iNtegrate Technology Administration Governance Process

October 2009

Contents

INTRODUCTION

This document provides a governance framework for the implementation and ongoing technical support of the PeopleSoft Campus Solutions applications as defined by the iNtegrate project in partnership with Nevada System of Higher Education (NSHE) institutions. The framework reflects the experience gained from other agencies and institutions that have implemented PeopleSoft and from the collective experiences of key NSHE staff. The framework also reflects the need to continue the work of defining and then evolving business practices based on the Campus Solutions configuration, the potential for impact of the Campus Solutions application on existing policies and procedures, and the opportunity for continuous improvement. An ad hoc working group called the Modification Development Group was formed to prepare this document. The group consisted of selected technical representatives and technology leaders representing CCI, the iNtegrate Project Office, SCS, UNLV, UNR and TMCC (representing the Shared Instance) worked for many months and at a critical point during this effort, the group agreed upon a set of guiding principles to assist all NSHE institutions going forward, as this governance framework matures and evolves. The initial iNtegrate ERP Guiding Principles can be found in Appendix 1.

BACKGROUND

iNtegrate is NSHE's implementation of PeopleSoft student applications across seven NSHE institutions. Implementation began in July 2008 with pilot and full implementations spread throughout the ensuing three years. The initial scope of implementation is scheduled to be complete by November 2011. NSHE has established a governance process for delivering technical support to guide the remaining implementation activities from the first go-live event into production and beyond. The following are assumptions made in the development of the technical support governance process.

ASSUMPTIONS

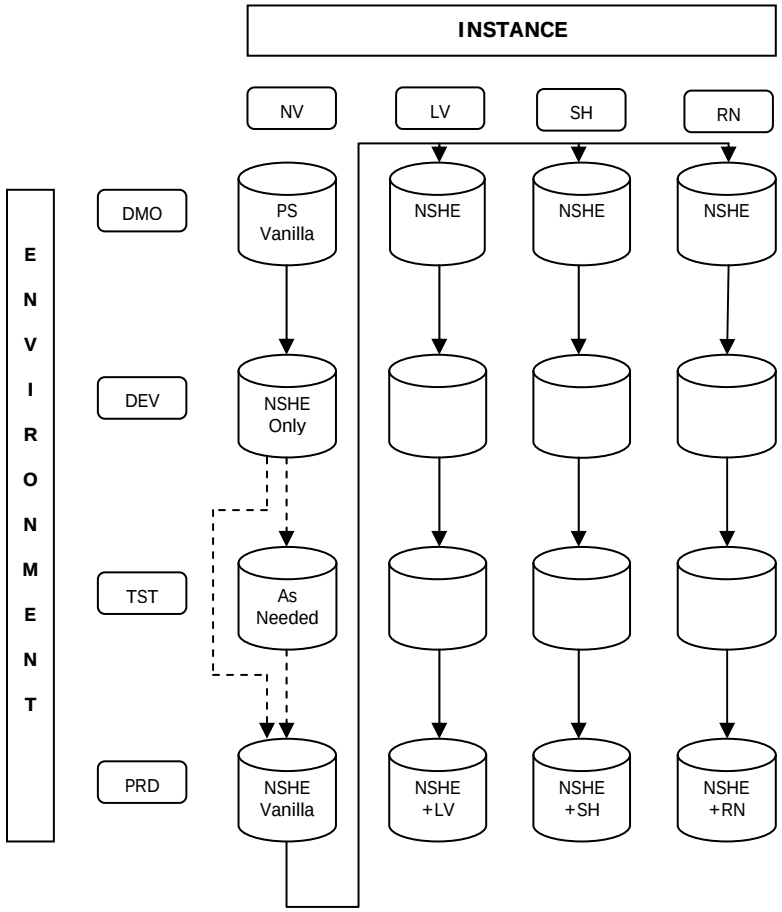
- It is expected that business and functional needs, identified by various councils and user groups, will direct the continued evolution of iNtegrate.
- The needs identified will require prioritization based upon functional criticality, resource availability and funding requirements.
- The needs of NSHE may, at times, conflict with the needs of the individual institutions and vice versa. Resolution of some of these conflicts may need to occur at the highest levels of those entities.
- Memoranda of Understanding (MOUs) between each NSHE institution and System Computing Services (SCS) will be used to specify technical support requirements that fall outside those provided by CedarCrestone (CCI), the contracted iNtegrate implementer or other third party provider during implementation.
- Service Level Agreements between each NSHE institution and SCS will define the operational basis for the daily technical support needs of each PeopleSoft instance post-implementation.

An iNtegrate Technical Support Matrix is included in Appendix 3 and will be used to clarify the technical support groups involved in supporting the various technical environments.

DEFINITIONS

- Modification - A modification changes one or more PeopleSoft delivered objects. A modification is required when PeopleSoft has delivered code that partially meets our business requirements but needs additional changes to make it work to fit our needs. A modification requires analysis each time the PeopleSoft code is upgraded or revised to determine if the changes can be dropped, must be reapplied, or must be reworked and/or redesigned.

