USNH Project FRESH
Project Definition Document
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Project Background and Description

Existing Systems
The University System of New Hampshire presently relies on two major enterprise-wide administrative systems for its financial and human resources administrative computing needs. These include the AMS College and University Financial System (known as CUFS) that was installed in the 1980’s and the Human Resources HRIS/HUM system that has been developed and refined internally over the past 30 years. Both of these systems have generally been effective in supporting daily transaction processing needs at USNH, subject to the limitations set forth below. The HRIS/HUM system is known to be particularly functional from an end user perspective because it has been continuously enriched over the years to accommodate transactional business requirements that are existent at USNH but are not necessarily common throughout the higher education industry.

While both the CUFS and HRIS/HUM systems contain many favorable attributes, they also bring serious drawbacks. These systems do not have the capability to serve as robust management reporting tools, nor do they provide end users with an up-to-date technological environment to enhance transaction processing efficiency and advance operational reporting capabilities. More importantly, the hardware and software platforms on which these two systems are built represent major business risks to USNH due to:

- The lack of vendor support for CUFS;
- The obsolescence of the underlying hardware and operating systems for both CUFS and HRIS/HUM;
- The use of the S1032 database for HRIS/HUM which is marketed by a small, relatively unknown vendor; and
- The anticipated long-term challenge of retaining technical staff with the requisite skill sets to support these systems due to eventual retirements and changing skill sets available in the larger technical market place.

Additional information regarding the current systems in place at USNH is included in the Long Range Technology Plan V2.0.

Exploring Replacement Options
The risks inherent in the existing systems led management, in the Spring of 1998, to proceed with an expedited assessment of the feasibility and estimated cost for acquiring an integrated suite of information systems to meet the financial and human resources needs of the USNH community. This assessment process utilized a “scout team” consisting of representatives from each campus, system offices, OSR, and central administration to engage in an intensive information gathering initiative focused on recent information systems installations at other comparable institutions. The scout team’s evaluation was informed by several key criteria, including a fundamental requirement that any viable replacement system should be able to accommodate at least
90 percent of the functionality inherent in the existing USNH finance and human resources systems.

In the late summer of 1998, the scout team produced a report concluding that an integrated system is not only feasible, but is preferable from an operational and management perspective. Accordingly, a subset of the scout team continued their work during the fall of 1998 to refine the estimated implementation costs and to chart the course for a full-blown vendor selection process. These reports, major provisions of which are part of the Long Range Technology Plan V2.0, set the stage for this project and other initiatives that will shape the future technological environment at USNH.

The Vendor Selection Process
In February 1999, the Executive Steering Committee (ESC) appointed a core team of campus and system representatives to develop a Request for Proposal. The team elicited proposals from the viable vendors identified by the scout team, conducted preliminary vendor interviews and inquiries, and narrowed down the search to three finalists: Oracle, PeopleSoft, and SCT. Representatives from the core team also developed a name for the project deciding upon “Project FRESH” which stands for Finance, Research and Especially Human Resources.

In the summer of 1999, the three finalists came to USNH to demonstrate their products to over 300 USNH faculty and staff who were invited to participate in this collaborative evaluation process. Each vendor conducted a weeklong demonstration of their products and responded to numerous inquiries from both functional users and technical support staff. Participants in the demonstrations were afforded various feedback methods including group discussions, online questionnaires, and open communications with team members and designated campus contacts. At the conclusion of these demos, participants expressed an overwhelming preference for SCT largely due to the vendor’s focus on the higher education market, the user-friendliness of the products, and the lower overall estimated implementation risk and cost as measured against other solutions.

The ESC, core team, and other participants shared concerns regarding certain gaps inherent in the SCT product’s functionality, the state of certain technological features, and the vendor’s lack of significant presence among large universities. Despite these concerns, there continued to be substantial evidence that SCT could provide the most cost effective, integrated information technology solution for USNH. The ESC decided to focus its next primary efforts on negotiating a contract with SCT. A focal point of these negotiation efforts was to secure an adequate resolution to the gaps and to provide assurances that SCT would keep pace with the requirements of a complex institution like USNH.

The Vendor Negotiation Process
In September 1999, the ESC appointed a negotiating team. Under the guidance of the ESC, the team completed its negotiations on September 30, 1999. The executed contract includes the entire SCT Banner product suite with a modest escalation in annual maintenance costs. This provides USNH the option to develop a truly comprehensive integrated business solution over the long term.
USNH negotiated consulting support to implement the finance and human resource systems. There are options to purchase additional support, within specified timeframes, should one or more of the campuses choose to install additional or expanded component system licenses. The contract also includes a commitment by SCT to enhance its baseline product, with USNH serving as a strategic development partner, to resolve functionality gaps. A complete synopsis of the contract is attached as Exhibit 1.
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Project Goals and Objectives

Goals
Project FRESH was established by USNH to deploy new software solutions in the areas of finance and human resources. The Executive Steering Committee has established the following goals for this project, which are consistent with the overarching goals set forth in the Long Range Technology Plan V2.0 (LRTP) and certain foundational planning assumptions included in that document, as well as “The Scout Team’s” Feasibility Survey.

• Replace existing USNH finance and human resources systems that are technologically obsolete and prone to risk with a modern and reliable infrastructure that brings sufficient capacity and responsiveness to support the current and ongoing business requirements of USNH.

• Promote the overarching functionality goals established by the Long Range Technology Plan V2.0 for Project FRESH and other projects encompassed within that plan as further articulated in the following objectives.

• Redesign business processes to fit the software, allowing the project to maintain a “near zero modification policy” as assumed in the LRTP. Engage in additional redesign initiatives that improve business processes by leveraging the new technologies to the extent that it is prudent to do so.

• Carry out the project’s work in a manner that is consistent with current and emerging institutional policy initiatives and is in accordance with existing advisory, decision-making and policy setting processes in place at USNH.

• Deliver meaningful change management initiatives and training programs that enable employees to acquire skills and cross functional knowledge so that they may: (1) function effectively upon the deployment of new business processes and systems; and (2) use their skills to promote efficient and effective business operations within their respective areas of responsibilities.

• Fulfill the aforementioned goals within the timeline and budgetary constraints established for the project.

Objectives
The following objectives have been established by the ESC to advance the aforementioned goals:

• Provide a modern technological infrastructure that is reliable, vendor-supported, and scalable to future needs, while promoting full integration and open systems architecture.

• Establish an application architecture predicated on rich data structures and a visionary implementation approach that will: accommodate current business processes; enable future business process changes; support ongoing management reporting needs; and
provide for the implementation of additional SCT modules and other technological solutions as deemed appropriate by USNH.

- Improve the overall business functions that support the USNH mission by deploying new information technology tools that are highly functional and easy to use for all participants in the business process. Examples of these tools include the delivery of the applications across the World Wide Web, the availability of intuitive graphical user interfaces, and the implementation of automated workflow engines and processes.

- Empower end users, promote process integrity, efficiency and continuous improvement, and maximize the overall utilization of the new system through the delivery of quality documentation, training and consulting support to USNH users.

- Support administrative, management and planning initiatives by providing timely and affordable access to data in a manner that is appropriate to the nature of the data and the information needs of end users. Toward this end, draw upon the rich foundational data structures and technologies described above, implement an adequate security environment, and make available flexible and intuitive reporting tools to end users.

- Create a project team and management structure that fosters collaborative creativity and broad user input in the design of future solutions to achieve the project’s business process redesign goals, while instilling focus and discipline in the build, test, and deployment phases of such solutions. Establish timely and informed decision making processes that shall endure well past the life cycle of the project and communicate decision-making, acceptance, and quality assurance processes to all Project FRESH teams and work groups.

- Ensure that the work of the project implementation teams and advisory groups is consistent with existing policies and new business concepts emerging from the Board of Trustees and executive management at large. Toward that end, establish forums pursuant to which the ESC, together with Advisory Committee members and business process owners, can share with process groups the vision and principles that shall guide business process redesign in a manner that is consistent with changing operating paradigms.

- Establish decision-making criteria that allows the ESC to establish priorities and shape expectations for the work that will be undertaken during the project life cycle, subject to the broader goals and objectives set forth above.
Project Scope and Phases

Introduction

There are four main components to the scope of Project FRESH. These include:

- Implementation of SCT baseline modules and functions (within the various phases of the project) in support of core business functions
- Implementation of SCT product enhancements and modifications
- Implementation of an enhanced management information and reporting environment (MIR)
- Redesign of business processes

This document presents information for each of these components to establish a framework for continuing discussions that will lead to a preliminary definition of the initial scope and phases for Project FRESH. It also includes criteria that shall guide the decision making for determining the scope.

Implementation of SCT Baseline Functions and Modules

SCT Products Purchased
USNH has purchased a full suite of products from SCT which are shown in the following chart. UNH and CLL campuses presently use the SCT Student, Financial Aid and Web for Student products. The new agreement dated September 30, 1999 extends the site licenses for those products to all USNH campuses.

The following table summarizes the modules that are deemed to be in and out of scope for Project FRESH.

<table>
<thead>
<tr>
<th>In Scope</th>
<th>Out of Scope</th>
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<tbody>
<tr>
<td>Banner Finance</td>
<td>Banner Student</td>
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<tr>
<td>Banner Human Resources</td>
<td>Banner Financial Aid</td>
</tr>
<tr>
<td>Banner Web for Employees</td>
<td>Banner Web for Student</td>
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<tr>
<td>MIR*</td>
<td>Banner Web for Faculty and Advisors</td>
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<td></td>
<td>Banner Alumni/Development</td>
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<tr>
<td><strong>Potentially In Scope</strong></td>
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<tr>
<td>SCT Imaging</td>
<td>Banner Web for Alumni</td>
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<tr>
<td>SCT Workflow</td>
<td>Campus Pipeline</td>
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</table>

*not a SCT module

Major Project Phases
The project will operate in major phases as depicted below. Phase 1 will include the implementation of the core essential activities that are needed on the first “go-live date”. Phase 1 may also include other modules and/or enhancements that can be implemented within the timeline and budgetary constraints established for the project. Phase 2 will be
predominantly the stabilization of Phase 1 activities. The completion of additional modules/functionality and business process enhancements may be implemented during Phase 2 based on ESC approval. Post implementation includes items not within the scope of the project, examples may include full deployment of workflow, imaging, and expansion to the base level MIR accomplished in Phase 1.

