional features to streamline workflow, increase efficiency, and improve communications.

Finally, the ISSS office has significant regulatory and other reporting requirements on behalf of Emory University. Information is not stored in PeopleSoft in a way that enables efficient and accurate reporting. We have no query access in PeopleSoft HR; any raw data needs require making a request to the HR technical team. In addition, student and scholar information is housed in two separate systems. This makes it difficult to create reports on both student and scholar populations. Sunapsis provides robust reporting capabilities, including canned versions of reports that we currently need

Business Case

EMORY UNIVERSITY | EMORY HEALTHCARE | Office of Information Technology

to create manually.	
GOALS & OBJECTIVES	*Describe the business outcomes, highlighting how they support business needs.*
Business Goal/Objective	**Description**
SEVIS reporting	Enable accurate and timely SEVIS batch reporting for both student and scholar F and J populations (**required** for compliance with DHS ICE regulations)
Case management	Provide comprehensive case management tools for student and scholar teams to ensure university and constituency compliance with Federal regulations.
Additional reporting	Support production of canned as well as custom reports and statistics as needed for Federal reporting, University business, and other needs.
Internationalization	Support the internationalization component of Emory's strategic plan by bringing international students and scholars to Emory and providing quality support for them during their stay.
Move to paperless office	Provide functionality to assist in reduction of paper use within the office, including e-forms, scanned document management, and email services.
Department request function	Provide online forms for departments to make requests to bring in an international scholar/employee; replicates existing functionality in the PeopleSoft bolt-on module and includes additional features.
PERFORMANCE MEASURES	*Describe performance measures to gauge what will constitute project success in key process or service areas.*
Key Process/Service	**Performance Measures**
SEVIS integration	Successful batching of XML files to and from the SEVIS system; successful implementation of integrated SEVIS RTI browser.
Case management	Increased efficiency in monitoring immigration records; better communication between ISSS advisors as well as department administrators, students, and scholars; ease of access to case files
Data conversion	Successful conversion of existing data into Sunapsis, with less than 20% of data needing to be entered manually
Reporting functions	50% reduction in time needed to produce standard and custom reports, such as the annual IIE Open Doors reports.

DELIVERABLES	*At a high level, describe the product/s, process/es, or service/s this project will produce*
Description	**Beneficiaries**
Embedded SEVIS RTI browser	ISSS staff; F and J students and scholars
Full SEVIS batch compliance	ISSS staff; F and J students and scholars
Case management tools (case tracker, etc.)	ISSS staff, international students and scholars; departmental administrators and exchange visitor hosts
Online services and e-forms	ISSS staff, international students and scholars; departmental administrators and exchange visitor hosts
Email services	ISSS staff, international students and scholars; departmental administrators and exchange visitor hosts
Reports and online graphs	ISSS staff; any who request statistics/information from the ISSS office
Scheduling functions	ISSS staff; F and J students and scholars; departmental administrators and exchange visitor hosts
Departmental request function	ISSS staff; departmental administrators and exchange visitor hosts; Emory PeopleSoft HR development team
ASSUMPTIONS	*List the assumptions regarding OIT products/services affected by the proposal. Assumptions are believed to be true(70-80% accuracy) and the project will be managed accordingly.*

- OIT will be able to extract existing data on international students and scholars from PeopleSoft for import into Sunapsis
- OIT will be able to work with Sunapsis developers to create a data feed for ongoing import of relevant PeopleSoft

Business Case

EMORY UNIVERSITY EMORY HEALTHCARE | Office of Information Technology

data into Sunapsis
- Two environments will be created on VM's – Development and Production.
- This will not be an Enterprise Application supported by UTS.

CONSTRAINTS	*List the limitations or constraints regarding OIT products/services affected by the proposal. Constraints are absolutely true(100% accuracy) and cannot be changed by the project. They generally concern technology, budget issues, schedule, or business processes.*

- Sunapsis runs on Cold Fusion which is no longer supported by the UTS Systems group. However, application development and support will be provided by the vendor as part of the maintenance contract.
- UTS will need to set up the database and application servers

DURATION	*Estimate (plus/minus 50%) the duration of the proposal.*

4 months

RESOURCE REQUIREMENTS *Estimate (plus/minus 50%) the level of effort.*

Roles for Project Time & Maintenance	OIT Hours	Non-OIT Hours
Project Manager	120	0
Database Administrators	20	0
HR Developer / Testing	160	50
SA Developer / Testing	200	80
System Administration	240	0
Customer / Non-OIT Resources	0	400
Total Hours =	**740**	**530**

OIT Hours

Ongoing maintenance and support demand estimate at 160 hours per year.

Non-OIT Hours

Ongoing maintenance and support demand estimate at current hours per year.

COST *Estimate (plus/minus 50%) the cost of the proposal. Include description of how costs were obtained.*

Item	One-time	On-going / Annual
Hardware	$6265	$6265
Software (option exists to spread initial cost over five year period at $18,300/year)	$51,500	$10,000
Software: SQL Server (license)	$ 600	$0
Software: ColdFusion (license)	$2,300	$0
Training	$0	$0
Consultant Services	$0	$0
Total Costs =	**$ 60,665**	**$16,265**

EXPECTED FUNDING *If funding has been set aside for this project, please indicate the source(s).*

ISSS departmental (non-OIT) budget

ALTERNATIVES	*Describe alternative options, including the option of not implementing the project at all and at least one alternative. State the reasons for not selecting each alternative.*
Alternative Option	**Reason for Not Selecting Alternative**
Status Quo	Emory University will lose the ability to batch J-1 scholar information to SEVIS, making compliance with Federal regulations extremely difficult. In addition, poor case management functionality increases the workload for the ISSS staff to a point that will soon become untenable. SEVIS is no longer being supported by Oracle for HR. The effort to customize a solution will be large and not have the flexibility and functionality of Sunapsys.
Additional OIT development/support	Requires significant OIT resources; no international office experience at the developer level.