- Bolt-On Modification (bolt-on) – A bolt-on is the addition of new code that can be pulled out of the system and reinstalled without modifying any objects delivered by PeopleSoft. Bolt-ons can still be affected by PeopleSoft patches/fixes/upgrades if they utilize features later changed by PeopleSoft, however the presence of these new objects will not impact the technical task of applying upgrades or maintenance. Functional analysis should determine if bolt-ons are still needed or require adjustment after upgrades or maintenance
- Interface – An interface is used to pass data (real-time or batched) between the PeopleSoft application and an external application. Interfaces typically are constructed as customizations (or bolt-ons), but in some cases require modifications to delivered PeopleSoft objects. Note that interfaces are just another type of modification or customization and, for purposes of specification, development, approval, etc., are typically not treated differently from other modifications.
- Report – A report is a program or collection of programs that retrieves and presents data from the database. A report does not update data in the database. Note that reports are just another type of modification or customization and, for purposes of specification, development, approval, etc., are typically not treated differently from other modifications.
- Query – A PeopleSoft query is developed using Query Manager, a tool delivered with the PeopleSoft application. A query is designed to return data from selected records and fields using criteria selected by the developer of the query. Queries can be designed with prompts that will ask the user each time the query is run for parameters that will control the output. Queries do not update the database, but can be used to do so in conjunction with the Query-Based update, another PeopleSoft tool. Queries can be migrated from one database instance to another via an Application Designer Project.
- NV Modifications – NSHE modifications are unanimously agreed upon. NV modifications include contracted modifications, pre-processors, queries, interfaces, bolt-ons, custom reports, and may be initiated as institutional modifications that are adopted as system wide modifications.
- NV DEV Environment – The NV DEV environment is the NSHE approved environment for the development and maintenance of the PeopleSoft application (see diagram).
- Oracle Database instance – A single copy or version of a database used in the PeopleSoft implementation. For example, in the Shared Instance, SPCSSDEV and SPCSSIDP are two different Oracle Database instances.
- Instance – A set of Oracle Database instances and associated servers representing the direct path from origin to production. For example, SPCSSDEV, SPCSSIDP, SPCSSCNV, SPCSSTST and SPCSSPRD and associated servers are components of the Shared Instance. Other Instance examples are UNLV, UNR and NV.
- Environment – A set of databases and associated servers that function to provide a focused task such as demo, development, test, stage, QA, training, production. For example: The UNLV Production database would be referred to as the Oracle Database instance in the Production Environment of the UNLV Instance.


INSTANCE
NV
LV
SH
RN
ENVIRONMENT
DMO
DEV
TST
PRD
PS Vanilla
NSHE
NSHE
NSHE
NSHE Only
As Needed
NSHE Vanilla
NSHE +LV
NSHE +SH
NSHE +RN

INTEGRATE GOVERNANCE

iNtegrate governance is decision-making through roles, responsibilities and processes that enable diverse agents and groups to provide efficient and effective support within a shared PeopleSoft system and/or infrastructure. iNtegrate technology administration governance gains its authority by delegation from the appropriate officials within NSHE. The purpose of iNtegrate technology administration governance is to ensure that consumers and business/functional users have high quality, responsive information and functionality in accordance with their priorities and resources that are or can be made available. The iNtegrate Technology Administration Governance process has been developed using existing and new institutional, iNtegrate and NSHE governance bodies. The development of the governance structure is an evolving process as iNtegrate moves through the life cycle from an implementation project toward post implementation. The governance structure is dependent on institutional governance structures, and the governance structure for the iNtegrate Shared Instance Alliance (iSIA). Existing and newly created functional and technical groups inform decisions and guide activities designed to ensure that that the goals of the iNtegrate project are met.

iNtegrate Technology Administration Governance During Implementation

During the implementation of the iNtegrate Campus Solutions, technology administration governance lies primarily within the project structure (see iNtegrate Governance Structure document available at: http://integrate.nevada.edu/gov-structure.html). Decisions about project scope and resources, modifications, testing and preparing the infrastructure occur as part of regular project activities. The iNtegrate Implementation Team (project leads) facilitate the decision-making process, by bringing forth issues for resolution and/or action that arise from the Interactive Design and Prototyping (IDP) teams and subject matter workgroup activities. Decisions requiring a change in resources or policy are addressed and escalated as follows:

Procedures and Best Practices Decisions
- NSHE wide – iNtegrate Implementation Team
- Shared Instance – iNtegrate Shared Instance Alliance
- Institution – Module leads with approval by Institution Steering Committee as required

Resource Allocation Decisions
- NSHE – iNtegrate Project Office upon recommendation and approval by the iNtegrate Steering Committee and the Council of Presidents, as required
- Institution – Project Lead upon appropriate approval by Institution Steering Committee
- Vice Chancellor for Information Technology - upon review with the Chief Technology Officers and Business Officers Groups as appropriate

Board of Regents Policy Decisions
- Student Services – Student Services Module Task Force
- Academic – Academic Research & Student Affairs Council
- Financial – Business Officers Group
- Technical – Chief Technology Officers Group in consultation with SCS