**Modules/Functionality Encompassed in the Project Scope**

The primary goal of Project FRESH is to deliver functionality for the replacement of the finance and human resource systems. A secondary goal is to maintain a near zero modification policy while maximizing functionality for end users.

UNH and CLL currently operate the SCT student and financial aid modules; thus, the issue of integration with those systems and other SCT modules that might be implemented at USNH must also be considered by the Project FRESH team. The finance and human resource systems will initially be implemented in a separate instance. However, planning is taking place with existing SCT system owners, such as UNH Student Information Systems, to ensure compatibility between existing modules and the new finance and human resource system should USNH decide to operate all SCT modules under a shared environment.

To provide for enhanced reporting, a reporting solution must be considered within the project scope as well.

Many of the modules can be broken down further into functions, as shown in the following table. A reporting solution and common module functions have also been added to present a total picture of the potential scope.

<table>
<thead>
<tr>
<th>Module</th>
<th>Component Functions</th>
<th>Phase 1</th>
<th>Phase 2</th>
<th>Optional TBD</th>
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<td>Module</td>
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The Optional TBD items require additional research and discussion to determine the appropriate implementation strategy and timing. Some may be considered out of scope and deployed in future phases or projects. Others may be most cost effectively included in Phase 1 or 2, and some may be enabled on a pilot basis in limited areas.

**Implementation of Baseline Enhancements and Modifications**

*Enhancements and Modifications to be Developed by SCT*

The agreement between USNH and SCT calls for the following enhancements and modifications to be delivered by SCT as an integral part of the Phase 1 project scope:

- Chart of Accounts Attributes will be encompassed in baseline no later than the October 2000 production release that will be implemented by USNH.
- The upgrade to Oracle Developer forms 6.0 will be incorporated into the February 2001 production release. A pre-release of the code will be delivered to USNH by October 31, 2000, at which time a determination will be made as to implementation.
- SCT will develop modifications in four designated areas, pending the incorporation of the related functionality into a baseline production release by no later than February 2002.
- SCT will develop functional specifications for an Indirect Cost Encumbrance modification.

These enhancements and modifications are further described below. The agreed-upon deliverables and associated delivery dates for these enhancements and modifications are also included for informational purposes.

**Chart of Accounts Attributes**

SCT will release “reporting attributes” in the October 2000 baseline production release of the Banner2000 Finance Component System. SCT will work with USNH along with a few other select large universities to develop the specifications for “attributes”. SCT has provided detailed specifications of the “attributes” enhancements as of February 1, 2000.

**Upgrade to Oracle Developer Forms 6.0**

SCT’s product calendar calls for SCT to move the Baseline Banner2000 Component Systems to Oracle Developer 2000 forms 6.0. SCT will deliver the functionality necessary to operate the Baseline Banner2000 Component Systems with Oracle Developer forms 6.0 by February 28, 2001. SCT will deliver a pre-release version of the code by October 31, 2000. This pre-release of the code will be compatible with SCT’s October 2000 Baseline production release of the Banner 2000 Finance Component System that contains the “attributes” enhancement.

**The Four Designated Modifications**

SCT will provide all services necessary to develop and deliver the following four designated modifications by no later than October 31, 2000. Members of the Project FRESH team will work with SCT to design these modifications in a manner that fulfills USNH’s business requirements.
Web for Employees
Modification will provide functionality to enable Web for Employees use for flexible benefits.

Interface to the Human Resources Module for Salary Increases
SCT will provide an interface that allows salary increase transactions processed in external systems to be imported into the SCT Human Resources module where employee job and position records can be validated and updated in batch mode.

Interface to Proposal Preparation/Approval System
SCT will provide an interface that will allow relevant grant information to be imported from a multitude of available proposal preparation and pre-award systems to the SCT Grants Module.

Interface to a Purchasing Card System
SCT will develop an interface to the USNH Purchasing Card System as a modification.

Specification Services for Encumbrances Modification
SCT will provide all of the necessary professional services to develop the specification, at no cost to USNH, by April 1, 2000. To the extent that USNH wishes for SCT to develop and code the modification, SCT will provide such services at a mutually agreed upon price.
SCT will deliver the general functionality reflected in the four designated modifications into an appropriate baseline component systems by no later than February 28, 2002.

Potential Functionality Gaps to be Addressed by USNH
Product reviews performed to date by the Project FRESH Team have exposed other major functionality gaps that will not be addressed by SCT in the near term. These potential gaps, which are described in Exhibit 2 Report of Major Gaps, involve the following functional areas:

- Salary increase processing (1)
- Position control and pool accounts
- Display of daily vs. hourly rates for faculty and PAT salary information
- Ability to propagate date extensions.
- MIR. (2)

The process groups will work to resolve these potential gaps through business process redesign or other alternate solutions, however, it may be necessary to develop technological solutions for the potential gaps

(1) While SCT will provide an interface for these areas as a modification, the core functionality for processing salary increases must be addressed by USNH.

(2) See the following section of this document for information regarding a reporting solution.
Reporting Solution

It is envisioned that an enhanced reporting environment will be encompassed within the Project FRESH scope. Members of the Project FRESH team have commenced discussions regarding the future USNH reporting solution (see Exhibit 3). Additional input from a broader group of users is needed. The ESC has appointed the UNH Director of Enterprise computing to lead a working group to evaluate the various types of reporting needs existent at USNH and to form a short- and long-term strategy that will fulfill those needs in priority order. Upon conclusion of the group’s work, the description and scope of the enhanced reporting solution can be encompassed in this section of the scope document.

Business Process Redesign Philosophy

The primary goal of Project FRESH is to replace the existing finance and human resources systems and business process redesign will be an important part of the project.

A fundamental goal of Project FRESH (as summarized in the Project Goals and Objectives section) is to redesign business processes to fit the software, thus allowing the project to maintain a “near zero modification policy”. The Project FRESH team will also engage in additional redesign initiatives that improve business processes by leveraging the new technologies to the extent that it is prudent to do so. As the process groups engage in these redesign activities, they should place the highest priority on those areas with known functionality gaps and processes that are deemed to be core and essential to the conduct of business at USNH. The next level of focus should be on areas with potential cost savings, improved management, etc.

Decision-Making Criteria

The scope for the various phases of Project FRESH will not be completely frozen until the conclusion of the design period. It is important to have a basis for making judgments regarding the level of work activities that can be accommodated during periods of the project life cycle without incurring unmanageable project risk. The following decision-making criteria have been established by the ESC to guide the project scope and prioritize system implementation and business process redesign activities.
• The highest priority for the project will be the delivery of functionality required to conduct the core essential business activities of USNH, including compliance with external regulations and Trustee mandates.

• Additional modules/functionality and business process redesign initiatives will be implemented by the project in a manner that attains an optimal balance among the following criteria:
  - Ability to easily implement the module/functionality or business process change without jeopardizing the project’s ability to deliver the core essential business functions required by USNH and remain within its overall budgetary and timeline constraints. When measuring the ease of implementation, the following factors should be considered:
    - The magnitude of the initiative
    - The amount of resources required
    - The timing of resources required
    - The availability of human resources with required skill sets
    - The effort required for deployment and retraining/reorganization of human resources.
    - The availability of other viable alternatives.
    - The risk that the initiative will not be successfully implemented
  - Ability to achieve a significant return on the implementation of the module/functionality or business process change (e.g. the investment), as measured by: cost savings, improved management and accountability, advancement of the institutional mission, impact on a broad number of users, reduced business risk, and other relevant measures
  - The necessity to implement the module/functionality or business process change at a later date. In other words, would the deferment of the initiative jeopardize the design of a fully functional business process or create substantial rework later?
  - Ability to implement the module/functionality or business process change within the current cultural and political dynamics of USNH.
  - The necessity to adhere as closely as possible to the “Near Zero” Modification Philosophy.
  - The extent to which the contemplated module/functionality or business process change will result in a significant move to simplify and standardize processes across USNH and enable complete, accurate, timely, and consistent data across all campuses
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Implementation Methodology and Deliverables

Introduction
The implementation methodology established for Project FRESH includes the following five major groups of activities. At any point in time and for any given business process area, the groups may overlap meaning that multiple activities encompassed within the various phases may be occurring simultaneously.

1. Mobilize
   • Mobilize the project
   • Document current business processes
   • Install the system
2. Design
   • Conduct system education
   • Design the business solution
3. Build
   • Configure the business solution
4. Test
   • Test and refine the solution
   • Perform system, integrated and stress testing
   • Execute the conversion
5. Deploy
   • Train end users
   • Deploy business solutions
   • Plan continuous improvement

Major Project Activities

Mobilize the Project

Description
During the project mobilization phase, the project is defined in terms of goals, objectives and preliminary scope etc., the administrative infrastructure for the project is established, a preliminary work plan is developed, teams members are appointed by the ESC, SCT consultants are identified, and various kick off activities occur. In addition, process groups are mobilized following the procedure outlined in the Project Administration Document.

Associated Deliverables
• Project Definition Document
• Project Administrative Document
• Technical Management Plan
• Project work plans
• Implementation specialists and process group participants identified
• SCT consultants identified
• Campus demonstrations
• Kickoff meeting
• Mobilize process groups

**Document Current Business Processes**

**Description**
USNH has developed an inventory of current business processes/subprocesses that have been cross-referenced to existing policies, procedures, user guides and other available materials. Additional documentation of the current business processes will be developed in targeted areas when the lack of existing documentation hinders a group’s ability to develop the future prototype.

**Associated Deliverables**
• Inventory of current business processes cross-referenced to existing documentation.
• Additional descriptions of current business processes as needed.
• Document non-value added steps in processes.

**Install the System**

**Description**
SCT consultants and USNH technical staff members install the software at the client site. Activities include planning the software and hardware installation to ensure that the application software is operational and ready to support the project’s activities.