Business Case

EMORY UNIVERSITY EMORY HEALTHCARE | Office of Information Technology

Sungard - fsaATLAS	fsaATLAS does not provide the same level of case management, paperless integration, and commitment to support as Sunapsis. Sunapsis was developed by an international office, and as such is far better suited to the needs of such an office.

INITIAL RISK CONSIDERATION	*Identify initial risks and rate them for their probability of occurring and their impact if they occur. Risks are things that may occur, and require active management to mitigate their impact. Risks can be negative threats or positive opportunities*	
Description	**Probability** (High / Med / Low)	**Impact** (High / Med / Low)
Difficulty converting data from PeopleSoft to Sunapsis	Low	High
Difficulty developing data feed from PeopleSoft to Sunapsis	Low	High

The following individuals provided input and/or a review of this Business Case:

- Paul Barrett
- Marisa Benson
- Stephanie Roberts
- Kaven Moodley

By signing the Business Case you are in agreement with the preliminary estimates for duration, scope, anticipated costs, and the project analysis as described herein. All signatories to this agreement acknowledge that actual costs and duration will be different from the preliminary estimate.

NAME	SIGNATURE	DATE
Dana Haggas		
Stephanie Roberts		

Project Charter

EMORY | UTS University Technology Services

UTS Project Management Office
Project Charter

PROJECT CHARTER – ISSS SUNAPSIS – PSHR IMPLEMENTATION – FINAL+1

Project Name:	Project Number:	Prepared by: (Project Manager)	Date:
Sunapsis Implementation	279	Graydon Kirk	3/20/12
Customer:	**Business Unit:**	**Contact Name:**	**Project Type:**
Emory Enterprise (International Student and Scholar Services (8 professional staff, 4 support staff); DSOs outside ISSS (4); Department representatives from all schools/divisions (approx. 75); PS HR team representatives (relative to project load related to ISSS)	International Student and Scholar Services (ISSS)	Stephanie Roberts	☐Mini ☒ Standard ☐Complex

PSSA cannot participate in this project at this time. Given this high audit/risk critical strategic mission implementation, senior management decided to proceed with only the PSHR portion of the solution. The PSSA component will be implemented via a separate, future project.

SUMMARY OF YOUR COMMITMENT	The Project Charter is the document of record used to gain initial agreement and start the planning process by describing the project in detail and is used as input into the project plan. When you sign this document, you become a "sponsor" by virtue of your commitment of time, money, and people to the project. The people who work on the project are "team members" and commit themselves to produce certain work products, or deliverables; additionally a Project Manager who will make every effort to guide the project to a successful conclusion is named. By signing this document, you agree to proceed with the project and to donate your time, money, people, and continued support as long as the parameters of the project do not substantially change. As planning progresses, you are free to back out of the project and/or refuse to sign additional documents.

PRELIMINARY SCOPE STATEMENT	*Describe the project and the characteristics of the product, service or process to be created. A more detailed project scope statement which describes, in detail, the project's deliverables, work required, and scope exclusions will be created in the project's Planning Phase.*

The Sunapsis International Office Module product will replace international student and scholar information currently managed using PeopleSoft HR bolt-on Case Management functionality. This includes SEVIS (Student and Exchange Visitor Information System), the critical reporting requirement Federally mandated by the Department of Homeland Security. Additional reporting, including annual DOS and IIE reports and internal Emory reporting, will be supported from the new database as well.

PROJECT JUSTIFICATION	*State the problem, issue, or opportunity this project addresses. Describe the project's impact on UTS products/services and its benefit to Emory (both tangible and intangible).*

Oracle has discontinued support of the SEVIS updates for PeopleSoft HR. As a result, most significant changes to the SEVIS batch system will not work with PeopleSoft HR. This jeopardizes our ability to comply with increasingly complex Federal regulations for the scholars on our J-1 Exchange Visitor Program.

Tangible benefits for Emory include the minimization of risks associated with SEVIS tracking of international students and scholars and Emory reporting and planning requirements. Also, benefits will accrue to current and prospective international students and scholars via a reliable, specifically designed application which includes Case Management. The international-ization component of Emory's strategic plan will be operationally supported by the Sunapsis implementation.

At the appropriate time, UTS will decommission the SEVIS and Case Management functionality in the PSHR bolt-on module.

The Sunapsis infrastructure (servers, operating systems and databases) will be supported by UTS. UTS will also support the interface from PSHR.

Sunapsis was developed by the Indiana University International Services Office. The functionality offered directly correlates to the requirements of ISSS. Comparable Sunapsis customers include Georgia Tech, Penn State, the University of Pennsylvania plus several other higher education institutions.