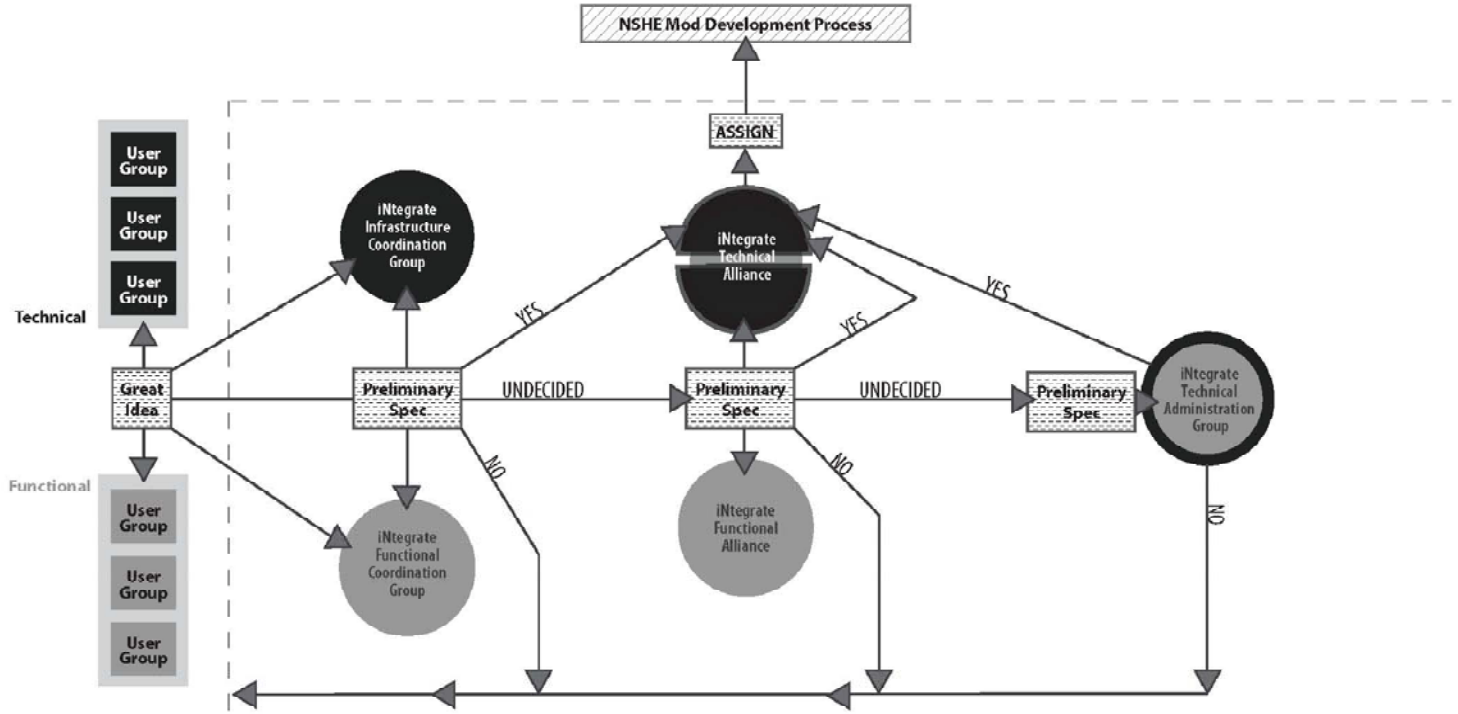
Appendix 2 contains the iNtegrate Project Governance Decision Matrix which describes who participates in project decisions and who has decision making authority.

iNtegrate Technology Administration Governance Post iNtegrate Implementation

Once the Campus Solutions portion of the iNtegrate project moves from implementation into production, the technology administration governance required to support and enhance iNtegrate becomes more complex. It requires several groups with system-wide representation to reach agreement on collaborative efforts, determine priorities, assign resources, and ensure high quality functionality and coordinated technological services to meet collective goals. The governance structure, in turn, depends on institutional commitment to shared governance as well as dedicated resources to collaborative efforts. The governance structure also requires specific agreements for a variety of services and the continuous development and review of, and adherence to agreed-upon standards and procedures.

The Governance Structure

The iNtegrate Technology Administration Governance structure consists of three layers representing increasingly broader areas of responsibility within the iNtegrate project, within the instances, and within NSHE.



NSHE iNtegrate Technical Administration Structure and Flow

The purpose of this structure is to ensure that consumers and business/functional users have high quality, responsive information and functionality in accordance with their priorities and resources that are available to the system through its member organizations.

iNtegrate technical support governance is decision-making through roles, responsibilities and processes that enable diverse agents and groups to provide efficient and effective technical support within a shared PeopleSoft system and/or infrastructure. iNtegrate governance gains its authority by delegation from the appropriate officials within NSHE.

Great Idea — **A great idea can originate anywhere.**

NSHE mod — **It can be turned into an NSHE modification after going through the governance approval process.**

Responsibilities for Shared Governance

The iNtegrate Technology Administration Governance structure has been designed to oversee and/or participate in the activities associated with three primary components of iNtegrate administrative systems:

1. Modifications to the system
2. Maintenance of the system
3. Upgrades to the system

Modifications to the System - Modifications to the system can be quite small or very complex and may apply to one campus, one instance, two or more campuses or instances, or all NSHE institutions. Modifications are to be done using agreed upon application development standards (see Appendix 4). Some modifications may be considered for NSHE-wide implementation. These modifications are referred to as NV modifications (NV mod) and will be assigned an NV modification number. Ideas for an NV mod can come from many sources, functional users groups, technical users groups, Board of Regency policy, legislation, regulatory compliance, etc. For an NV mod to be approved for development it must be submitted to the iNtegrate Technology Administration Governance structure (see diagram above). Once approved and assigned, an NV mod must be developed in accordance with the NSHE Mod Development Process (see Appendix 5). Enhancements, maintenance and upgrade projects issues will be documented and addressed through the Project Issue Resolution Process (see Appendix 8).

Maintenance of the System - The iNtegrate system requires frequent maintenance of the complex hardware and software systems of which it is comprised. NSHE institutions have agreed that they will strive to apply system maintenance in as close a time frame as possible. NSHE institutions have further agreed that it will not always be possible and may not be desirable to apply maintenance at exactly the same time. Finally, NSHE institutions have agreed that any maintenance that affects critical NV modifications (e.g., universal ID) must be applied at the same time across all instances to preserve the functionality of the modification.

Both the iNtegrate Technology Administration Governance structure and the system architecture have been designed to facilitate the application of system maintenance in accordance with the needs of NSHE and the instances. Procedures for applying maintenance are included in Appendix 6.