**Associated Deliverables**
• SCT software installed and tested
• Instance management strategy and procedures developed and documented.
• Instances created for some or all of the following purposes:
  - SCT reference standard
  - Software development
  - New SCT patch/version release testing
  - Training
  - Functional development
  - Production

**Conduct the Systems Education**

**Description**
Systems education is not synonymous with end-user training. The objective of the SCT Systems Education is to provide the necessary training to enable implementation specialists and process groups participants to understand Banner2000 features, functions, business rules, processes and setups so that these individuals can design the future business process solution. There will be approximately 18 weeks of formal training for Project FRESH, the bulk of which will occur during the first year of the project.
Associated Deliverables

• SCT education/consulting plan
• Training plan and curriculum
• Trained project team

**Design the Business Solution**

**Description**
The process groups are ready to design the future business solution. During the design phase, all aspects of the business process are considered:

• Process assumptions and goals
• Inputs and outputs (including interfaces)
• Work steps and flows
• Automated and manual processes
• Organizational responsibilities
• Security requirements
• Reporting requirements
• Estimated transaction volumes and performance benchmarks

During this phase, the process groups also establish foundational data definitions, business rules, and determine if software modifications are needed. Functional and technical specifications for software modifications, baseline enhancements, interfaces, conversions, and the reporting environment are also developed during the design phase.

Concurrently, the technical project team is working with its IT partners to design the technical infrastructure, including hardware, network, and desktop requirements and other aspects of the future technical environment (including organizational responsibilities among IT units).

Associated Deliverables

• Future business process solution design document:
  - Flowcharts of processes and subprocesses
  - Description of the process
  - Reporting recommendations
  - Security recommendations
  - List of necessary interfaces
  - Data conversion requirements and mappings
  - Principles and definitions governing the use of foundational data definitions if applicable
  - Justification for software modifications as outlined in the Project Administration document.
• Preliminary training plan
• Cut over strategies and plans
• Technical infrastructure design document
  - Hardware
  - Software
  - Middleware
IT roles and responsibilities

- Final scope description in *Project Definition Document*
- Updated project plans and budgets

**Configure the Business Solution**

**Description**

During the configuration or build stage, the solution is ultimately implemented in the testing instance in accordance with the solution design documents. Baseline applications are set up, business rules are established, workflows are defined, security and user accounts required for testing are established, the master test data set is defined, data mapping rules are defined, and test data is converted and entered. In the development instance, coding for software modifications, automated conversion routines, reporting, and other features is performed, unit tests are conducted, and the software is migrated into the testing instance. External to the Project FRESH team, the vendor is coding the baseline enhancements and modifications that will eventually be installed in the testing instance, and owners of legacy systems are modifying the integral data structures to provide output files in accordance with the interface specifications.

The configuration phase also includes the beginning development of draft policies, procedures and user guides since testing should assess the reliability and functionality of the entire business process (not just the applications) in a production-like mode.

**Associated Deliverables**

- Applications set up and configured
- Prototype business rules and workflows defined
- Preliminary security and user accounts established
- Master data sets established
- Required test data converted
- Initial interface specs developed and communicated
- Demonstration of system functionality for business process owners and process group members conducted
- Preliminary drafts of policies and procedures and user manuals started
- Enterprise server solution determined

**Test and Refine the Solution**

**Description**

Testing of the individual processes begins after the prototypes have been configured in the system with sufficient data to support transaction testing for each process. This will include processing a defined set of transactions for each process to examine the outcome and to enable the procedures and steps to be fully understood. As the testing proceeds, the processes will be refined, the procedures identified, refined and documented, individual issues resolved, and modifications tested and installed as available. Users of the systems such as departmental business service assistants and central office personnel may be incorporated in the test to provide an opportunity for their input into the procedures and processes. Data mapping for transfer of legacy data will continue to be
tested and refined as well as the resolution of USNH’s reporting solution and location of historical data and volumes of historical data to be brought forward.

The actual outcomes are documented and updated as testing is completed and processes refined throughout the testing phase. The outcomes will be compared to the expected outcomes for the processes. Refined processes or expectations will be developed as needed based on the results of testing. (See the *Project Administrative Document* for more details). During this phase, demonstrations of the processes may be developed for a variety of groups including but not limited to the individual process groups, the integration team, the BSC Forum, and the ESC. This testing is designed to test the individual processes. It may include testing against other modules as required. Full integrated testing is accommodated in the next phase.

**Associated Deliverables**

- Completed test results
- Refined processes, testing plans, scenarios, scripts and expectations
- Draft of data mapping of legacy data, reporting solutions, location of historical data and volume of legacy data determined
- Draft policies and procedures
- Draft user materials
- Draft training materials

**Perform System, Integrated and Stress Testing**

**Description**

Once all solutions, modifications and extensions have been delivered and tested, system testing can commence to verify that Banner performs as designed with live data. Integrated testing follows to prove the full interoperability of the system as a whole. All components of the go-live production environment need to be integrated into this testing cycle, as they are become available. Toward the end of this cycle performance testing under load (stress and availability testing) will be conducted to produce metrics to aid tuning the software and hardware for production.

Integrated testing will test all the functionality of each module in an emulated live environment. During this stage of testing, a representative subset of directly entered transactions and feeds from external systems using job scheduling routines emulating production will be processed to verify system functionality. Final testing of legacy data mapping and reporting solutions will be conducted throughout this step. Scripts, refined in the prior phase, will be used to determine results in a fully integrated environment and provide for any final refining necessary using data mapped from the legacy systems as much as possible. Interfaces, production schedules and reporting requirements are also tested and final refinements made.

Modifications are fully tested, installed, and final testing performed in this segment. Deployment solutions are finalized and fully tested as well as stress tests to determine likely system performance. Final documentation is prepared and end user training scheduled and communicated.
Some modules may require parallel processing, such as payroll processing and preparation of new year purchase orders. Any parallel testing required will be completed during the integrated testing mode.

Presentations of final processes are developed and submitted to the appropriate groups. Final sign-off by each of the process groups, the integration team, the ESC and any other pertinent parties is obtained on the final processes.

**Associated Deliverables**
- Individual system check list
- Interoperability check list
- Summary of areas requiring refinement/adjustment
- Systems performance metrics
- Identification of software/hardware that may benefit from scaling
- Completed systems performance test results
- Completed integrated test results, including tests of external interfaces
- Completed parallel test results, as appropriate
- Final polices and procedures
- Final user materials
- Final training materials
- Documented acceptance by project management, business process owners, the ESC and other pertinent parties

**Execute the Conversion**

**Description**
The conversion process consists of the following major steps:

- Finalized detailed mapping rules including historical data
- Extract data from legacy systems and populating appropriate tables
- Perform quality assurance on the converted values and resolve exceptions to the conversion rules

**Associated Deliverables**
- Final conversion plans
- Final mapping rules
- Automated conversion facilities
- Legacy data converted
- Production enterprise server systems on-line
- Banner production environment constructed and on-line

**Train End Users**

**Description**
A completed training plan identifies the various groups that need to be trained, the training curriculum for each group, the mode of training for each piece of the curriculum and the approximate time frame and locations for the training sessions.
Training materials will be developed by the Project FRESH team and the completed training plan will be initiated to facilitate the training.

**Associated Deliverables**
- Initiate completed training plan
- Final end user training materials/curriculum completed and logistics determined and communicated
- Security, connectivity and desktop configured
- User community trained

**Deploy the Solution**
**Descriptions**
The applications are set up and configured in the production instance, software modifications and enhancements are migrated, and full converted data sets are loaded.

**Associated Deliverables**
- Implement final cut over plan
- User support structures in place
- Fully functional system exists

**Plan Continuous Improvement**
**Description**
Management evaluates system effectiveness, tunes the system to enhance performance, modifies procedures as required, and conducts ongoing training and consulting programs to support the new information technology.

**Associated Deliverables**
- Plans for the introduction of additional features, modules, upgrades, performance standards and monitoring completed.
- Assess human resource requirements associated with post implementation maintenance.
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Preliminary Milestone Work Plan

Listed below are preliminary high-level project milestones, their associated completion dates and a brief description of the milestone.

<table>
<thead>
<tr>
<th>Milestone</th>
<th>Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Implementation team initial training completed</td>
<td>01/07/00</td>
</tr>
<tr>
<td>The implementation team and other designated individuals will take part in overview training that will concentrate on key areas in finance, human resources and research accounting. The goal of this training is to identify and learn more about foundational data structures.</td>
<td></td>
</tr>
</tbody>
</table>

| Functional/technical specifications on attributes received      | 02/01/00        |
| The gap report identified limitations with the chart of account hierarchy and reporting structure available in the existing baseline SCT software. In order to meet USNH's management reporting needs, SCT has committed via contractual agreement to add chart of accounts attributes functionality to its baseline software. A component of this agreement is that USNH will serve as a development partner for this enhancement and will have an opportunity to evaluate the proposed functional and technical specifications. |

| Full SCT system education completed                           | 06/30/00        |
| The process groups will participate in extended training and consulting sessions as they begin the design of a future business process solution. In all likelihood additional training and consulting will take place after this date; however, the majority of the system education will be completed by this date. |

| Attributes in baseline application                             | 07/31/00        |
| The chart of accounts attributes functionality is included in the baseline SCT Banner application. |

| Preliminary process designs completed. Business process redesigns, modifications, workflows submitted and approved | 08/01/00        |
| The process groups are responsible for designing the preliminary business solution(s) for their assigned area(s) and including their recommendations in a preliminary business solutions document. This document includes a narrative of the proposed future business process, recommendations for business process redesign, workflow definitions and requests for modifications to the SCT baseline software (if any). |

| Preliminary process designs configured in baseline application and ready for testing and refinement |               |
| For Finance                                                  | 08/31/00        |
| For Human Resources                                         | 09/30/00        |
The preliminary process designs will be configured in the baseline application by these dates. This work includes defining applicable codes within the application, populating and completing setup forms, and developing rule codes, etc.

**SCT 4.X Delivered** 10/31/00
This version of the SCT software includes the release code for the chart of accounts attributes functionality as well as pre-release code for the web-compliant Oracle Developer 2000 Forms 6.0.

**SCT 4.X Installed and Tested** 12/31/00
By this date, SCT version 4.X will be installed and tested. All testing and refinements will occur in this version.

**All process solutions, data mappings, business process redesign, modifications and workflows frozen and tested.**
- For Finance 01/31/01
- For Human Resources 06/30/01
By this date, the preliminary process solutions have been thoroughly tested and no additional solution development will occur.

**New production environment ready.** 01/31/01
By this date, the new production environment, including hardware and operating systems, is functioning.

**New production environment and application proven** 03/31/01
The new production environment and associated applications have been thoroughly tested and proven stable. All future testing will occur in this environment.