OBJECTIVE/S	*State the purpose of the project and how it relates to strategic themes, goals and objectives.*

- Implement an appropriately configured QA & PROD[uction] infrastructure (servers, databases, backup facilities, etc) for the Sunapsis application.
- Build a foundation ISSS database from cleansed and converted PSHR data. An inbound interface from PSHR will occur on an ongoing basis. There may be periodic updates/downloads from the SEVIS System. This database is the "bedrock" of ISSS operations.
- Automated reporting capabilities will support the SEVIS and USCIS (U.S. Citizenship and Immigration Services) regulatory

audit trail requirements and meet the internal reporting requirements of Emory University.

- SEVIS will enable accurate and timely batch reporting for both student and scholar F and J populations (**required** for compliance with DHS ICE [U.S. Immigration and Customs Enforcement] regulations)
- Case Management tools provide comprehensive data tracking, alerts, etc for student and scholar ISSS teams so they can ensure University and constituency compliance with Federal regulations.
- Sunapsis capabilities will ease the workload on the ISSS staff.
- ISSS staff will perform process improvement assessments to implement enhancements congruent with regulations, Emory policy and ISSS operating requirements. Sunapsis functionality will be an integral part of these improvements.
- Moving to a paperless office will assist in reduction of paper use within the office; including e-forms, scanned document management, and email services.
- The existing functionality in the PeopleSoft HR bolt-on module is replicated with additional features.

DELIVERABLES (HIGH LEVEL)	*What are the products, services, or processes this project will create?*

- Viable Sunapsis vendor-supplied software to support the University and ISSS missions.
- Electronic on-line connectivity with regulatory agencies (DHS [SEVIS] and USCIS support Emory tracking and reporting responsibilities.
- Reporting designed to meet both regulatory and Emory University requirements.
- Decommissioning the legacy PSHR Case Management bolt-on module functionality and tables will occur no later than 3 months post Sunapsis go-live. Stephanie Roberts and Kaven Moodley will determine the date. This will involve removing ISSS security privileges, terminating the current interfaces and providing the appropriate documentation to Knowledge Management.
- Well planned and constantly monitored infrastructure for hardware and database Quality Assurance and Production environments to ensure continuity by using best practices.
- Improved internal ISSS processes per above stated objectives.

KEY REQUIREMENTS	*What must this project have in place in order to be successful? (hardware or software environments, knowledge/skills of team members, stakeholder support, etc.)*

- Approvals from PSHR Governance, ITSC Governance and the UTS Directors for priorities and formal permission to activate the project.
- Key stakeholder advice, review and support.
- An oversight committee comprising personnel in these roles: ISSS managerial and functional subject matter experts; UTS PeopleSoft functional and technical personnel; and functional and technical resources from the Sunapsis vendor.
- An appropriately planned and structured hardware and software infrastructures for Quality Assurance and Production environments. Proper infrastructure services for backups, restorations and security must be in place.

BENEFICIARIES	• On-campus and potential international students and scholars. • Emory strategic internationalization initiative. • Mission support for ISSS. • Emory's continuity/green initiative.

ANTICIPATED PROJECT DURATION

4 – 6 months depending upon timely availability of needed resources. Sunapsis told us the "usual" implementation timeline is 6 months. However, we will accelerate the schedule as much as prudently possible.

EMORY | UTS University Technology Services

UTS Project Management Office
Project Charter

STAKEHOLDERS	NAME	DEPT	EMAIL
PROJECT MANAGER	Graydon Kirk	UTS PMO	gkirk@emory.edu
PROJECT SPONSOR - ISSS	Holli Semetko	Vice Provost, International Affairs	holli.semetko@emory.edu
PROJECT SPONSOR - UTS	Dana Haggas	Director, UTS Enterprise Applications	dana.haggas@emory.edu
TECH LEAD	Tim Climis	IT, Sunapsis, Indiana University	tclimis@indiana.edu
CORE PROJECT TEAM:	Stephanie Roberts	Assistant Director, ISSS	srober8@emory.edu
	Scot Kenyon	US PeopleSoft HR	skenyon@emory.edu
	Tim Climis	IT, Sunapsis, Indiana University	tclimis@indiana.edu
	Graydon Kirk	UTS PMO	gkirk@emory.edu
	Susan Newborn	HR: Mgr., Data Services	sjacks2@emory.edu
	Tracy McFarland	HR: Technical Services Business Analyst	tmcfarl@emory.edu

RISK ASSESSMENT	*This risk assessment begins with the risks identified in the Requirements Overview document and adds two components: probability of the risk event and the impact of the event. A full Risk Assessment will be conducted in the Planning phase. Risks will be identified and managed throughout the life of the project.*

RISK EVENT	PROBABILITY	IMPACT
Customer pressure for an accelerated implementation.	Medium	High
Denial by any of the Governance bodies will delay the project.	Low	High
PSSA Governance declined the project for right now - suggesting instead we look into external resources. Additional Sunapsis technical visit costs may be incurred when the PSSA "side" is implemented.	Medium	High
Reconsideration of PSSA Governance in mid-March for inclusion in the project implementation.	Medium	Low
Unavailability of timely functional or technical resources from Emory or Sunapsis.	Medium	High
Unavailable or inadequate funding for developing the functional and or technical infrastructure.	Low	High
Adequate data conversion mapping capability.	Low	High
Full and complete accurate definition, documentation, development, testing and implementation of all reporting requirements.	Medium	Medium
On-line connectivity with Federal regulators for data updating (batch and on-line) and report submissions.	Medium	High
Accurate and timely interfaces from PSHR.	Low	Medium