Upgrades to the System - Every 18 to 24 months an upgrade to the software is released. Application and infrastructure upgrades are essentially mini-implementations and will be treated as NSHE projects. The iNtegrate Technical Administration Governance group (iTAG) will initiate the upgrade project. As part of the project a project plan, a resource plan and governance structure will be established.

Components of the iNtegrate Technology Administration Governance Structure

The iNtegrate Technology Administration Governance Structure is comprised of five groups with representation from NSHE, SCS, and each of the three iNtegrate instances - the iNtegrate Shared Instance Alliance (iSIA), the University of Nevada, Las Vegas (UNLV), and the University of Nevada, Reno (UNR). The groups bring functional and technical leaders together to make decisions about collaborative efforts related to application maintenance, support, and development. The five groups include:

iNtegrate Functional Coordination Group (iFCG)
iNtegrate Infrastructure Coordination Group (iICG)
iNtegrate Functional Alliance (iFA)
iNtegrate Technical Alliance (iTA)

iNtegrate Technical Administration Group (iTAG)

Examples of tasks and activities that would be performed or acted upon by each group are contained in Appendix 7.

The responsibilities of each group as well as the membership and the characteristics of the representatives are described below. Representatives appointed to the various groups are expected to be either part of and/or well informed about the iNtegrate governance structures on their respective campuses and, as appropriate, the campuses that comprise the iNtegrate Shared Instance Alliance.

Functional and technical groups are expected to work with their complementary counterparts to discuss issues, reach consensus on decisions, develop recommendations, create documents (e.g., preliminary modification specifications, time frames for applying maintenance patches) and complete other responsibilities as assigned. The functional and technical groups are also expected to keep their instance representatives on other iNtegrate Technology Administration Governance groups informed of the activities in which they are engaged. For example, the iSIA representative from the iNtegrate Functional Coordination Group should be in frequent communication with the iSIA representative on the iNtegrate Infrastructure Coordination Group and the iSIA representatives on the iNtegrate Functional Alliance and Technical Alliance groups as well as the iSIA representative on the iNtegrate Technical Administration Group.

The functional and technical groups may receive direction from a variety of sources but are most heavily informed by the efforts of Functional User Groups (FUGs) and Technical Users Groups (TUGs). These groups and their responsibilities are described below. While the functional and technical users groups are not part of the iNtegrate Technology Administration governance structure, they may be called upon to serve in an advisory role for activities associated with the groups within the governance structure.

Groups within the iNtegrate Technology Administration Governance Structure

The responsibilities for each group within the governance structure as well as the membership and the characteristics of those selected as members of the groups are included below.

<u>iNtegrate Functional Coordination Group</u> (iFCG)

Responsibilities:

- Review preliminary specifications for NV modifications to ensure that the expected functionality will be achieved for all instances, assist with the development of the specifications as needed
- Work with the iNtegrate Infrastructure Coordination Group:
    - to reach consensus, where possible, on whether a recommended application modification should be done as an NV mod
    - set schedules for applying maintenance to the NSHE environment
    - determine when an NV mod is no longer needed
- Work with the iNtegrate Infrastructure Coordination Group and the iNtegrate Functional and Technical Alliances, to create and maintain the NSHE Modification Development processes and documentation

Membership:

NSHE	Representative appointed by the Vice Chancellor for Academic and Student Affairs, iNtegrate Project Manager
SCS	Representative appointed by the Vice Chancellor for Information Technology
iSIA	Functional staff representative appointed by the members of the iNtegrate Shared Instance Alliance
UNLV	Functional staff representative appointed by the Vice President for Student Affairs
UNR	Functional staff representative appointed by the Vice President for Student Services

Functional staff representatives should:

- be in a position related to functional leadership of the iNtegrate project in their respective instance
- be familiar with all the functional modules within iNtegrate
- have detailed knowledge of the functional environments of the instance for which they are responsible
- be able to make decisions regarding the functional environments of the instance for which they are responsible
- have well established working relationships with their technical counterparts in their respective instance

iNtegrate Infrastructure Coordination Group (iICG)

Responsibilities:

- Review preliminary specifications for NV for technical accuracy, feasibility, and efficiency, assist with the development of the specifications as needed
- Develop, maintain, and modify, as needed, Service Level Agreements between SCS and the instances regarding the iNtegrate infrastructure
- Periodically review the iNtegrate infrastructure to ensure that it is meeting current and anticipated needs
- Work with the iNtegrate Functional Coordination Group:
    - to reach consensus, where possible, on whether a recommended modification should be done as an NV mod
    - create and maintain the NSHE Modification Development Process documentation
    - set schedules for applying maintenance to the NSHE environment
    - determine when an NV mod is no longer needed
- Work with the iNtegrate Functional Coordination Group and the iNtegrate Functional and Technical Alliances, to create and maintain the NSHE Modification Development processes and documentation

Membership:

NSHE	Associate Vice Chancellor for Information Technology/Chief Operating Officer for SCS iNtegrate Project Manager
SCS	Director, Information & Application Services and Technical staff representative(s) appointed by the Vice Chancellor for Information Technology
iSIA	Technical staff representative(s) appointed by the members of the iNtegrate Shared Instance Alliance
UNLV	Technical staff representative(s) appointed by the Vice Provost for Information Technology
UNR	Technical staff representative(s) appointed by the Vice President for Information Technology & Dean of Libraries

Technical staff representatives should:

- be in a position related to technical leadership of the iNtegrate project in their respective instance or in a related technical leadership position at SCS
- be familiar with the architecture of the iNtegrate hardware
- have detailed knowledge of the technology environments of the instance for which they are responsible and/or the instances they support
- be able to make decisions regarding the technology environments for which they are responsible
- have well established working relationships with their functional counterparts

iNtegrate Functional Alliance (iFA)