**Code Freeze**
- For Finance 03/31/01
- For Human Resources 09/24/01
No new programming efforts will occur after this date. Bug fixes will be allowed, but no new or substantial development initiatives will be undertaken.

**Parallel payroll testing and central office training completed.** 12/07/01
By this date, the payroll process has been fully tested via parallel payroll runs. Additionally, central office staff have been trained on the human resources system.

**Finalize all pre-production testing**
- For Finance 06/01/01
- For Human Resources 12/07/01
All pre-production testing has been finalized. Systems are ready for production.

**End users trained**
- For Finance 06/30/01
- For Human Resources 12/31/01
By this date, the end user community has been trained on the new software and business processes. Processes are well understood and accepted throughout the user community.

**Final data conversion executed.**

- For Finance: 06/30/01
- For Human Resources: 12/31/01

The final data conversion, which includes all required data needed to migrate to the new system, has been executed.

**Go live**

- For Finance: 07/01/01
- For Human Resources: 01/01/02

On these dates the transition to the new system occurs. Users perform transaction processing in the SCT application.
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Project Assumptions

Introduction
This document contains the assumptions for Project FRESH. Project assumptions can be categorized into the following categories:

- Timelines
- Implementation Philosophy and Approach
- Project Management and Control
- Staffing
- Training, Change Management, and Communication
- Vendor Performance
- Budget

Assumptions for each of these areas are set forth below:

Project Assumptions

Timelines
The assumed final completion dates for Phases 1 and 2 for the finance and human resources areas are shown below. Certain items within each phase may be completed before the final completion date as listed hereunder.

<table>
<thead>
<tr>
<th>Area</th>
<th>Final Completion Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Finance</td>
<td></td>
</tr>
<tr>
<td>Phase 1</td>
<td>7/1/01</td>
</tr>
<tr>
<td>Phase 2</td>
<td>7/1/02</td>
</tr>
<tr>
<td>Human Resources</td>
<td></td>
</tr>
<tr>
<td>Phase 1</td>
<td>1/1/02</td>
</tr>
<tr>
<td>Phase 2</td>
<td>10/1/02</td>
</tr>
</tbody>
</table>

Implementation Approach

- USNH will go live with the October 2000 production version of the Banner Finance and Human Resources modules. This version will include baseline enhancements for chart of account attributes.
- The initial deployment of the finance and human resources business solutions will include an enhanced reporting environment (MIR).
• Upon implementation, the SCT Finance and Human Resources modules will operate in a single instance separate from the existing student and financial aid instance.

• USNH will implement modifications to the SCT Finance and Human Resources suite. These modifications include the implementation of a pre-release of the Oracle Forms upgrade code (to enable web deployment) and additional modifications in four areas set forth in Exhibit 1 to the SCT Software License Agreement. SCT will incorporate such modifications into the baseline product no later than February 2002.

• With the exception of the modifications described above, Project FRESH seeks to adhere to a near zero modification policy. Business processes will be redesigned to fit the software and to leverage the capabilities of the new technologies to the extent that it is possible.

• The Banner software and related business processes will be designed and implemented by the Project FRESH team in a coordinated and integrated fashion. The design and implementation of shared modules, tables, etc. will include other user groups as appropriate.

• The Project FRESH team will adhere to a common implementation methodology and a set of standards governing the content of deliverables.

• The project’s stated goals and objectives will serve as a guide for the design, implementation, and deployment of new finance and human resources business solutions.

• The design, implementation, and deployment of the finance and human resources business solutions will include broad and substantial input from distributed processors, end users, and other stakeholders.

• The Project FRESH technical team will partner with senior IT management to design and implement a technical infrastructure that will support the new finance and human resources systems.

• The Project FRESH team will provide interface specifications and guidance to support existing USNH interfaces. It is the responsibility of the owners of such interfacing systems to make the necessary changes to those systems in order provide data as required by the SCT applications.

• Those systems now being maintained/managed by CIS will have interfaces written by CIS.

**Project Management and Control**

Appropriate project management and control mechanisms will be put in place to ensure that the following essential requirements are properly managed and controlled by the Project FRESH management team, the ESC, and business process owners pursuant to the procedures defined in the *Project Administration Document*.

• Comprehensive project planning and effective resource management.

• Definition of the project scope and approval of scope changes.
• Approval of proposed software modifications.
• Approval of policy, procedure, and organizational changes.
• Approval of expenses for Project FRESH.
• Timely resolution of issues and decision making.
• Monitoring and reporting of the status of project deliverables.
• Comprehensive review and formal acceptance of completed deliverables.
• Other project management and control procedures as required.

Staffing
• The USNH philosophy with respect to the project is to minimize reliance on external consulting resources to the extent possible. USNH will dedicate several of its most capable professionals to the project on a substantially full time basis. It is assumed that additional representatives from the campuses and system offices will be made available to the project as needed to ensure that the project attains its goals and objectives.

• Under the existing model, all FIS/HRIS technical staff members serve as implementation specialists for Project FRESH, and this staff is managed under the guidance of the project’s IT team leader. During the project’s life cycle, this same group of individuals will also be responsible for supporting the existing finance and human resources systems and for modifying certain legacy systems to conform with the new SCT interface requirements. The IT team leader, with respect to maintaining the legacy systems, is responsible to the UNH Director of Enterprise Computing.

• USNH will make the project the number one priority for all essential staff members (both functional and technical) for a period of up to three years. During this period, USNH will limit the undertaking of non-essential projects so that resources can remain dedicated to the successful completion of activities encompassed within the Project FRESH scope.

• The Project FRESH team will receive adequate training and tools that will allow team members the opportunity to successfully complete their assigned project responsibilities and to prepare for the ongoing operation of the new systems and processes in a production mode.

• Project FRESH will operate in an environment that fosters respect and open, collaborative creativity and information sharing among team members, including the SCT consultants.

• The SCT application consultants will serve as members of Project FRESH teams, and their activities will be mutually planned and scheduled under the purview of the team leaders, the USNH Project Director, and the SCT Project Manager.
Training, Change Management and Communication

- Training and consulting support for the new Finance and Human Resources systems and processes will be based on a distributed support model. Project FRESH will provide the resources necessary to facilitate the initial deployment training. It is the responsibility of the individual campuses to provide staff support for ongoing training and consulting needs.

- Project FRESH will provide other consulting and change management services designed to ready the USNH community for the new system and business processes.

- The Project FRESH team will provide timely and regular communications regarding project status and events to end users, constituency groups, and other key stakeholders. A communication plan will be developed and included in the Project Administration Document.

- Each campus will appoint a Campus Communication Liaison to coordinate the information sharing of Project FRESH activities at the campus level.

Vendor Performance

- SCT will provide seasoned, high-quality consultants to support the implementation of the SCT Finance and Human Resources systems at USNH.

- SCT will meet the agreed-upon dates for delivering enhancements to their baseline products and temporary modifications at the USNH site as defined in the Software License and Technical Currency Agreements and further articulated in additional agreements between SCT and USNH.

- The design and implementation of modifications will be managed jointly by SCT and USNH in accordance with written specifications approved by USNH. Such modifications will be designed and implemented in a manner that is consistent with the planned strategy for incorporating the subsequent associated enhancements into the baseline product. Additionally, there is an expectation that SCT will share modified code with USNH as soon as feasibly possible.

Highlights of Major Budget Assumptions

Overall Project Budget and Contingency

- USNH will make every effort to complete the activities encompassed in the Project FRESH scope within the $10.3 million budget set forth in the Long Range Technology Plan V2.0.

- The $10.3 million budget encompasses a three-year period.

- The $1.3 million general contingency included in the Long Range Technology Plan V2.0 (or a portion thereof) has been approved by the ESC to support Project FRESH.

Base Application Software and Vendor Consulting Services

- The $1.6 million budget for the baseline application software assumes no customizations by USNH.
The $1.2 million budget for vendor implementation and training services includes an amount required to train internal staff using the aforementioned “train the trainer” approach.

**Internal Staff**
- The project budget includes $3.3 million of incremental functional staffing costs for: (1) project and team management; (2) backfills for internal project personnel at the central and campus levels; (3) new term positions necessitated by the project. Not all internal project effort is reflected in the project budget since it is assumed that staff members from central and campus offices will carry additional uncompensated responsibilities in support of this important project.
- The project budget assumes no provision for additional technical staff beyond the amount included in the $3.3 million.

**Central Systems Hardware**
The budget assumes that incremental costs associated with database servers and other central hardware requirements will be funded jointly by current operating budgets and the project in equal amounts of approximately $.6 million.

**Infrastructure Enabling Technologies**
- The budget includes software and hardware costs associated with document imaging/workflow and data warehousing solutions in the amounts of $.4 million and $.5 million, respectively. These estimates were derived based on budgets for similar projects undertaken at other universities.
- It is assumed that the costs associated with implementing these enabling technologies are included in the staffing estimates summarized above.

**Desktop Support**
- The *Long Range Technology Plan V2.0* assumes that the replacement of desktop hardware on a three to four year cycle necessary to access the new systems will be the responsibility of each campus. However, there is a minor part of the budget allocated to situations with extenuating circumstances pending approval.
- Similarly, it is assumed that costs associated with workstation support will be a campus responsibility.

**Other Expenses**
- The project budget also includes amounts for one-time Oracle license fees ($.8 million) and other costs ($.9 million) as shown in the *Long Range Technology Plan V2.0*.
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Project Constraints

Introduction

The major constraints that will be imposed on the Project FRESH implementation and deployment activities can be grouped into the following major areas:

- Human Resources
- Budget
- Timing
- Vendor Reliance
- Internal and External Mandates
- Culture

Each of these areas of constraints is discussed below.

Constraints

Human Resources

- USNH has dedicated substantial human resources to Project FRESH but many of these individuals also have operational responsibilities and/or commitments. Therefore, the pool of experienced individuals available to support Project FRESH will be periodically constrained, by cyclical events such as year end closing, benefits enrollment, and other similar tasks.

- Many of these individuals associated with Project FRESH have not had the opportunity to participate in a major enterprise-wide systems implementation and business process initiative. Accordingly, they will be constrained by the learning curve that all individuals experience during their first major project of this nature.

- Additional project constraints may be realized due to staff turnover as employees develop highly marketable skill sets as a result of their Project FRESH work.

- The current market for IT professional is extremely competitive. This makes recruiting and retaining staff difficult.