EMORY | UTS University Technology Services

UTS Project Management Office
Project Charter

ASSUMPTIONS	*Assumptions may describe details about what is not included in the project, budgetary agreements, or external factors (often schedule or quality issues) outside the control of the project team. These items are assumed to be true and often become risk events if they prove to be untrue.*

- Emory HR alone is a viable implementation strategy.
- Sunapsis is a viable vendor selected outside the RFP Process. ISSS did a comparison of functionality with the Sungard fasATLAS System. Sunapsis is far superior.
- Stephanie Roberts will be available to the project as the ISSS Operations SME and Business Analyst.
- Adequate and timely funding and internal and external resources will be available to the project.
- Sunapsis support, including ColdFusion, will be provided by Sunapsis via a negotiated Services and Maintenance Contract.
- ISSS will maintain and report on the project budget. This will be listed as "out-of-scope" on the Scope Statement.
- OIT UTS will be able to extract existing data on international students and scholars from PeopleSoft HR for import into Sunapsis.
- UTS will be able to work with Sunapsis developers to create the ongoing data feed for importing from PSHR.
- Two infrastructure environments will be created; QA [Quality Assurance] and PROD (Production].
- This is not a hosted application so UTS support (upgrades, patches, etc) will be needed for the web/application server(s) and database server(s) (SQL Server DBA).
- Application fixes and patches will be applied by the ISSS Technical Team application administrators under the direction of Sunapsis technical support personnel.

CONSTRAINTS	*Constraints are known to be true and cannot be changed. They may include budget figures, hardware or software environments, deadlines, staff involvement, etc.*

- Sunapsis is the predetermined choice.
- Sunapsis runs on ColdFusion which is no longer supported by the UTS Integration group. The vendor will provide development and support as part of the TBD Maintenance contract.
- UTS is responsible for setting up the database and application servers.
- This implementation will not utilize ECM (new document management system) for go-live.

BUDGET INFORMATION

COST ESTIMATE	This Charter is for implementing Sunapsis with PSHR only. ISSS opted for a five year payment plan. Over the plan term, the projected costs ($168,612), including a 10% contingency ($16,861), total to $185,473). This estimate is expected to be within ±20%. Stephanie Roberts in ISSS is tracking and managing the project budget in a separate document.		
FUNDING SOURCE (ACCOUNT #)	0000021767	**FUNDING SOURCE SIGNATURE (REQUIRED)**	Stephanie Roberts, ISSS Asst. Director

HIGH LEVEL BUDGET

POTENTIAL DIRECT COSTS ITEMS	ITEM DESCRIPTION	FUNDING SOURCE	HIGH LEVEL FIVE YEAR ESTIMATE
Hardware	2 Virtual Servers + 2 Physical Database Servers	0000021767	$14,940
Storage	400 GB; including backup	0000021767	$14,320
Software Acquisition (ISSS opted to spread initial costs over five years at $18,300/year less $10,000/year maintenance.)	Sunapsis Software	0000021767	$41,500
Ongoing Software Maintenance/year:	Sunapsis Software	0000021767	$43,500
Software	SQL Server (license)	0000021767	$ 600
Software	ColdFusion (license)	0000021767	$2,300

Training			$0
Consultant Services			$0
POTENTIAL OTHER COSTS			
Sunapsis	Installation support contract	-	$6,500
Technical Contract Resource	ColdFusion	-	0
System Administration (Ongoing)	UTS System Support	0000021767	$44,952

BUSINESS UNIT INVOLVEMENT

BUSINESS UNITS INVOLVED	PERSON / ROLE	ANTICIPATED RESPONSIBILITIES & AVAILABILITY REQUIREMENTS	FUNCTIONAL MANAGER / APPROVING AUTHORITY
ISSS Asst. Director	Stephanie Roberts	ISSS Operations & Business Analysis	Lelia Crawford
UTS Director – PeopleSoft Apps	Dana Haggas	UTS Oversight	Dana Haggas
UTS Manager – PSHR	Kaven Moodley	PSHR Oversight	Dana Haggas
UTS Systems Mgr.	Steve Siegelman	Hardware & Operating Systems Mgt.	Paul Petersen
UTS Database Mgr.	Jon Helsel	Database Management Oversight	Paul Petersen
UTS Database Administrator	Ramona Tucker	Technical Database Administrator	Jon Helsel

The following email string record the concern (bottom email raised by Michael Keown, UTS Director of Enterprise Services (includes UTS Desktop Support). Dana Haggas' response is on top.

