



OIT 62.006: Information Systems Change Management

Responsible Executive:	Chief Information Officer (CIO)
Responsible Office:	Office of Information Technology
Related Policy:	
Approved-On Date:	January 14, 2006
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General

The Information Systems and Resources Infrastructure at Norfolk State University is always expanding and continues to become more sophisticated and complex. University customers become more and more dependent upon their personal computers, the network, and on administrative information systems and productivity software each and every day. The environment is very dynamic and characterized by change. The need for strong and effective change management processes is vital and managing change in a timely and effective manner is a critical part of providing a robust and valuable Information Systems and Resources Infrastructure.

Purpose

The purpose of the **Change Management Program** is to ensure changes are made in a rational and predictable manner so faculty, staff, and students can plan accordingly. Changes require serious forethought, careful monitoring, and follow-up evaluation to reduce negative impact to the customer community.

Additionally, the specific charge to the Office of Information Technology (OIT) Change Management Committee as provided by the Chief Information Officer (CIO) is to: report on any upcoming changes anticipated that will impact other departments, activities, and/or support groups; discuss any issues that might potentially result in downtime to any university-wide system so these can be placed on the operational calendar; report on any significant matters that the respective technical support teams are working on; report on any outstanding issues or problems that need to be known to the committee; and, identify all assistance that will be needed from other teams to accomplish the change or changes requested.

Responsibilities

Under the guidance, leadership, and direction of the CIO, the OIT Change Management Team is responsible for implementing effective change management over the entire Information Resources Infrastructure operated and maintained by OIT for the efficient conduct of University business, institutional as well as instructional.

Change Management Program and Procedures

Every change to a major component of the Information Resources Infrastructure, (including but not limited to systems hardware; operating systems; networks and connectivity; client software; and application information systems), is subject to the Change Management Program and must follow the change management procedures described herein.

Whenever an OIT representative knows of proposed changes to environmental support systems (e.g., air-conditioning, water, heat, plumbing, electricity, security, alarms, etc.) which might significantly affect the performance of University information and network systems, these changes will be brought to the CM Committee for review as well.

The OIT Change Management Committee meets regularly, normally once each week. The committee will ensure that change proposals are properly reviewed; announced to the community of users in a timely and efficient manner (well in advance whenever possible) when this is necessary; approved; and, analyzed afterward both for effectiveness and possible lessons learned.

Change requests, (using the System Downtime Request Form provided at appendix 1) will be made during regularly scheduled OIT CMC weekly meetings so they can be thoroughly evaluated and approval granted.

All change requests must incorporate an effective 'back out' plan/process to ensure systems, configurations, equipment, etc. can be and are restored to their 'before' state in the event the change does not work properly or as planned.

Change requests should be presented to the committee well in advance so the committee has sufficient time to review and assess the request, including the back out plan/process; identify and review potential consequences and the possibility of failure; and, make the decision to proceed, delay, or deny the change. The approval of the CMC must be obtained before proceeding.

The CIO, or a designated representative in her absence, may deny a change for any reasons including, but not limited to, inadequate planning, lack of 'back out' planning, adverse change timing; and the inadequacy of the necessary resources needed to properly implement the required change.

Timely customer notification must be completed for each scheduled change.

A Post Change Review will be conducted after each change has been implemented. This will be accomplished during a subsequent meeting of the CM Committee. (The System Downtime Completion Report Form found at appendix 2 will be used for this purpose.)

The Change Management Committee's SHAREPOINT website will be the information repository for maintaining CM-related documentation; task/action items; CMC decisions; etc.