Budget

- Project FRESH expenditures should be limited to the $10.3 million budget established for the Project, plus any portion of the $1.3 million LRTP V2.0 contingency that may be appropriated by the ESC.

Timing

- The scope of Project FRESH, Phase 1 is constrained by the targeted go-live dates of 7/1/2001 and 1/1/2002 for finance and human resources, respectively. Failure to meet
these dates will result in budget overruns and the continued reliance on existing systems that are prone to business risk.

**Vendor Reliance**
- SCT has shown a serious commitment to meet USNH’s stated business requirements, but there is no guarantee that all required or desired functionality will be encompassed in the baseline enhancement solution.
- Choice of an integrated system may cause some areas to lose functionality even though the overall system meets the goal of providing enhanced functionality.

**Internal and External Mandates**
- Project FRESH system implementation and redesign activities will be constrained by the need to adhere to certain internal and external requirements, including federal and state regulations, Trustee mandates, and standards for internal control and sound business practices that enable USNH management to effectively carry out its fiduciary responsibilities.

**Culture**
- Project FRESH redesign activities will take into consideration those changes that are politically saleable and acceptable within the broader USNH culture.
Project Risks and Mitigation Strategies

The Risks

Common risks associated with large enterprise-wide systems replacement and business process enhancement projects can be characterized as follows:

- The project does not fulfill its goals and objectives.
- The project exceeds its established budget.
- The project misses its implementation deadlines.

In the most extreme case, a project may be deemed an implementation failure, meaning that an institution cannot conduct its essential business activities. In less extreme circumstances, the risk outcomes are less severe and are often evidenced by poor integration, substantial software modifications, lack of business process improvements, ill-conceived implementation strategies that may limit the return on investment, insufficient training and a variety of other unfavorable outcomes.

Conditions and Factors that Promote Risk

The conditions and factors that promote risk can be discussed within the context of the following general areas:

- Strategic vision
- Scope creep
- Project management and control
- Functional and technical staffing
- Vendor performance
- Integration and team communication
- User input and communication
- Decision making and issues resolution
- Training and change management
- Interfaces

Strategic Vision

Description of Risk

The ultimate product may not support strategic management initiatives, including planning and resource allocation if visionary executives are not actively engaged in the solution design. A lack of strategic vision can also result in limited improvements to business processes or a tendency to replicate current processes.

Mitigation Strategy:

The Project FRESH team structure includes a provision for executive focus membership in each of the process groups to provide strategic vision.
**Scope Creep**

**Description of Risk:**
A lack of scope definition and/or procedures to control scope changes may result in budget overruns, missed timelines, and a lack of focus that diminishes the overall quality of work products.

**Mitigation Strategy:**
A preliminary scope document is included in the *Project Definition Document*. This preliminary scope document contains high-level assumptions. The scope will continue to be refined throughout the design phase. Upon the conclusion of that activity phase, all proposed changes must be formally approved by the ESC (see procedure in the *Project Administrative Document*).

**Project Management and Control**

**Description of Risk:**
Ineffective project management could result in a variety of risks, including budget overruns, missed deadlines, faulty implementation strategies, and low-quality work products that do not fulfill the institution’s business requirements.

**Mitigation Strategy:**
Under the guidance of the ESC, the Project FRESH management team will establish and communicate formal written procedures that promote sound project management and control. Project plans that clearly establish the due dates for deliverables will be developed by Project FRESH management.

Project management will provide timely reports on the status of project deliverables to the ESC.

Project management will make available training sessions for key project staff in project management techniques.

**Functional and Technical Staffing**

**Description of Risk:**
An insufficient number of functional and technical staff members dedicated to a project and/or a mismatch in the required skill sets could exacerbate project risk. USNH should anticipate some degree of staff turnover as project participants develop new, highly marketable skill sets.

There is also risk associated with spreading staff across too many project activities.

**Mitigation Strategies:**
The work will be staged carefully during the planning process and resources will be deployed to the highest priority tasks. Throughout the course of the project, scope will be monitored and changed to reflect the available resources.
In the event that additional resources are required, a balance between the use of outside consultants and internal staff for various project activities will be examined. Appropriate training, support and award programs will be made available to project team members. USNH will limit the undertaking of other nonessential activities during the life cycle of Project FRESH.

**Vendor Performance**

**Description of Risk:**
If SCT does not provide adequate training, consulting and support services, there is a risk that the project will not develop adequate solutions to meet USNH’s business requirements and/or meet its implementation deadlines. Additionally, if SCT does not deliver the baseline enhancements and modifications on the established delivery dates, the project may miss its implementation timeline and/or exceed its budget. There is also a risk that the solution delivered by SCT may not fulfill all of USNH’s business requirements, which may hinder the project’s ability to attain its goals and objectives.

**Mitigation Strategy:**
USNH will monitor the performance and quality of training, consulting and support services provided by SCT and take appropriate action to correct substandard performance. USNH will work with SCT to ensure that enhancements and modifications are delivered on time, in accordance with USNH business requirements, and are consistent with the goal of incorporating these functionalities into the baseline. USNH will play an active role in the definition and review of functional and technical specifications for the baseline enhancements and modifications and will be available to serve as an early test site. USNH will strive to acquire code as early as possible to facilitate on-site review. USNH will obtain periodic status reports from SCT to ascertain progress in completing the deliverables for both baseline enhancements and temporary modifications. The contract with SCT provides appropriate monetary rewards as an incentive to deliver the modifications and enhancements on time.

**Integration and Team Communication**

**Description of Risk:**
If teams operate and make decisions in a stovepipe fashion, there is a substantial risk that the applications and the business processes will not be properly integrated. Further, a lack of communication among the teams and process groups may lead to flawed designs, work inefficiencies, and poor team dynamics and synergy.
Mitigation Strategy:
Project FRESH, from its very onset, will have an active integration team to ensure effective integration of the applications and business processes. The team will meet no less than monthly throughout the project’s life cycle.

Team leaders will also meet with the Project Director several times each week to promote effective communication among the management team.

End User Input and Communication

Description of Risk:
A lack of broad user input could result in design flaws, misperceptions, and a lack of user buy-in and acceptance.

Mitigation Strategy:
The Project FRESH team structure is designed to include a substantial number of distributed processors, end users, and other stakeholders.

A communication plan will be established for the project. Communication will be timely and widely distributed. Opportunities for broad and constructive dialogue within the USNH community will be promoted and significant information will be presented in both an active and passive format.

Decision Making and Issues Resolution

Description of Risk:
Untimely decision making and issue resolution may cause a project to miss its implementation deadlines or exceed its budget.

Mitigation Strategy:
Formal decision making, issues resolution, and acceptance processes are included in the Project Administration Document.

The status of outstanding issues will be tracked and monitored by project management and reported regularly to the ESC.
End User Training

Description of Risk:
Ineffective end user training programs create significant frustration, staff turnover, and reduced efficiency.

Mitigation Strategy:
Project FRESH will develop a formal training and change management support plan that will set forth the types of training programs required, including the anticipated resources.

Interfaces

Description of Risk:
Numerous ongoing operations within USNH will require the successful and timely conversion of external data interfaces between our current legacy HR/finance applications and Banner. Frequently institutions underestimate the level of functional and technical resources required for modifying system interfaces necessitated by the legacy system replacement. This common planning deficiency can result in a project missing its implementation timelines and exceeding its budget.

Mitigation Strategy:
USNH will develop an interface plan that includes an estimate of required resources by the spring of 2000. The design of the reporting solutions environment should include the requirements of external systems interfaces as well as reporting needs. Interface specifications will be made available to the owners of finance interfacing systems no later than early fall of 2000 and spring of 2002 for Human Resources.
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Team Structure and Organization

Model for the Overall Team/Group Structure

Introduction
The Project FRESH team structure is designed to provide for the active involvement of visionaries, key stakeholders and end users. Project FRESH was initiated by USNH to deploy new administrative software solutions in the areas of finance and human resources. While the primary focal point of Project FRESH is the implementation of the new SCT finance and human resources systems, business process redesign (BPR) will also be an important part of this project.

Each business process area will engage in the following activities:

- Define the baseline (i.e. current) business requirements.
- Assess the capabilities (gaps and opportunities) of the new software to fulfill the business requirements.
- Establish a vision of the future business process that is informed by an understanding of the overall business requirements of USNH and the inherent capabilities of the software.
- Design integrated business solutions that allow the project to attain a near zero modification policy, while capitalizing on the benefits of added technological features.
- Build or configure the business solutions, that include a fully functional, integrated system and technical infrastructure, documented business process flows, and updated policies and procedures.
- Test and refine the business solution (including new policies and procedures).
- Develop documentation and end user training materials for the business solutions.
- Train end users.
- Deploy the production business solutions.

Overview of the Project FRESH Team Structure
Implementing a software solution is much like constructing a new building in terms of roles and phases. These projects require: (1) client or executive visionaries to articulate the overall vision and budget for the end product or solution; (2) architects to design the solution in a manner that is compatible with the vision, available tools, and budgetary constraints; (3) builders to construct the solution in accordance with the design specifications; and, (4) project managers to guide the day-to-day activities of all of these participants to ensure that the overall solution is delivered on time, on budget, and in an integrated, high-quality fashion.

For Project FRESH the ESC, with broad and substantial advice and participation from senior management representatives, fulfills the client or executive visionary role. Process groups serve as architects for the project in that they design a solution that fulfills the
business needs of USNH and is compatible with the software’s capabilities. Implementation specialists, with the support of process group members, build the solution based on the design specifications established by process group architects. The project director and team leaders are responsible for managing the day-to-day activities of Project FRESH and for ensuring that the collective deliverables form an integrated, practical, timely and cost-effective business solution.

**Constraints on Group Decision Making**
Project FRESH groups do not have the authority to bypass or usurp existing decision-making and policy-setting processes that are in place at USNH. It is the joint responsibility of the project leadership, process group chair, and business process owners to make sure that any proposed business policy change is properly authorized before such change is implemented. While this document describes the roles and responsibilities of the Project FRESH team, the processes for issue resolution, sign-off and acceptance of deliverables and project outputs, etc are included in the *Project Administration Document*. 
Project Management

Overview
The management of the project is directed by the Executive Steering Committee (ESC), the Project Director and the Team Leads.