From: *Haggas, Dana*
Sent: *Monday, March 26, 2012 2:24 PM*
To: *Roberts, Stephanie R*
Cc: *Kirk, Graydon E; Semetko, Holli A; Crawford, Lelia*
Subject: *RE: Sunapsis Charter for Review & SIgnatures*

Stephanie:
I'm actually glad that Michael mentioned this gap. I was actually going to schedule a meeting with you guys to discuss their concerns.
If we have an issue, after Desktop Support (Dwayne) has exhausted their knowledge from a server troubleshooting perspective, there is a potential need for on-site ColdFusion support and that is an area that we do not have UTS expertise. However, we do have an external resource that we contract with frequently to cover this gap in other applications. In fact, he is working with us on a ColdFusion migration right now. Several departments have him on retainer for support for the potential need for support. He is already an approved vendor and charges $150/hr. We just need to make you aware of this potential need.
If you want to chat more about this, we can schedule a meeting.
Dana

From: *Keown, Michael*
Sent: *Monday, March 26, 2012 2:13 PM*
To: *Kirk, Graydon E*
Cc: *Semetko, Holli A; Crawford, Lelia; Roberts, Stephanie R; Haggas, Dana; Moodley, Kaven; Petersen, Paul; Gregory, Sharon P; Benson, Marisa A*
Subject: *Re: Sunapsis Charter for Review & SIgnatures*

Graydon,

I think the charter looks good. I do have one concern from a UTS Desktop perspective. I think there are a couple of risks/assumptions that speak to it but I do want to ensure it is clear.

The way I read the charter, there is potential for a gap in support. Sunapsis will support their code but not the server. If we have a scenario where Sunapsis validates their code as working in their environment but it does not work (for whatever reason) in our environment, the vendor could deem it a "server problem". Since UTS Desktop is not knowledgeable about CF server application support, we could find ourselves in a difficult position.

We would be able to handle standing up a server using an out-of-the-box configuration. Anything more involved presents a risk. I want the team to be aware and I think Dana is looking at third-party support for the server side.

Michael [Keown]

By approving the Project Charter you are in agreement with the preliminary duration, the scope, the anticipated costs, and the project resources as described herein.

STAKEHOLDER	NAME	SIGNATURE	DATE
EXECUTIVE PROJECT SPONSOR	Holli Semetko	Electronic Approval on File	3/21/12
ISSS PROJECT SPONSOR	Lelia Crawford	Electronic Approval on File	3/23/12
ISSS ASST. DIRECTOR & ISSS SME	Stephanie Roberts	Electronic Approval on File	3/20/12
PROJECT MANAGER	Graydon Kirk	Electronic Approval on File	3/21/12
UTS DIRECTOR – Enterprise Applications (PeopleSoft)	Dana Haggas	Electronic Approval on File	3/28/12
UTS MANAGER – PeopleSoft HR	Kaven Moodley	Electronic Approval on File	3/22/12
UTS DIRECTOR – Desktop Support	Michael Keown	Electronic Approval on File (with above notation)	3/26/12
UTS DIRECTOR - Infrastructure	Paul Petersen	Electronic Approval on File	3/26/12
UTS MANAGER – Service Desk	Sharon Gregory	Electronic Approval on File	3/26/12

Attachments:

-
-

Scope Statement

EMORY | UTS University Technology Services

UTS Project Management Office
Scope Statement

SCOPE STATEMENT – SUNAPSIS INTERNATIONAL OFFICE MODULE – FINAL

Project Name:	Project Number:	Prepared by: (Project Manager)	Date:
Sunapsis Implementation	279	Graydon Kirk	3/26/12
Customer:	**Business Unit:**	**Contact Name:**	**Project Type:**
Emory Enterprise	International Student and Scholar Services (ISSS)	Stephanie Roberts	☐Mini ☒ Standard ☐ Complex

INTRODUCTION	The Scope Statement provides a documented basis for the project scope. As the project progresses, the scope statement may be appended to reflect scope changes submitted through the Project Change Request process.

PROJECT OBJECTIVE/S	• Implement the Sunapsis International Office Module to mitigate the impact of Oracle no longer supporting SEVIS via the PSHR bolt-on. • Connect electronically (batch and real-time) with SEVIS within the Department of Homeland Security and locally with PSHR (inbound interface). • Utilize the Sunapsis comprehensive Case Management functionality to replace the inadequate PSHR bolt-on for tracking the required aspects of the students' and scholars' relationship with Emory and the community. • Convert, verify and sign-off on a comprehensive data conversion of PSHR tables and SEVIS data. • Extensively use the built-in reporting capabilities of Sunapsis to meet all Stakeholder reporting requirements. • Provide e-forms for Emory departments and applications. • Training and marketing • Authentication using Shibboleth • Provide required documentation for Knowledge Base information

DETAILED PROJECT SCOPE	
IN SCOPE	OUT OF SCOPE
1. Obtain OIT ART (Architecture Review Team) concurrence as to the viability of the infrastructure design. There will be six servers for QA and PROD for these tiers: Web Servers; Database Servers and Application Servers. 2. Installed and configured Microsoft SQL Server Databases 3. Build and obtain approval for a five year "installment" financing plan. 4. Negotiate and execute legal documents with Sunapsis (Indiana University). 5. Procurement of virtual servers, operating systems, storage plus other software licenses for Microsoft SQL Server databases and ColdFusion application software. 6. Analyze, map, document and obtain ISSS SME approval for the Sunapsis conversion requirements using the appropriate PSHR table schemas. 7. Provide in-house training from the ISSS SME for ISSS staff and campus departments (~90 – 100 FTEs). 8. Meet UTS infrastructure requirements. 9. Negotiate a comprehensive SLA among the Vendor, UTS Systems, Database, Storage Management and Desktop Support. The SLA should include a TBD	1. These items are explicitly out-of-scope for this project. .1 A return interface from Sunapsis to PSHR. .2 Including any interfaces, to or from, OPUS (PSSA). .3 Any modifications to the delivered Sunapsis application. .4 PMO (Project Manager) maintenance of the project budget. Stephanie Roberts will handle this in ISSS. .5 ISSS internal process improvements. This will be done independently – coordinated by Stephanie Roberts in ISSS. 2. UTS ColdFusion code level support. 3. Utilization of the ESB in this implementation.