Appendix #1 to OIT Policy 62.006

**Office of Information Technology
System Downtime Request Form**

CMC Requestor or designee: _____

**Request Submission
Date & Time:** _____

Date & Time Requested	
Anticipated duration of outage	
Systems that will be affected	
Primary and Secondary Contacts	
<u>ON-SITE Work</u> (1) Describe work to be performed on site, the location, and by whom. (2) Describe the impact if the work cannot be performed as planned. (3) Provide telephone contact information for personnel (including vendors) involved.	(1) (2) (3)
<u>OFF-SITE WORK</u> (1) Describe work to be performed off site, the location, and by whom. (2) Describe the impact if the work cannot be performed as planned. (3) Provide telephone contact information for all personnel (including vendors) involved.	(1) (2) (3)
<u>Back Out Plan/Process</u> Describe how the system(s) will be restored in a timely manner to their 'before state' should the change not work as intended.	

Who will certify systems are normal and accessible when work is completed and describe how this will be done.	
Suggested content for Campus Outage Notification Message	
Names of OIT CMC members who have approved and the date(s)	
CIO or designee approval, (name and date)	

NOTES:

- (1) The normally established system(s) downtime for maintenance and similar work performed is the third Sunday of each month beginning at approximately 7 am, after tape backups have completed.**
- (2) Downtime requests can also be occasionally submitted for Wednesday evenings between 8 pm and 11 pm as long as the work does not impede the start of regularly scheduled system/data tape backups which start at 11 pm.**

Appendix #2 to OIT Policy 62.006

**Office of Information Technology
System Downtime
Completion Report Form**

CMC Member or designee: _____

Submission Date & Time: _____

Date & Time Outage Started and Finished	
System(s) Upon Which Work was Performed	
Describe work performed	
Describe results achieved	
Describe lessons learned	

**Appendix #3 to OIT Policy 62.006
Enterprise Information Systems Software Changes & New Development**

**Responsible Agent: Director of Enterprise Information
Responsible Office: Enterprise Information Systems (EIS)**

General

The Student System at Norfolk State University consists of the Datatel Colleague software. University customers rely on the Student System to complete tasks critical to daily university operations. The system will need to be altered periodically. The need for detailed process change procedures is critical to maintaining a system that is a functional and useful part of the EIS applications.

Purpose

The Process Change and New Development Procedures provide a method in which development and implementation of requested changes is completed. EIS strives to efficiently adapt to the continuously changing needs of university customers. This policy provides direction and requirements related to Student System process changes and new development required to complete EIS projects of varying size, scope, and complexity.

Responsibilities

Under the guidance, leadership, and direction of the Director, EIS is responsible for developing and implementing process changes and new development on the Student System for the efficient conduct of university business.

COLLEAGUE:

Process Change & New Development Procedures

Process changes and new development on the Student System must follow the procedures described herein. See also the Change Management for Enterprise Information Systems Managed Applications document for information on how to initiate a change request and how requests are categorized.

Procedures:

1. All new processes will be developed in the Envision environment (Envision is a Datatel, Inc. proprietary software development tool).
2. When making a change to an existing custom process:

- a. Save the original process in both the production and test environments in the format “PROCESSNAME.ORIG” (e.g. XSTF011.ORIG) using the PRMN screen (in TOOLKIT)
 - i. **NOTE:** The “PROCESSNAME.ORIG” will be overwritten every time a change is made to a process.
- b. The programmer will copy the process from the live environment to the test environment to ensure that the most recent production version of the process will be modified. The programmer will make the requested changes in the test environment.
- c. Make comments about what is being changed in the tech doc section on SGP (SGP=Screen Global Parameters) for screens, or BGP (BGP=Batch Global Parameters) for batch/report processes. Use the “#” to show date, time, and user before any comments. In addition, the programmer may also make comments in the actual code on BPO (BPO=Batch Process Overview) to describe what was changed.
- d. The programmer will test the changes in the test environment.
- e. Have the requestor test the changes in the test environment.
- f. The requestor will notify the programmer of user acceptance.
- g. The programmer will notify the EIS Director that the requestor has tested and approved the changes. The EIS Director will notify the programmer to proceed with moving the changes to the production environment.
- h. The programmer assigned to the request will ask another programmer to copy the process from the test environment to the production (live) environment.
- i. The programmer will ask the requestor to test the changes in the production environment. When the requestor has notified the programmer of user acceptance the request is considered completed. Any changes will require a new request form.
- j. If the change significantly alters how the process is run and/or the output, the programmer must update documentation.