Executive Steering Committee (ESC)
The ESC is responsible for providing executive oversight for all Project FRESH activities. In this capacity, the ESC, with assistance from the project director, will:

• Establish the goals, objectives, scope, budget, and decision-making guidelines for the project.
• Approve the project’s milestone work plan.
• Monitor the status of major deliverables.
• Perform executive level reviews of business process solution designs and other major deliverables.
• Authorize proposed business process redesigns and software modifications.
• Resolve issues and conflicts that may hinder the project from meeting its goals, objectives, and milestone dates.
• Approve, recommend or refer appropriate policy level changes.

The organizational structure for Project FRESH as shown in the Long Range Technology Plan V2.0 includes a provision for an Advisory Committee to provide advice and council to the ESC as needed. The committee would not generally convene as a full group, but rather individuals would be invited to meet with the ESC during periods of design and implementation relative to their respective functional areas.

Role of the Project Director
The Project Director is responsible for managing the day-to-day operations of Project FRESH.

• Recommend an appropriate team structure for the project. Work with the ESC and other senior management representatives and team leaders to identify and appoint suitable team representatives.
• Establish and communicate the implementation methodology, administrative, and control mechanisms for the project.
• Direct the development of the project scope and work plans.
• Work with the ESC to mobilize process groups including the development of the group’s charter and the identification of appropriate group membership.
• Monitor the status of deliverables.
• Review all major deliverables for completeness, accuracy, integration, and consistency with the approved design.
• Review standards and recommendations for shared data, foundational data structures, tables and other naming and numbering conventions.
• Coordinate the timely resolution of issues.
• Prepare periodic reports regarding project status and issues for the ESC and other senior management groups at the request of the ESC.
• Present executive level reviews of deliverables to the ESC and invited Advisory Committee members.
• Manage the process sign off/acceptance process.
• Manage the finances of the project.
• Perform other project management activities as needed.
• Serve as a resource for team leaders and members to guide the completion of deliverables.
• Manage the strategic development partnership between USNH and SCT including SCT’s deliverables.
• Resolve conflict among project leaders and team members.
• Ensure that all proposed policy and business process changes are approved by the business process owner, ESC and other authoritative bodies as appropriate on a timely basis.
• Oversee timely and relevant communications to USNH constituencies through a variety of forums, including the project’s web page, newsletters, group presentations, etc.

Role of Team Leads
The team leaders are directly responsible for managing the work of the implementation specialists and monitoring the activities of process groups. The team leaders work with business process owners and process group chairs to create work teams of implementation specialists and process group members to design, implement, test and deploy effective, creative, and integrated business solutions in their assigned areas of responsibility. The team leads also assist the project director as requested in performing certain overall project management tasks, including defining the scope of the project, mobilizing the teams, developing project plans, and establishing administrative and control mechanisms.

• Help shape the scope of the project.
• Identify areas of potential scope creep.
• Participate in the development of project work plans.
• Develop detailed task-level work plans to ensure that the implementation specialists and process groups complete deliverables by the dates in the project’s milestone plan.
• Monitor the status of deliverables
• Provide weekly status reports to the Project Director.
• Communicate the project’s established implementation methodology to implementation specialists and process group chairs.
• Serve as a coach, mentor, and subject matter expert to team and process group chairs.
• Provide guidance as the assigned individuals work to complete their deliverables.
• Facilitate creative thinking, good team dynamics, open communication, high-quality work products, and effective integration.
• Review standards and recommendations for shared data, foundational data structures, tables and other naming and numbering conventions
• Partner with business process owners and the project director to mobilize process
groups (as authorized by the ESC) and identify group membership.
• Assign individual tasks to implementation specialists
• Partner with the process group chair to manage the deployment of available
resources.
• Review deliverables to ensure that the solution is complete, accurate, integrated,
practical, and in accordance with business requirements.
• Resolve conflict among team and process group members in a manner that promotes
mutual respect and a healthy work environment.
• Identify and log issues that arise during the course of the project as outlined in the
Project Administration Document.
• Perform other project leadership tasks as required.

Role of Process Group Chairs
The process group chairs are responsible for organizing and managing the process
group’s work and are accountable for the group’s outcomes and deliverables. Process
group chairs work with the appropriate team leader to create work teams of
implementation specialists and process group members to design, implement, test and
deploy integrated business solutions in their assigned areas of responsibility.
• In conjunction with the team leader, develop the charge for the process group.
• Communicate the charge to process group members.
• Develop and maintain process group level work plans.
• Assign tasks to process group members.
• Provide weekly status reports to the team leader.
• Provide guidance to group members as they work to complete deliverables.
• Prepare a business solution document outlining the future business process.
• Resolve conflict among group members.
• Identify and communicate issues to the team leader.
• Schedule meetings and work sessions. Create and communicate agendas for such
meetings.
Role of the Integration Team

General Purpose and Role
The Project FRESH team structure will include an integration team. This team ensures integration among applications and processes.

Specific Responsibilities
- Analyzes solution design documents, requests for software modifications, scope changes and business process redesign proposals and provides feedback to the business process owners.
- Reviews the recommendations of the shared data group.

Membership
The membership for the integration team is:

<table>
<thead>
<tr>
<th>Name</th>
<th>Position/Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diane Cotter</td>
<td>Project Director</td>
</tr>
<tr>
<td>Bill Baber</td>
<td>IT Team Lead</td>
</tr>
<tr>
<td>Melanie DeZenzo</td>
<td>Chair Budget &amp; Position Control process group</td>
</tr>
<tr>
<td>Sarah Flause</td>
<td>MIS/HR</td>
</tr>
<tr>
<td>Suzanne Huard</td>
<td>OSR representative</td>
</tr>
<tr>
<td>Carol Powers</td>
<td>HR Team Lead</td>
</tr>
<tr>
<td>Alice Samuel</td>
<td>Finance Team Lead</td>
</tr>
<tr>
<td>Invited Participants</td>
<td></td>
</tr>
<tr>
<td>such as Process</td>
<td></td>
</tr>
<tr>
<td>Group Chairs</td>
<td></td>
</tr>
</tbody>
</table>
Role of the Implementation Specialists

Overview
The implementation specialists serve as the nucleus of the larger USNH Project FRESH team. Implementation specialists are generally appointed by business process owners or IT management to serve as application or technology experts in their assigned areas.

Specific Responsibilities
- Install the SCT application software and migrate data to the required instances. (Specific to IT.)
- Work with USNH IT partners to deploy other components of the technological infrastructure, including hardware, networks, user support structures, etc. (Specific to IT.)
- Attend extensive systems education classes conducted by SCT.
- Participate in the development of the project work plans.
- Assist process groups to identify gaps based on existing business requirements and the software’s capabilities.
- Serve as an expert resource to process groups as they identify proposed changes to business.
- Determine how database structures, workflows, security, menus, forms, and other application processes and features will be implemented.
- Assist in the definition and design of the conversion plan and strategies; develop data mapping rules and validate/reconcile converted data.
- Build conversion programs. (Specific to IT.)
- Develop interface specifications and file transfer protocols to support the exchange of data between the SCT applications and auxiliary systems.
- Develop specifications for baseline system enhancements.
- Develop reporting environments and select tools; build reports for use by business process owners and end users.
- Draft updates to policy and procedure manuals and develop end user training materials.
- Perform other implementation activities as required.

Membership
The implementation specialists appointed by the ESC are:

<table>
<thead>
<tr>
<th>Name</th>
<th>Area of Expertise</th>
<th>Work Team</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dona Alexander</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Pat Ames</td>
<td>MIS – Finance</td>
<td>IT</td>
</tr>
<tr>
<td>Mike Ashcroft</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Deirdra Baldwin</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Stephanie Behan</td>
<td>Payroll/Disbursements</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Lisa Cloyd</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Name</td>
<td>Department</td>
<td>Division</td>
</tr>
<tr>
<td>--------------------</td>
<td>---------------------</td>
<td>----------------</td>
</tr>
<tr>
<td>David Cosgrove</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Glenn Dailey</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Melanie DeZenzo</td>
<td>Budget/Position Control</td>
<td>Human Resources/Finance</td>
</tr>
<tr>
<td>Richard Dockery</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Stephanie Eno</td>
<td>Accounts Payable</td>
<td>Finance</td>
</tr>
<tr>
<td>Sarah Flause</td>
<td>MIS – HR</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Ray Foss</td>
<td>IDC/Compliance Issues</td>
<td>Finance</td>
</tr>
<tr>
<td>Bob Goudreau</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Margaret Hardy</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Kim Harkness</td>
<td>Campus Human Resources</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Margie Harrell</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Suzanne Huard</td>
<td>OSR</td>
<td>Finance/Human Resources</td>
</tr>
<tr>
<td>Judy Landry</td>
<td>Campus Finance</td>
<td>Finance</td>
</tr>
<tr>
<td>Joe Poulin</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Jan Shea</td>
<td>MIS</td>
<td>IT</td>
</tr>
<tr>
<td>Cindy Silver</td>
<td>Human Resources</td>
<td>Human Resources</td>
</tr>
<tr>
<td>Denise Smith</td>
<td>Purchasing</td>
<td>Finance</td>
</tr>
<tr>
<td>Susan Sullivan</td>
<td>MIS</td>
<td>IT</td>
</tr>
</tbody>
</table>
Role of Process Groups

Process Group Description
Major business process areas encompassed within the Project FRESH scope include the following:

Human Resources
- Employment Administration
- Benefits Administration
- Payroll/Labor Distribution/Time and Attendance
- Mass Salary Increase Process

Finance
- Budget
- Chart of Accounts and Financial Operations
- Buy/Pay
- Accounts Receivable and Billing
- Sponsored Programs Post-Award Administration

Suggested Composition of the Process Groups
Each major business process area listed above will be represented by a process group whose role shall be to design the future business processes based on the capabilities of the underlying software. The process groups will generally include business process owners or designees, other USNH system office staff, and knowledgeable campus representatives. The size and composition of each group will be determined by the business process owner(s), in consultation with executive management from the various campuses.

The business process owner or designee will chair each process group. The groups will also include either the Finance or Human Resources team leader, as appropriate, who shall partner with the chair to facilitate the timely completion of deliverables in accordance with the project plan. The groups will also include at least one functional and technical implementation specialist. The Project Director serves as an ex officio member of all process groups. This overlapping membership is designed to ensure broad input from all constituencies.