local, external ColdFusion technical resource adding expertise to augment UTS Desktop Support when necessary. 10. Include appropriate levels of documentation in Knowledge Management. 11. Obtain appropriate OIT CAB (Change Advisory Board) approval for implementation of Sunapsis. 12. Provide appropriate/required levels of Project Management leadership, Team communications and reporting.	
CLIENT ACCEPTANCE CONSTRAINTS	• Accurate and approved conversion. Approval is by the Assistant Director of Operations in ISSS, Stephanie Roberts. • No requested Sunapsis modifications are planned or anticipated.
COST CONSTRAINTS	• The infrastructure must be sufficiently robust to handle the addition of OPUS (PSSA) plus the normal annual volume increase (~10%). • ISSS opted for a five year payment plan.
COST SUCCESS CRITERIA	• Staying within budget.
PROCUREMENT CONSTRAINTS	• Sunapsis was purchased outside of an RFP process. • Emory has a standard for separating the application and database servers and the web servers from the PSHR interface (XML) file. This requires six virtual servers for QA & PROD.
RESOURCE CONSTRAINTS	• Sunapsis support (Indiana University) is normal business hours in the eastern time zone. • Emory UTS Integration no longer supports ColdFusion. • ISSS, specifically, Stephanie Roberts, will be the Sunapsis "application owner" and initial contact. She will troubleshoot the problem and contact technical resources as necessary. • ISSS is responsible for identifying and training a back-up contact for Stephanie Roberts.
SCHEDULE CONSTRAINTS	• Implementation as soon as possible to mitigate the risk of the Oracle discontinuing batch SEVIS support. • Time is of the essence due to resource availability constraints in Human Resources.
SCHEDULE SUCCESS CRITERIA	• Accurate and accepted implementation before the July rotation of medical residents. • Ability to show the Department of State (DOS) our due diligence (work to-date and implementation plan) for our upcoming students and scholars Sunapsis implementation.
SECURITY IMPACT / NEEDS	• Initially there will be 90 – 100 people using the system. When it is scaled to the enterprise, the total number of permitted "accessor"s will be in the 3,500 range. Concurrent users are estimated to be 25 +/-.
TECHNICAL CONSTRAINTS	• Sunapsis does not support Oracle. • We need a tight support agreement with Sunapsis for application code support (ColdFusion). • Reporting is done via canned reports and extracts from Sunapsis into Excel.
TECHNICAL SUCCESS CRITERIA	• Accuracy of conversion. • Reliably available

EMORY | UTS University Technology Services

UTS Project Management Office
Scope Statement

By approving the Scope Statement you are in agreement with the project scope as described herein.

STAKEHOLDER	NAME	SIGNATURE	DATE
EXECUTIVE PROJECT SPONSOR	Holli Semetko	Electronic Signature on File	4/4/12
ISSS PROJECT SPONSOR	Lelia Crawford	Electronic Signature on File	3/28/12
ISSS ASST. DIRECTOR & ISSS SME	Stephanie Roberts	Electronic Signature on File	3/27/12
UTS PROJECT SPONSOR & UTS DIRECTOR – Enterprise Applications (PeopleSoft)	Dana Haggas	Electronic Signature on File	3/29/12
PROJECT MANAGER	Graydon Kirk	Electronic Signature on File	3/26/12
UTS MANAGER – PeopleSoft HR	Kaven Moodley	Electronic Signature on File	4/9/12
UTS DIRECTOR – Desktop Support	Michael Keown	Electronic Signature on File (see email below RE Concern)	4/5/12
UTS DIRECTOR - Infrastructure	Paul Petersen	Electronic Signature on File	4/9/12
UTS MANAGER – Service Desk	Sharon Gregory	Electronic Signature on File	4/9/12

From Michael Keown: 3/26/12:

Graydon,

I think the charter looks good. I do have one concern from a UTS Desktop perspective. I think there are a couple of risks/assumptions that speak to it but I do want to ensure it is clear.

The way I read the charter, there is potential for a gap in support. Sunapsis will support their code but not the server. If we have a scenario where Sunapsis validates their code as working in their environment but it does not work (for whatever reason) in our environment, the vendor could deem it a "server problem". Since UTS Desktop is not knowledgeable about CF server application support, we could find ourselves in a difficult position.

We would be able to handle standing up a server using an out-of-the-box configuration. Anything more involved presents a risk. I want the team to be aware and I think Dana is looking at third-party support for the server side.

Michael

Changes were made and Michael sent his approval on 4/5/12.

Thanks for the changes - I approve.

Michael

C. XML Schema

APPENDIX A

This Appendix is the datafeed schema layout. The Type column below for each field closely aligns with SQL data types. Please format the datetime fields like 'YYYY-MM-DD.' Please use true/false for the Boolean values.

A.1 RECORDTYPE

XML Data Feed Structure:	RecordType
Database Table Populated:	-

The record is the information from the institutional SIS or HR systems for a given individual identified by their institution specific university id. This information can be any combination of the following structures that define the record. The University ID is required and if any element structure is included then please review those particular structures for required fields, field types, and field sizes.