Responsibilities:

- Be cognizant of changes in Board of Regents policy, federal and state regulatory changes, and other compliance-related issues that may generate the need to pursue the development of a NV mod and submit the need for an NV mod through the appropriate Functional and/or Technical Users Group(s). This includes the opportunity to review existing Board of Regents policy and make suggestions for policy revision where appropriate.
- Be cognizant of the relationship that iNtegrate has to other administrative systems within their respective instances and ensure that their functional and technical peers at their respective instance are included in considerations of modification development and maintenance schedules that may impact the broader instance environment
- If consensus is not reached at the coordination group level, work with the iNtegrate Technical Alliance to:
    - reach consensus on whether a recommended modification should be done as an NV mod
    - determine schedules for applying maintenance to the NSHE environment
    - review preliminary specifications for NV modifications to ensure that the expected functionality will be achieved for all instances
    - determine when an NV mod is no longer needed
- Work with the iNtegrate Functional and Infrastructure Coordination Groups and the iNtegrate Technical Alliance to create and maintain the NSHE Modification Development processes and documentation

Membership:

NSHE	iNtegrate Project Manager
SCS	Representative appointed by the Vice Chancellor for Information Technology
iSIA	Functional leader appointed by the members of the iNtegrate Shared Instance Alliance
UNLV	Functional leader appointed by the Vice President for Student Affairs
UNR	Functional leader appointed by the Vice President for Student Services

Functional staff leaders should:

- be in a position of high-level functional leadership that includes the iNtegrate project in their respective instance
- be familiar with all the functional modules within iNtegrate and be aware of the relationship between iNtegrate and other major administrative systems within their respective instance
- have significant knowledge of the functional environments of the instance for which they are responsible
- be able to make decisions on behalf of the instance for which they are responsible that take into consideration both the functional and technical aspects of iNtegrate as well as the relationship that iNtegrate has to other administrative systems within their respective instance
- have well established working relationships with their technical counterparts in their respective instance
- be familiar with NSHE and campus governance structures and be involved in iNtegrate governance structures in their respective instance

iNtegrate Technical Alliance (iTA)

The iNtegrate Technical Alliance has two major sets of responsibilities:

1. those associated with determining whether an application modification should be done as an NV mod as well as decisions regarding the application of maintenance to the NSHE instance
2. those associated with the assignment of application development responsibilities to one of the instances

Responsibilities for Application Modification and Maintenance:

- Be cognizant of changes in Board of Regents policy, federal and state regulatory changes, and other compliance-related issues that may generate the need to pursue the development of a NV mod and submit the need for an NV mod through the appropriate Functional and/or Technical Users Group(s)
- Be cognizant of the relationship that iNtegrate has to other administrative systems within their respective instances and ensure that their technical and functional peers at their respective instance are included in considerations of modification development and maintenance schedules that may impact the broader instance environment
- If consensus is not reached at the coordination group level, work with the iNtegrate Functional Alliance to:
    - reach consensus on whether a recommended modification should be done as an NV mod
    - determine schedules for applying maintenance to the NSHE environment
    - review preliminary specifications for NV modifications to ensure that proposed technical solutions are accurate, feasible, and efficient and, most importantly, that the expected functionality will be achieved for all instances
    - determine when an NV mod is no longer needed
- Work with the iNtegrate Functional and Infrastructure Coordination Groups and the iNtegrate Functional Alliance to create and maintain the NSHE Modification Development processes and documentation

Responsibilities for Assigning NV Modifications:

- Develop and maintain a process for assigning responsibility for developing approved NV modifications to one of the instances
- Develop and maintain the processes for ensuring that NV modifications assigned to the instances are maintained appropriately
- Assign the development of an approved NV mod to one of the instances
- In coordination with the iNtegrate Infrastructure Coordination Group and the appropriate Technical Users Groups, ensure that the NSHE Modification Development Process documentation is created and maintained

Membership:

NSHE	iNtegrate Project Manager
SCS	Director, Information & Application Services
iSIA	Technical leader appointed by the members of the iNtegrate Shared Instance Alliance
UNLV	Technical leader appointed by the Vice Provost for Information Technology
UNR	Technical leader appointed by the Vice President for Information Technology & Dean of Libraries

Technical leaders should:

- be in a position of high-level technical leadership that includes the iNtegrate project in their respective instance

- be familiar with the overall iNtegrate hardware and software environments and be aware of the relationship between iNtegrate and other major administrative systems within their respective instance
- have significant knowledge of the technology environments of the instance for which they are responsible
- be able to make decisions on behalf of the instance for which they are responsible that take into consideration both the technical and functional aspects of iNtegrate as well as the relationship that iNtegrate has to other administrative systems within their respective instance
- have well established working relationships with their functional counterparts in their respective instance
- be familiar with NSHE and campus governance structures and be involved in iNtegrate governance structures in their respective instance

iNtegrate Technical Administration Group (iTAG)

Responsibilities:

- Be cognizant of changes in Board of Regents policy, federal and state regulatory changes, and other compliance-related issues that may generate the need to pursue the development of a NV mod and submit the need for an NV mod through the appropriate Functional and/or Technical Users Group(s) or iNtegrate Technical Administration Governance group
- Be cognizant of the relationship that iNtegrate has to other administrative systems within their respective instances and across NSHE and ensure that their technical and functional peers at their respective instance and across NSHE are included in considerations of modification development and maintenance schedules that may impact the broader instance and NSHE environments
- If consensus on assigning NV modifications cannot be reached at the alliance group level, assign the development of an approved NV mod to one of the instances
- If consensus on the need to apply or not apply maintenance to the NSHE environment cannot be reached at the alliance group level, decide whether the maintenance will or will not be applied
- Ensure that the iNtegrate Technology Administration Governance Structure is working, the documents describing the structure are up-to-date, and lead the effort to modify the structure to overcome challenges or meet new needs
- Ensure that all components of the relationships between SCS and the instances involving iNtegrate are in good working order and lead the effort to address any associated challenges or meet new needs
- If consensus is not reached at the alliance group level:
    - determine whether a recommended modification should be done as an NV mod
    - determine schedules for applying maintenance to the NSHE environment
    - review and, where necessary, modify preliminary specifications for NV modifications to ensure that proposed technical solutions are accurate, feasible, and efficient and, most importantly, that the expected functionality will be achieved for all instances
    - determine when an NV mod is no longer needed

Membership:

NSHE	Vice Chancellor for Information Technology
SCS	Associate Vice Chancellor for Information Technology/Chief Operating Officer for SCS
iSIA	Representative appointed by the members of the Shared Instance Alliance
UNLV	Vice Provost for Information Technology
UNR	Vice President for Information Technology & Dean of Libraries

Technical Administration group members should:

- be in the highest technical leadership position in their respective instance
- be familiar with the overall iNtegrate hardware and software environments; be familiar with all the functional modules within iNtegrate; and be aware of the relationship between iNtegrate and other major administrative systems within their respective instance and across NSHE
- have significant knowledge of both the technology and functional environments of the instance for which they are responsible and a broad awareness of the technology and functional environments of other NSHE instances
- be able to make final decisions on behalf of the instance for which they are responsible that take into consideration both the functional and technical aspects of iNtegrate as well as the relationship that iNtegrate has to other administrative systems within their respective instance and across NSHE
- have well established working relationships with their functional and technical counterparts in their respective instance and across NSHE
- be familiar with and participate in NSHE and campus governance structures and be a leader in iNtegrate governance structures in their respective instance and across NSHE

Groups Associated with the iNtegrate Technology Administration Governance Structure

The work of the groups that comprise the iNtegrate Technology Administration Governance Structure is done in consultation with groups outside the governance structure. In addition to those groups that comprise the iNtegrate Governance structure (see documents describing that structure at: (http://integrate.nevada.edu/gov-structure.html); the technical governance structure is dependent on both functional and technical users groups. Descriptions of their role in the technical governance structure are included below.

Functional Users Groups (FUGs)

Functional Users Groups are NSHE-wide groups consisting of representatives from SCS and the campuses who have interest in and/or expertise related to the functionality being provided by the iNtegrate project. Functional Users Groups exist for each major component of the iNtegrate implementation (e.g., student, human resources, finance) and are organized around the modules contained within each of the component (e.g., the six modules within Campus Solution for the student component). In addition, Functional Users Group are created, as appropriate, for other administrative systems that are closely related to the implementation of the iNtegrate components (e.g., EPM – the data warehousing application being used NSHE-wide).

For a current list of Functional Users Groups, their responsibilities and membership please see Appendix 7.

Technical Users Groups (TUGs)

Technical Users Groups are NSHE-wide groups consisting of representatives from SCS and the campuses who have interest in and/or expertise related to various aspects of the technology upon which the iNtegrate project depends. Technical Users Groups are organized around various aspects of the technology (e.g., database administration, application development) and are created as need arises.

For a current list of Technical Users Groups, their responsibilities and membership please see Appendix 7.

APPENDICES

1. **iNtegrate ERP Implementation Guiding Principles**
2. **iNtegrate Project Governance Decision Matrix**
3. **iNtegrate Technical Support Matrix**
4. **Application Development Standards**
5. **Modification Development Procedures**
   - **Mod approvals example (TBD)**
6. **Maintenance Procedures**
   - **Maintenance decisions example (TBD)**
7. **iNtegrate Technology Administration Governance Groups Tasks and Activities (TBD)**
   - **Examples of tasks and activities for each group**
   - **Functional and Technical User Group roles and responsibilities**
8. **Project Issue Resolution Process**

Appendix 1

iNtegrate ERP Implementation Guiding Principles

Overarching Outcomes (as agreed upon at the 7/16/09 NSHE Special Modifications Meeting)

- Preserve the flexibility for each instance to make changes to meet their unique requirements.
- Be cost- effective.
- Protect integrity of shared goals of iNtegrate such as universal ID.
- Facilitate collaboration that leverages the collective expertise of the teams' managing each instance.
- Preserve the reliability, security and integrity of iNtegrate.

To maximize both sharing of resources across the NSHE system and environmental (or instance) independence, the following objectives apply to the development of any modifications, customizations, etc. These objectives apply both to development that will become NV as well as campus-specific development.

- Build all modifications to work in all instances with all Institution, Setid, and/or Business Unit Codes as appropriate.
- All development will use the agreed upon naming/development standards.
- Developers will follow NSHE Modification Development Process when determining whether or not to modify objects delivered by PeopleSoft. For institutional modifications, the same guidelines should be considered if modifying objects considered part of NV. NV objects should not be modified in the Shared Environment unless agreed to by all Shared Environment institutions.
- Build institutional modifications so that they do not collide with NSHE modifications or PeopleSoft delivered functionality.
- NV and Shared Environment Institutional modifications should be built in such a way so they can be disabled or not utilized if not needed by a particular institution.
- Give special consideration to Campus Community 3Cs – communications, checklists, comments - so that these components function consistently across all modules.
- Give special consideration to any non-Setid, Institution, or Business Unit based functionality. This includes but is not limited to Bio/Demographical Data, Education Component, Front End and Navigation of Student and Faculty Center, etc.