Specific Responsibilities
Process group members will generally perform some or all of the following tasks:

- Attend targeted SCT systems education.
- Design the future business processes and reporting requirements. Identify proposed changes to business processes that could resolve technology gaps, introduce efficiencies, and promote effective management.
- Assist in developing data mapping rules.
- Perform quality reviews of converted data.
- Draft updates to policies and procedures and submit for approval to business process owners and policy-setting bodies.
- Participate in application configuration.
- Participate in testing and quality assurance reviews of the systems and procedures.
- Develop and/or review training materials for end users.
- Perform other tasks as required.
Communications

Project Communications
Communications will occur through a variety of mediums, including the project’s website, campus publications, focus group meetings and other appropriate forums. While the project technology and communication specialist will coordinate the project’s overall communication initiatives, all implementation specialists, process group members and business process owners or designees have a responsibility to share timely and accurate information with their constituent groups and colleagues from their home units.

Campus Communication Liaisons
Campuses may appoint a communications liaison or point person to coordinate the information sharing of Project FRESH activities at the campus level, both among process group participants and with end users. Issues, concerns or suggestions raised at the campus level should be shared regularly with the project director. The following individuals have been appointed as campus communication liaisons:

<table>
<thead>
<tr>
<th>Name</th>
<th>Campus</th>
<th>Position/Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eric Blumenthal</td>
<td>CLL</td>
<td>Associate Dean of Admin &amp; Finance</td>
</tr>
<tr>
<td>Karen House</td>
<td>KSC</td>
<td>Assistant VP of Finance</td>
</tr>
<tr>
<td>Judy Landry</td>
<td>PSC</td>
<td>Accountant</td>
</tr>
<tr>
<td>John Griffith</td>
<td>UNH</td>
<td>Assistant VP Financial Plan/Budget</td>
</tr>
</tbody>
</table>
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Exhibits
Exhibit 1

SCT Contract Highlights

Software
SCT Banner Products Licensed by USNH Prior to the New SCT Contract (where licensee was defined as UNH and CLL):

- Student
- Financial Aid
- Web for Students
- Voice Response for Students
- INAS Software Supplement

Additional SCT Banner Products Licensed on September 30, 1999 for A Cost of $1.0 million (approximately 47% off list price)

Single USNH Site Licenses for:
- The student-related products listed above, extended to all campuses
- Web for Faculty and Advisors
- Finance
- Human Resources
- Web for Employees
- Alumni/Development
- Web for Alumni
- Imaging
- Workflow
- Campus Pipeline
- Other Software Supplements

Future SCT Software Licenses

- Option to license additional SCT software at a minimum discount rate of 40% off of SCT’s then-current list price.
- Option expires on September 30, 2003.
- Annual maintenance on additional licenses is subject to current contractual provisions.

SCT Commitment to Enhance Baseline Products

No-Cost Baseline Enhancements:
- Chart of Accounts Attributes (October 2000)
- Oracle Forms Upgrade (February 2001; pre-release code in October 2000)
- USNH serves as a strategic development partner
Four Enhancements Subject to Limited Cost Sharing
1. Extend functionality of Web for Employees to accommodate flexible benefits
2. Interface to Human Resources Module
3. Interface to Sponsored Research Proposal Preparation/Approval System
4. Interface to Purchasing Card System

- The four enhancements will initially be implemented at USNH as temporary modifications to the baseline products no later than October 31, 2000.
- USNH cost for these temporary modifications is capped at $100,000, plus travel and living expenses.
- The four enhancements will be incorporated into the SCT Baseline Products no later than February 2002.

Known, Remaining Gaps With No Agreed-Upon Baseline Solution At the Present Time
• Indirect Cost Encumbrances (modification specifications to be developed and funded by SCT)
• Salary Increase Processing
• Position Budgeting and Pools

Maintenance
Annual Fees
• For newly-licensed software, annual maintenance fees are approximately 15% of the $1.0 million license fee, with escalation limited to 4.0% per year.
• Agreement spans ten years, but terms are extendable.
• Annual maintenance fees for student-related products licensed by UNH/CLL are folded into the new agreement; annual fee increases are now limited to 4.0% (versus 6.0% under the previous agreement).

Commencement Date
• Commencement date for maintenance fees related to the newly-licensed software is dependent upon the delivery of the aforementioned baseline enhancements and temporary modifications.
• If delivery occurs on October 31, 2000, maintenance fees will commence on October 1, 1999, and shall be payable in arrears on October 31, 2000.
• If delivery occurs after October 31, 2000, the commencement date for maintenance fees will not begin until such time as the enhancements and modifications are delivered.

Professional Services
Committed Services
• USNH has agreed to purchase a block of hours to support the Finance and Human Resources Systems Replacement Project at the following rates:
  Project Management/DBA services: $186/hour (25% off list)
  Technical, functional and training services: $160/hour (20% off list)
Optional Services

- USNH has the option to purchase an unlimited number of additional 500-hour blocks of services at the contract hourly rates, as shown above.
- The final option must be exercised no later than September 30, 2001.
- Each block of hours must be used within 36 months from the date the associated option is exercised (latest date is September 30, 2004).
- Upon the expiration of the 36-month period, USNH can consume any remaining, unused hours for an additional period of 12 months, but the hourly rates increase by approximately 10% during this contract extension period.
- In summary, we have locked in very favorable consulting rates for a period of six years.
- Agreement also includes an option to purchase certain data mart/reporting services at a fixed price.

Services Free of Charge

- SCT will provide three demonstrations of their products at USNH client sites at no cost to USNH. All demos must be conducted in a single week.
Exhibit 2

Major Findings from GAP report

A major gap suggests significant functionality in an essential business process is at risk. A minor gap does not significantly impact an essential business process but may require a cultural, policy, procedural or other change for USNH. A solution needs to be determined for a major gap, while a minor gap may be supported through a workaround or other accommodation. The major gaps identified during contract negotiations are discussed in detail below. Minor gaps are listed in the summary table, but are not detailed. The process groups, during the design and testing phases of the implementation, will determine solutions to the minor gaps.

Summary
The GAPs are summarized below, along with the determination of responsibility.

<table>
<thead>
<tr>
<th>Gap</th>
<th>Degree</th>
<th>Determination</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chart of Accounts - Attributes</td>
<td>Major</td>
<td>SCT to support in baseline by October 2000.</td>
</tr>
<tr>
<td>Web deployability</td>
<td>Major</td>
<td>SCT will provide a pre-release of the code by October 2000 and will support in baseline by February 2001.</td>
</tr>
<tr>
<td>Salary increase processing</td>
<td>Major</td>
<td>SCT will provide interface as a temporary modification by October 2000 and will include the interface in the baseline by February 2002. USNH will determine solution for core requirements of salary increase processing.</td>
</tr>
<tr>
<td>Position control/pool accounts</td>
<td>Major</td>
<td>USNH will determine solution</td>
</tr>
<tr>
<td>Display of daily versus hourly rates</td>
<td>Minor</td>
<td>USNH will determine solution</td>
</tr>
<tr>
<td>Web enrollment for flexible benefits</td>
<td>Major</td>
<td>SCT will provide a temporary modification by October 2000 and will support in baseline by February 2002.</td>
</tr>
<tr>
<td>Indirect cost encumbrances</td>
<td>Major</td>
<td>SCT will provide specifications for a modification by April 2000. USNH will determine ultimate Phase I solution and will work with SCT for long</td>
</tr>
<tr>
<td>Gap</td>
<td>Degree</td>
<td>Determination</td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>--------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Interface to proposal preparation/approval</td>
<td>Major</td>
<td>SCT will provide an interface as a temporary modification by October 2000 and support in baseline by February 2002.</td>
</tr>
<tr>
<td>systems</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The ability to propagate date extensions</td>
<td>Minor</td>
<td>USNH will determine solution</td>
</tr>
<tr>
<td>Reporting Solutions such as a Data Warehouse</td>
<td>Major</td>
<td>USNH will determine solution</td>
</tr>
<tr>
<td>Support for ACards/PCards</td>
<td>Minor</td>
<td>SCT will provide interface as a temporary modification by October 2000 and support interface in baseline by February 2002. USNH will determine solution for the subsystem requirements, but will work with SCT for long term resolution.</td>
</tr>
<tr>
<td>Workflow</td>
<td>Minor</td>
<td>SCT will distribute application in February 2000. Functionality will likely be limited to targeted areas during Phase I or Phase II (most probably the latter).</td>
</tr>
</tbody>
</table>

*Chart of Accounts – Attributes*

**Description of Gap**
Under the SCT chart of accounts, there is one hierarchical structure that enforces a strict relationship. With the SCT chart, the structure appears to support either control functions such as budget rollups and approvals or reporting, but not both.

Under the SCT model, Org2 cannot have linkage to KVP3 as well as to KVP1 even though there may be real reporting or responsibilities. Our need to accommodate cross-organizational reporting requirements, future expansion of organizational and system growth, internal reorganizations, and perhaps even budget controls and approvals, is restricted.
**Possible Business Implications**
The lack of attributes restricts the capability of providing flexible reporting needs across all system functions. USNH currently uses all of the attributes for various types of reporting by campus, department, business application, budget reporting, variance analysis, and year-end statements. In addition, we have used our existing attributes to manage other types of processes such as the coding to calculate negotiated F & A rates with the government, Business Service Center ownership, in the future RCM identification, A133 reporting structure, etc.

As SCT currently uses the hierarchy to impose security and approvals as well as the reporting structure, the distribution of security and approvals flexibility could be impacted as well if USNH attempted to use the existing hierarchy for both purposes.

**Web Deployability**

**Description of Gap**
One of the highest level expectations of the LRTP is to provide system access at anytime and anyplace; implicit therein is the requirement for web accessibility. We have seen a demonstration from Oracle of the technical capability of the delivery tools utilized by SCT that encourages us to believe that this deployment methodology could meet our minimum requirements. However, the version of the tool (Developer 2000 version 4.x) utilized by SCT as demonstrated here does not meet our minimum technical requirements for performance and functionality.

**Possible Business Implications**
Given the complex, heterogeneous technical environment at USNH and the need for flexible access, web deployment is especially attractive. Failure to effectively web deliver this system would represent a substantial reduction in expected access flexibility and increases in physical systems deployment costs, maintenance costs, and service costs. Additionally, since web technology is such a good fit with our needs, an initial deployment using client/server technology would probably represent only a temporary solution with additional significant cost implications.