Element Name	Type	Size	Description	Required
prsn_univ_id	varchar	11	University ID	✔
associatedIDNumbers	AssociatedID NumbersType	-	This identifies additional ID numbers associated with this record.	
biographical	BiographicalType	-	The core biographical and address information with SEVIS batch implications.	
visaCitizenship	VisaCitizenshipType	-	The immigration status and citizenship information with SEVIS batch implications.	
admissions [admission]	AdmissionListType [AdmissionType]	-	List of current and future admission rows.	
programs [program]	ProgramListType [ProgramType]	-	List of active and completed academic programs with SEVIS batch implications.	
terms [term]	TermListType [TermType]	-	List of current enrollment information used for SEVIS registrations and enrollment analysis.	
courses [course]	CourseListType [CourseType]	-	List of current term courses for enrolled students used for enrollment analysis.	
saa	SAAType	-	The amount of FTE on a student academic appointment used for enrollment analysis.	
studentHolds [studentHold]	StudentHoldListType [StudentHoldType]	-	List of holds on a student's record. Can be a list of past, current, and future holds.	
studentVisit	StudentVisitType	-	Information about a visiting student.	
toefl	ToeflListType [ToeflType]	-	List of TOEFL scores. Can be a list of all TOEFL tests on record for the person.	
employee	EmployeeType	-	Most recent HR employment record (active or terminated) used for H-1B and J-1 analysis.	
paychecks [paycheck]	PaycheckListType [PaycheckType]	-	Last 3-5 years of payroll paycheck data used for complete verification of H-1B salary.	

A.2 ASSOCIATEDIDNUMBERSLISTTYPE

XML Data Feed Structure:	AssociatedIDNumbersListType
Database Table Populated:	-

A list collection of associated string University ID numbers tied to this account. The primary number must be defined in the RecordType and those defined in this structure will be used to determine if a record already exists in the application.

Column Name	Type	Size	Description	Notes	Required
associatedIDNumber	varchar	11	Associated ID Number	String listing of ID numbers to be mapped to this primary record.	✔

A.3 BIOGRAPHICALTYPE

XML Data Feed Structure:	BiographicalType
Database Table Populated:	iuieBio

This is the core biographical information for all international student or scholar records which will populate and update the various biographical and address elements in the application. This will also generate SEVIS batch records for biographical or local address changes as required by SEVIS.

Element Name	Type	Size	Description	Notes	Required
prsn_prm_sfx_nm	varchar	15	Primary Name Suffix		
prsn_prm_last_nm	varchar	60	Primary Last Name	The primary last name and first name is required from the institutional system for the biographical update.	✔
prsn_prm_1st_nm	varchar	60	Primary First Name		✔
prsn_prm_mid_nm	varchar	60	Primary Middle Name		
prsn_gndr_cd	varchar	1	Gender Code	mapGender which maps to codeGender (i.e. M, F, U)	✔
prsn_martl_stat_cd	varchar	1	Marital Status	mapMaritalStatus which maps to codeMaritalStatus (i.e. S, M, U)	
prsn_birth_dt	datetime	10	Date of Birth		✔
prsn_birth_plc_nm	varchar	30	Place of Birth		
prsn_birth_cntry_cd	varchar	3	Country of Birth	mapCountry which maps to codeCountry with SEVIS country values	
prsn_other_email_id	varchar	150	Non-University Email Address		
prsn_gds_cmp_email_addr	varchar	150	University Email Address	This email address is used by the email services, alerts, and e-forms to communicate.	

prsn_ntwrk_id	varchar	150	Client's Username	Authenticated by an institutional central login service for online services (i.e. iStart).	
prsn_lcl_ln1_addr	varchar	60	Local Address Line 1	The local U.S. address information drives the SEVIS Batch update address action. This information should be updated whenever the institution receives a new U.S. address for a client due to the 21 day SEVIS reporting requirement. Note: the state code values align with codeStates (all standard values for U.S. states)	
prsn_lcl_ln2_addr	varchar	60	Local Address Line 2		
prsn_lcl_cty_nm	varchar	60	Local City		
prsn_lcl_st_cd	varchar	30	Local State Code		
prsn_lcl_zip_cd	varchar	20	Local Zip Code		
prsn_lcl_phn_nbr	varchar	25	Local Phone		
Prsn_lcl_subtype	varchar	10	Local Address Subtype	Institutional specific information * (Table: codeAddressSubtype)	
prsn_frgn_cntry_cd	varchar	3	Foreign Address Country	The foreign address information is required for creating initial SEVIS documents, which is primarily at the admissions stage. This information can be helpful for the population of those RTI fields in creating a SEVIS document. Note that the foreign country value uses the mapCountry which maps to codeCountry with SEVIS country values.	
prsn_frgn_ln1_addr	varchar	60	Foreign Address Line 1		
prsn_frgn_ln2_addr	varchar	60	Foreign Address Line 2		
prsn_frgn_cty_nm	varchar	60	Foreign City		
prsn_frgn_st_cd	varchar	30	Foreign State or Province		
prsn_frgn_zip_cd	varchar	20	Foreign Zip Code		
prsn_frgn_phn_nbr	varchar	25	Foreign Phone		
prsn_frgn_subtype	varchar	10	Foreign Address Subtype	Institutional specific information * (Table: codeAddressSubtype)	
pic_url	varchar	250	Picture URL		

* Update the application with the code/description values found in '*General Configurations*' -> '*Institutional Specific Codes*'

A.4 VISACITIZENSHIPTYPE

XML Data Feed Structure:	**VisaCitizenshipType**
Database Table Populated:	**iuieVisaCitizenship**

This should be populated with the most effective dated citizenship and immigration status for the international population. The immigration status will help drive some of the alerts, reporting, and filters for online services. The citizenship value may produce a SEVIS batch biographical update for changes of that value. These fields are optional because a new student may only have a one of the values, like citizenship, before the other value is assigned in the institutional system.