Appendix 2

iNtegrate Project Governance Decision Matrix

iNtegrate Project Governance	Operational						Strategic			
	Module Teams/IDPS/ (Student Affairs Workgroups)	Module Leads	Project Leads	Student Services Module Task Force	Business Officers (Financial Review Team)	CTOs (Technical Review Team)	iNtegrate Steering Committee	Council of Presidents (iNtegrate Exec. Oversight Committee)	Chancellor (or SA Cabinet Designee)	Board of Regents
Procedures and Best Practices decisions:										
NSHE wide – Implementation Team	CA, N	R	AR*	CON	CE	CE	I			I
Shared Instance – Shared Instance Alliance	N	R	IP, A	CA	CE	CE	I			
Institution – Module leads recommend with approval by Institution Steering Committee as required*	N	R	A	CA			I			
Resource Allocation decisions:										
NSHE – iNtegrate Project Office upon recommendation and approval by iNtegrate Steering Committee and the Council of Presidents, as required*			N, IP, AR*		CE	CE	AR*	A, AR*	A, AR*	A, I
Institution – Project Lead upon appropriate approval by Institution Steering Committee			N, AR							
SCS – VCIT upon review with the Advisory Group and CTOs as appropriate	N		N, IP, R			AR			A	
Board of Regents Policy decisions:										
Student Services – Student Services Module Task Force			NR	CE	CA	CA	AR	A,AR	CON	A
Academic – Academic Affairs Council			NR	CE	CA	CA	AR	A,AR	CON	A
Financial – Business Officers Council			NR	CE	CA	CA	AR	A,AR	CON	A
Technical – Chief Technology Officers icw SCS			NR	CE	CA	CA	AR	A,AR	CON	A

KEY		
A	Approve/Override	Body has authority to approve or override the decision
AR	Approve & Refer	Body has authority to recommend for approval and refer to a higher authority for approval
CA	Consult (advise throughout process)	Body has responsibility and subject matter expertise and should provide consultation throughout the decision making process
CE	Consult (evaluate at end of process)	Body has responsibility for executing the decision and should evaluate after the decision has been made
CON	Legal, contractual, Board policy, Govt. Regulation	Body has authority and must be consulted on the issue due to legal, contractual, BOR or legislative compliance
I	Inform (after decision)	Body should be informed of the decision
IP	Inform planning (before decision)	Body should be involved in the planning before the decision is made
N	Initiate, prepare, analyze	Body should initiate, prepare and analyze the pertinent information, are aware of broader issues and may initiate a recommendation
R	Recommend	Body recommends a resolution to an issue

Appendix 3

iNtegrate Technical Support Matrix

iNtegrate Support Matrix						
Last updated - Robyn Render 07/22/09						
Role / Responsibility	**SCS Data Center Hosting Services[a]**	**SCS Application Services[b]**	**Shared Instance Campus[c]**	**Individual Instance Campus[d]**		**Candidate for Sharing Support[e]**
Operations Support - Requires coordination among all instances						
Maintains 24/7 hardware availability	X					
Maintains 24/7 software availability		X		X		
Owns/controls hardware	X					
Provides backup/recovery services - OS	X					
Provides backup/recovery services - DB		X		X		
Provides backup/recovery services - App	X	X		X		
Provides disaster recovery services - data center and servers	X					
Provides disaster recovery services - data and applications		X		X		
Provides network operations services	X					
Provides information security services - data center, WAN, servers	X					
Provides information security services - LAN			X	X		
Provides information security services - data			X	X		
Provides information security services - application		X		X		
Provides hardware maintenance	X					
Provides OS software maintenance	X					
Hosts campus/instance specific hardware	X		X	X		
Supports storage and instance growth - requires standards and coordination	X					
Supports OS server performance	X					
Supports DB server performance		X		X		

Support Application performance		X		X		
Applications Support - Requires coordination among all instances						
Supports end users			X	X		
Control and Responsibility for an instance		X	X	X		
Applies vendor patches to software		X		X		
Provides database administration		X		X		
Provides train-the-trainer training		X	X	X		X
Provides application training		X	X	X		
Provides help desk services - data center	X					
Provides help desk services - PS application and "how tos" from functional designated users		X				
Provides help desk services - campus specific functional and student support			X	X		
PS application and all users				X		
NSHE Modifications and Interfaces (including UID) - Requires coordination among all instances						
Development - during implementation		X w/CCI	X w/CCI	X w/CCI		X
Operational support (refer to hosting above)	X					
Application support - post production, maintains mods		X				X
Application support - post production, apply mods		X	X w/SCS	X		X
Campus/Instance Specific Interfaces						
Development - PS		X				
Development - SI Application		X	X			
Development - Campus Application			X	X		
Application support - PS		X				
Application support - SI Application		X	X			
Application support - Campus Application			X	X		
Campus/Instance Specific Modifications						
Development		X	X	X		X
Application support		X	X	X		
NSHE Data Warehouse						

Development		X				
Operational support	X					
Data collection and creation		X	X	X		
Application support		X				
Campus/Instance Data Warehouse						
Development - ETL and schemas		X		X		
Development - reporting		X	X	X		
Operational support	X					
Data collection and creation		X	X	X		
Application support		X	X	X		
Portal						
Development		X	X?	X		
Application support		X	X?	X		
CRM						
Development		X	X?	X		
Application support		X	X?	X		
a SCS provides data center support for all instances						
b SCS provides application support for the shared instances and may provide other support for all instances						
c The shared instance campuses provide some technical support						
d The campuses with individual instances provide technical support for their instance						
e The ability to share support is difficult to determine until the roles and responsibilities are further defined						

Appendix 4

Application Development Standards

(Secured document maintained in HyperOffice)

NSHE application development standards are meant to ensure the most efficient solution for each function, a consistent style for all development, ease of readability for future modifications, and consideration for upgrades.