**Salary Increase Processing**

**Description of Gaps**
The gaps in this area can be segregated into three primary categories: processes, interfaces, and underlying data structures

**Processes**
The SCT HR product does not adequately support automation of the following requirements as measured against existing processes:

- Developing salary increase recommendations prior to updating the employees’ salary records, position budgets, and position characteristics;
- Revaluing prior increases when personnel events have occurred between the effective date of the increase and the update process (e.g. promotions, reclassifications, etc.);
• Updating employee salary records for increases;
• Updating current year position budgets for salary increases and other personnel events;
• Updating future year position budgets for salary increases and other personnel events (see additional potential gap included in underlying data structures);
• Transferring salary increase dollars from the centrally managed increase pools and accounts to the individual position and departmental budgets;
• A gap may also exist in the synchronization of updates to employee salary records and position budgets within the HR system and with the Finance system; and
• A gap may also exist in the ability to maintain history files in a manner that is readily assessable.

Interfaces
SCT does not:
• Provide a user interface that enables salary increase recommendations to be entered in a distributed setting, nor does it:
• Provide a portal that enables the update of employee salary records and position budgets when salary increases are developed in an external system.

Underlying Data Structures
SCT may not provide a placeholder where future year position budgets (as internally defined) can be stored within its baseline data structures.

Potential Business Impact
The elimination of automated functionality for developing salary increase recommendations and performing automated updates to employee salary records and position budgets without modifications to existing policies and processes could result in:
(1) the proliferation of shadow systems, (2) a decline in the accuracy and integrity of the increase process, and (3) substantial growth in labor costs in both departmental and central offices.

Additional potential implications from a budgetary control perspective are set forth in the following section entitled “Position Control Issues/Pool Accounts”.

Position Control Issues/Pool Accounts

Description of Gap
• The SCT product does not have the ability to maintain a permanent personnel budget base that includes pools. The SCT system does not support the pool concept for budgeting continuing increase guidelines in the future year. The SCT system also does not support the pool concept for budgeting appointment variances in the future year or the current year.
• The SCT product does not automatically adjust current year or future year position budgets to reflect adjustments generated by salary adjustment processes, whether they originate from automated mass processes or day to day business.
• The SCT product does not have the ability to associate both position and pool accounts with an expense distribution on a future or current year basis.
Possible Business Implications

- The inability to define a future commitment to permanent personnel that is fixed “predictable” for a specified period of time would represent a loss of information that is used to project future commitments to salary increases system wide (as well as by specific campuses or groups of employees), for development of budget models, modeling for increase guidelines and support for union negotiations.

- The inability to utilize pool accounts whether they be appointment variance or continuing increase would represent a loss of ability to centrally capture salary savings and provide the big picture perspective on how those savings should be managed. We are required to report compliance with Trustee approved salary increase guidelines. This would be a difficult task if central increase pools were not supported since our current method of monitoring guideline compliance is focused on monitoring the central continuing increase pools. Serious report development would be required to ensure that we did not lose the ability to capture and report the data.

- Manual adjustments to budgets would be extremely labor intensive during mass increase processing as well as conducting day to day maintenance on the file. We do not know the specific distributions of increases at the time budgets are being developed. This is a driving factor in budgeting at the pool level for mass salary increase processes and then moving the budgets as the salary adjustments are implemented. A mechanism for updating current year and future year budget adjustments such as our current matrix would have to be developed.

- We may not be able to determine which budgets belonged to which campus or organization, especially for positions with a split distribution, if we do not associate an expense distribution with a position.

Web Enrollment for Flexible Benefits

Description of Gap
Web enrollment and self-service is clearly the direction of the future. It allows employees immediate access to their benefit enrollment status. Using this tool during the open enrollment period would streamline the process and increase efficiency. During other times of the year, employees would be able to directly make limited changes (i.e., address, and beneficiaries) at their convenience.

Possible Business Implications
This tool would enable USNH to provide employees with accurate and up-to-date benefits information on demand and would minimize inquiries to central offices for information the employee could access in this manner. Web enrollment for benefits would be a significant time saver for all, management, and employees. The accuracy of the entry is incumbent upon the employee and would give them a better process of playing “what if” with options at time of entry.
**Indirect Cost Encumbrances**

**Description of Gap**
SCT’s product does the calculation and posting of indirect cost as part of the research accounting module. The activity is calculated and posted based upon coding structures established relative to the individual award. The process appears to be a good one, with the exception that only actual expenditures are included in the calculation process.

**Possible Business Implications**
USNH users are accustomed to having all commitments reflected in their reports and screen views as well as not included in calculations of available budget dollars. The lack of a commitment on what can be sizable dollar amounts will force departments to rely upon other means to track this information so as not to overspend their budgets or funds may not be available for the indirect commitment as the project grows toward closing.

**Interface to Proposal Preparation/Approval Systems**

**Description of Gap**
SCT has no funding information system, faculty profile system or proposal development system (including preparation of proposal application package either in printed format or electronic format).

**Possible Business Implications**
There is potential for duplication of information and staff maintenance time. USNH would need to enter and maintain faculty information, departmental information, sponsor data, etc., in a pre-award system that would replicate some information in HR and/or finance. It would be difficult to meet certain reporting requirements that call for the melding of proposal-related data with financial data.

**Reporting Solutions such as a Data Warehouse**
USNH believes a reporting environment is essential to the successful implementation of these systems. Expectations are most reporting for end users and perhaps even annual audited statements will be generated from the reporting environment.

USNH sees this as a very large undertaking that may be accomplished in a phased strategy. In phase I, access to current detail data and descriptive attributes, any USNH built data or “tack-ons”, and historical data
from the current legacy systems would be made available through a reporting tool such as BusinessObjects.

Phase II would follow as the systems are stabilized. This would involve development of, or extension of existing, data structures designed to manage the most frequently used summary reporting needs for users and management. Development of these structures would progress as users become more accustomed to the new systems and would be delivered through a tool such as BusinessObjects.

Phase III would most fully develop the environment to enable upper management to perform “what-if” analysis on a variety of data. The delivery tool could be something like BusinessObjects or SCT’s Web for Executives. Delivery of this type of data would be subsequent to this project.
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Exhibit 3

MIR (To be updated by Director of Enterprise Computing)

Overview
The reporting paradigm USNH has been building towards supports a methodology more independent of IT professionals. That is, users are enabled to support their reporting needs when provided with user-friendly, web-enabled tools and proper training in the data structures. This document attempts to identify the data needs required to support the reporting paradigm.

Reporting needs can be broken into various groups; standard system generated control reports, compliance requirement reporting, management reporting/ad-hoc reporting, and “what-if” analysis. These are described more fully as follows:

Standard system generated control reports: These represent control stream data run as part of a daily, nightly, weekly or monthly processing stream. Financial examples would include; a general journal (in CUFS this is the USNHA601), a detail trial balance (CUFS equivalent is the USNHA611), system balancing reports (CUFS table to ledger reporting of the USNHA2 and USNHB), human resource examples are; the weekly payroll reports used in central offices and distributed to responsible area managers.

Compliance Requirements: Data to support the requirements imposed primarily by external sources. Items in this grouping could include audited and quarterly financial statements both at USNH and campus levels, governor and council reporting, routine board reporting, federal/state requirements and some routine internally imposed requirements that are mandated by management.

Management/ad-hoc reporting: User run reports that provide for operational needs such as budget to actual and prior year comparisons, open commitment listings, personnel listings with current and future year budgets, historical views of positions as well as of persons, etc. These reports/inquiries are not run routinely on a system-defined schedule, they are invoked by the users on an as needed basis.

“What-if” analysis: Support for modeling a variety of scenarios for projections, reorganizations, changing market prices etc. This is sometimes referred to as “multi-dimensional” data structures.

Our current assessment of the SCT product relative to the categories listed above presumes the standard category would be supported natively within the system. This is supported through Cobol and C programming code, which makes it impracticable to deploy for general user audiences. The “What-if” category is extremely complex. The data structures required to fully support this group of requirements would necessitate significant involvement of both functional and technical staff to define and deploy. Although the future need of this type of reporting is recognized, it is a project of itself and could not be addressed with current resources.
The second and third categories share some reporting needs between them. For instance, the Statement of Revenues and Expenses in the audited report embodies some of the same data that is required for a departmental view of their revenue and expenditures. The audited report is at a very high aggregate level while the departmental needs are most likely more granular and other needs such as campus Vice Presidents, Deans, Directors and Chairs would be somewhere in the middle of the two. Because of this overlap, it is unclear specifically what reporting needs between these two groups could be met by programmed ‘canned’ system reports as in the standard reports, some may, however there is a significant need to be addressed in the management/ad-hoc level of reporting. This is where a data mart type solution would be most valuable.

In the work that has taken place on the current financial data-mart, one clear objective requested by users is access to detailed transaction data. Higher level aggregation can take place from the detailed data but the reverse is not true, that is, if only aggregate data is available a user cannot get back to the detail. To fully support users, this is absolutely necessary. In addition, during the course of conversion from existing systems to the new systems, converting all required history into the data structures of the new system seems an exhaustive task and would be unnecessary if the history were available in a data-mart type facility. Lastly, over time, population of data from other systems beyond finance and human resources, such as student systems, and advancement, would provide significant utility perhaps even providing the data sources required to prepare for the “what-if” analysis type reporting. Those additional systems needs is beyond the scope of this project, but if this is a future direction USNH would hope to pursue, the design of data-mart(s) for finance and human resources should proceed with that concept in mind.

Based on these conversations it seems clear that a data warehouse solution should provide for access to detailed transactions data for both current and historical needs for both financial and human resource data. The initial scope could be limited to the detail transactions and allow users to define the requisite aggregations through those that are most frequently used, or the views currently supported in the financial data-mart could be used as the model for the first aggregation then let the frequency of use define further aggregations as required.

Open questions:
- How many years of history should be brought into the application and how many years of history should be brought into a data warehouse?
- At what interval should current transactions be ported to the data warehouse, daily, weekly, monthly, quarterly, annually? This also asks the question of can current transactions be served seamlessly from the application database?
- What, if any, aggregations should be made available in the data warehouse initially?
- Should data be related to descriptive fields by fiscal year or by most recent fiscal year content? This may vary by the descriptive field data.