Element Name	Type	Size	Description	Notes	Required
prsn_vprmt_typ_cd	Text	3	Immigration Status	mapVisa which maps to codeVisa	
prsn_ctzn_cntry_cd	Text	3	Citizenship Country Code	mapCountry which maps to codeCountry with SEVIS country values	
prsn_ctzn_status_cd	Text	10	Citizenship Status Code	Institutional specific information * (Table: codeCitizenshipStatus)	

* Update the application with the code/description values found in '*General Configurations*' -> '*Institutional Specific Codes*'

A.12 EMPLOYEETYPE

XML Data Feed Structure:	EmployeeType
Database Table Populated:	iuieEmployee

This should be populated with the most recent employment information for the international so that the system could notify about H-1B or J-1 issues because of position termination, annual compensation review, possible change in position (based on position number), identification of scholar employees (based on salary plan and grade codes), etc. This table should only be required if the institution plans to utilize audits against the H-1B and J-1 data. This information would be core HR data. This information is updated or inserted with one row per individual.

Element Name	Type	Size	Description	Notes	Required
pos_nbr	varchar	8	Position Number	value used to determine if possible change to new position and to align position to LCA	✔
pos_desc	varchar	30	Position Description	useful for verification if a change of position number alert is activated	✔
emp_stat_cd	varchar	1	Employee Status Code	mapEmployeeStatus which maps to codeEmployeeStatus (i.e. A - Active)	✔
job_pos_entry_dt	datetime	10	Position Entry Date		
job_emp_typ_desc	varchar	30	Employment Type Description	informational only and at IU it is info like salaried, hourly, etc.	
job_slry_plan_cd	varchar	4	Salary Plan Code	specific institutional codes for salary plans (i.e. academic); informational only	
job_slry_grd_cd	varchar	3	Salary Grade Code	specific institutional codes for salary grades (i.e. various faculty levels); informational only	
job_comp_rt	numeric	9	Compensation Pay Rate	rate by hourly, bi-weekly, monthly, etc.	
job_comp_annl_rt	numeric	9	Compensation Annual Pay Rate	value is audited for the H-1B to ensure salary on file complies with salary on file with DOL	✔
job_reg_temp_ind	varchar	1	Regular or Temporary	mapEmployeeRegTemp which maps to codeEmployeeRegTemp (i.e. R - regular)	✔
job_full_pt_tm_ind	varchar	2	Full-Time or Part-Time Status	mapEmployeeTime which maps to codeEmployeeTime (i.e. FT - fulltime)	✔
emp_tot_fte_rt	numeric	9	Numeric FTE		✔
emp_occptn_unit_snrty_dt	datetime	10	Unit Seniority Date		
pyck_lst_chk_dt	datetime	10	Last Paycheck Date		
job_dept_setid_cd	varchar	5	Department Campus	values align with codeCampus which are determined at each institution	✔
job_dept_id	varchar	10	Department Code	institutional specific information only	✔

job_dept_desc	varchar	60	Department Description		
job_loc_desc	varchar	30	Job Location Description		
prsn_cmp_ln1_addr	varchar	55	Campus Address Line 1		
prsn_cmp_ln2_addr	varchar	55	Campus Address Line 2		
prsn_cmp_ln3_addr	varchar	55	Campus Address Line 3		
prsn_cmp_phn_nbr	varchar	24	Campus Phone		

A.13 PAYCHECKTYPE

XML Data Feed Structure:	**PaycheckType**
Database Table Populated:	**iuiePaycheck**

This should be populated with H-1B paycheck information so the system can run the analysis of actual payments for the Department of Labor compliance. This should cover between 3-5 years of paycheck data to cover the entire H-1B period for review. At IU we review the last 5 years of paycheck data. This table is optional and it serves as an audit of actual payments versus the H-1B minimum salary value. There is a check of the salary on the HR record but this verifies against payroll data in this analysis. This information is updated only if a record matches all the fields otherwise it is inserted. The information will stay in the application for 5 years.

Element Name	Type	Size	Description	Notes	Required
pyck_earn_setid_cd	varchar	5	Department Campus	values align with codeCampus which are determined at each institution	✔
pyck_earn_dept_id	varchar	10	Department Code	institutional specific information only	✔
pos_nbr	varchar	8	Position Number		✔
pyck_earn_amt	numeric	9	Amount Earned	value used in analysis for H-1B payment	✔
pyck_earn_cd	varchar	3	Paycheck Earning Code	institutional specific information only and can be used for multi-payments in same period	
pyck_earn_beg_dt	datetime	10	Pay Period Begin Date		✔
pyck_earn_end_dt	datetime	10	Pay Period End Date		✔