3. If making changes to a Datatel standard process:

- a. Proceed with the steps outlined in 2 above.
- b. Copy the process to an “X” process (example – copy NAE to XNAE) because changes to Datatel standard processes are overwritten during updates to the Colleague software.
- c. Create documentation detailing the process and showing sample output.
- d. Be aware that software updates may affect the customized process, and you may want to either include the changes or discontinue use of the customized process.

4. If creating a new process – use the following Datatel standard naming conventions:

- a. Put the new process on the Custom Program Conversion spreadsheet located at O:\OIT\Backuplog\R18 Stuff\Custom Program Conversion.
- b. The first character should always be “X” regardless of the type of process – this identifies this process as custom and prevents it from being overwritten during upgrades to the Colleague software.
- c. For screens:
 - i. Assign a 3 or 4 letter mnemonic (XHDC = SCHEV Headcount). The mnemonic will be placed on a menu after development is complete (see f below). This will be the name the user identifies with this process.
 - ii. The second and third characters should be the application module id (like ST).
 - iii. The next character should be :
 1. B=Batch Program
 - a. A process that performs any file updates.
 2. F=Front end screen
 - a. A screen in which a user enters parameters that are passed to a batch or report process.
 3. I=Inquiry screen
 - a. A screen in which a user can view data, but not change it.
 4. R=Report
 - a. A process that does not perform any file updates, and produces printed output.
 5. S=Update (maintenance) screen
 - a. A screen in which a user can change data. When the user saves out of the screen, the changed data is written to the appropriate file(s).
 - iv. The last two or three characters should be a sequential number.
 1. If a process requires a screen & another process (batch or report) the numerical portion of the name should be the same. For example, front end screen XSTF010 calls batch process XSTB010.
- d. For subroutines:
 - i. Create a descriptive name for the subroutine prefixed with an X
 1. Example – If you are creating a subroutine to get an address – X.GET.ADDRESS
- e. For computed columns/virtual fields:
 - i. Make sure to create this field through the appropriate mnemonic in Colleague (in TOOLKIT, not at the colon prompt).
 - ii. Create a descriptive name for the field prefixed with N27.<standard Datatel file naming convention>. The standard Datatel file naming convention can be viewed by listing D (data) type fields in the file.
 1. Example – If you are creating a field to get an address in the STUDENTS file– N27.STU.LOCAL.ADDRESS

- f. Put the new process mnemonic on the appropriate menu using the SMD screen.
- g. Give the appropriate users access to the new process by assigning a security class.

IFAS:

Process Change & New Development Procedures

Process changes and new development on the Financial System must follow the procedures described herein. See also the Change Management for Enterprise Information Systems Managed Applications document for information on how to initiate a change request and how requests are categorized.

Procedures:

Most of the development done in IFAS is the creation of reports developed in the Click Drag Drill (CDD) report writer. CDD is a third party report development tool from SunGard Bi-Tech, Inc. Standard processes are vendor maintained and rarely changed.

1. When making a change to an existing custom process:
 - a. Save the original process in the live account in the format "PROCESSNAME.MMDDYY" (e.g. GETPAYN.041406)
 - b. Copy the process from the live account to the test account to ensure that the most recent production version of the process will be modified.
 - c. Make the requested changes in the test account.
 - d. Comments should be added to reflect what is being changed. Use the "#" to show date, time, and user before any comments. In addition, the programmer may also make comments in the actual code to describe what was changed.
 - e. Give the appropriate users access to the process by assigning the appropriate security access (where required).
 - f. Have the requestor test the changes in the test account.
 - g. The requestor will notify the programmer of user acceptance.
 - h. Obtain managers approval to move process to production account (live) account.
 - i. Copy the process from the test account to the production (live) account.
 - j. Update the documentation to reflect the changes made as required.