The standards outlined recognize pre-defined PeopleSoft standards and reflect the application as of release **9.0**. As additional releases are made available, these standards should be updated. Sample NSHE standards are also incorporated into this document, overriding PeopleSoft standards where appropriate.

The most recent documentation of application development standards can be found in HyperOffice (iNtegrate Project>TECHNICAL>NSHE_Development_Standards.doc).

1. Module and Institution Prefixes
2. Development Naming Conventions
3. Formatting Comments for Modifications
4. Working with PeopleSoft Objects
5. Working with the PeopleSoft Message Catalog

Appendix 5

NSHE Modification Development Procedures

(to be reviewed and modified once the governance structure is in place)

NSHE modifications will be assigned by a coordinating committee to the instance team with the best availability and knowledge to develop it. The mod will be developed in the NSHE Dev environment. Once it is developed, tested and migrated to the NSHE PRD environment it will then be sent to every instance for their testing and sign-off. The process followed will be:

Step	Description	NSHE[1]	Instance
1	Assignment committee assigns an NV mod to an instance development team	iTAG	
2	Modification developed in NV Dev environment	X	
3	NV DEV unit test	X	
4	Modification applied to the NVTST environment	X	
5	System testing in the NV TST environment	X	
6	Integration testing in the NVTST environment	X	
7	Mod migrated to the NV PRD environment	X	
8	Mod migrated into all other DEV instances		X
9	Instance specific testing in DEV environment		X
10	If error, mod owner and instance IT collaborate and solve jointly	X	X
11	Promote to instance TST environment		X
12	Instance system/acceptance testing		X
13	If error, campus IT goes back to DEV environment and step 10		X
14	Move to instance PRD environment		X

1 The assigned development team from one of the instances represents all NSHE institutions when developing an NV mod.

Appendix 6

NSHE Maintenance Procedures

(to be reviewed and modified once the governance structure is in place)

Updates, fixes, and tools-only upgrades fall under the category of system maintenance. Maintenance releases will be packaged into PeopleSoft projects, then migrated and applied to the campus instances. The proposed migration steps for system maintenance are as follows:

Step	Description	SCS	Instance
1	Maintenance release applied to the NV DMO environment	X	
2	Maintenance release promoted to the NV DEV environment	X	
3	Modifications applied to NV DEV environment	X	
4	Unit testing in NV DEV environment	X	X
5	Maintenance release promoted to NV TST environment	X	
6	System testing in the NV TST environment	X	X
7	Maintenance release promoted to the NV PRD environment	X	
8	Instances notified that maintenance release is ready to be received	X	
9	Release migrated to the instance DMO environment		X
10	Release promoted to the instance DEV environment		X
11	Instance-specific modifications applied in instance DEV environment		X
12	Further instance specific testing		X
13	If error, SCS and instance IT collaborate and solve jointly	X	X
14	Promote to instance TST environment		X
15	Instance system/acceptance testing		X
16	If error. instance IT goes back to DEV environment and step 12		X
17	Release promoted to instance PRD environment		X

Additional moves to production may be required to keep campus instances (demo, development & test) in sync with the production systems.

Any additional changes to the file server, web server, application server, and database server will require an additional set of steps by SCS or campus IT to apply the changes to the appropriate test and, ultimately, production environments.

Appendix 7

iTAG Governance Group Tasks and Activities (TBD)

Appendix 8

Project Issue Resolution Process

The purpose of the issue resolution process is to provide a mechanism for organizing, maintaining, and tracking the resolution of issues that cannot be resolved at the functional or campus level. The approach consists of issue control mechanisms and a well-defined process that enables the iNtegrate project team to identify, address, and prioritize project issues.

The issue resolution process gives everyone involved with, or affected by, the project a way to report issues or problems. It provides a method for documenting the project, assessing the impact of the project, making recommendations, determining the cost (people and assets), and time required to resolve the issue.

Project Issue Resolution Strategy

Definition

A project issue is:

- a situation in which the software does not work,
- a conflict between the software and the business process,
- an issue that defies project-team consensus, or
- an event that puts the project at risk.

Purpose

Project issues need to be tracked to:

- manage “scope creep,” which can delay implementation;
- provide management with notice of problems and time to resolve them;
- communicate to team members issues that affect them;
- allow discussion by the implementation team within the constraint of the due date.
-

Responsibility

Project Teams

The project teams identify and log issues.

Management Team

The project management team determines an issue's scope and the action needed to correct the problem, and then delegates project-team responsibility. The project management team also determines whether the issue needs the attention of the project director.

Project Director

The project director elevates policy issues to the steering committee.

Corrective Action Options

- No action required.
- Defer action.
- Shorten the schedule.
- Minimize the task.
- Reassign resources from non-critical activities.
- Negotiate additional resources.
- Negotiate a schedule extension.

Process

Initial Identification

Any member of the project team can identify an issue. Once an issue is identified the following entries are made in the Issues Log.

- The date is logged
- The issue is classified as a:
  - customization or modification,
  - policy decision,
  - gap item,
  - conversion,
  - interface,
  - software bug, or
  - action item.
- It is assigned low, medium, or high priority.
- Responsibility is assigned for clarification and for resolution.
- It is assigned a due date and a tickler date.
- The area of impact is determined (resources, time, or costs)
- The area affected is determined.
- The economic impact is assessed.
- It is assigned a status of:
  - New,
  - Active,
  - Pending – iTAG,

Closed,
Archived, or
On Hold.