2. If making changes to a IFAS standard process:
 - a. Proceed with the steps outlined in 1 above
 - b. Copy the process to a custom process with appropriate changes to the job running capabilities for the corresponding custom process menu/mask.
 - c. Create documentation detailing the process and showing sample output.

3. If creating a new process – use the following IFAS standard naming conventions:
 - a. For CDD reports:
 - i. Create a descriptive name for the CDD report and this CDD report can be placed in the appropriate folder of the user department. The standard naming convention is as follows
 1. XXX_YYYYYY... XXX represents the initials of the person that created the report. The Y's represent the actual name of the report and the spaces are replaced with _ (underscores).
 2. XX_YYYYYY... XX represents the abbreviated name of the department. The Y's represent the actual name of the report and the spaces are replaced with _ (underscores).
 - b. For IFAS programs:
 - i. Create a descriptive name for the IFAS programs.
 1. Example – If you are creating a IFAS “C” program to get to data to EMPMSTR1 screen – emp1.c
 - c. For Crontabs:
 - i. Create a descriptive name for the IFAS Crontab script. Usually “run” is keyword is used for the Crontab scripts.
 1. Example – If you are creating a IFAS Crontab to get to DHRM HR daily interface data to IFAS HR Web system – runhrimport
 - d. For masks:
 - i. Put the new process mask on the appropriate menu.
 1. Example – If you are creating a mask to get DHRM file for HR interface – HRCSRF.
 - e. Proceed from steps 1c through 1j above.

Appendix #4 to OIT Policy 62.006

Change Management for Enterprise Information Systems Managed Applications

Responsible Agent: Director of Enterprise Information Systems

Responsible Office: Enterprise Information Systems (EIS)

General

The EIS applications at Norfolk State University continue to evolve and become more complex. University customers rely on EIS applications to complete tasks critical to daily university operations. The environment is very dynamic and characterized by change. The need for a detailed change management process is vital, and managing change in a timely and effective manner is an important part of providing robust and valuable EIS applications.

Purpose

The EIS Change Management Process provides an orderly method in which changes to the environment are requested and approved prior to development and implementation. EIS strives to efficiently adapt to the continuously changing needs of university customers. This policy provides direction and requirements related to management of EIS projects of varying size, scope, and complexity.

Responsibilities

Under the guidance, leadership, and direction of the Director, EIS is responsible for implementing effective change management over all of the applications supported and maintained by EIS for the efficient conduct of university business.

Change Management Procedures

Every change to a component of the EIS applications must follow the change management procedures described herein.

Change requests include the following: queries (including creation of computed columns/virtual fields, development of related subroutines, and non complex reports), analysis, custom programming changes, new custom programming development, and any modifications to vendor delivered and supported software. Requests for modifications to vendor delivered and supported software may be completed by either EIS staff or the applicable vendor, at the determination of the Director of EIS. The back out plan for the aforementioned requests is to revert to the prior production version.

Change requests should be submitted well in advance of desired completion to give the Director of EIS sufficient time to review and assess the request; identify and review

potential consequences and repercussions; and make the decision to proceed, delay, or deny the change.

Change requests will be categorized as follows:

Low – A request that is estimated to take 1-10 days to complete. *(No formal test plan required)*

Medium – A request that is estimated to take 11-30 days to complete. *(Informal test plan required. Formal test plan recommended.)*

High – A request that is estimated to take over 30 days to complete. Multiple EIS staff may be involved in completing requests in this category, and formal project planning may be required. *(Formal test plan required.)*

Complex – A request that is estimated to take 60 or more days to complete. Multiple EIS staff will be involved in completing requests in this category, as well as staff from outside departments and vendors. Formal project planning will be required as requests in this category will likely have campus wide implications. *(Formal test plan required.)*

NOTE: When the Request Form is referenced below either a signature (and date) on the original form or an email to the assigned EIS staff member is acceptable. If an email is used as documentation instead of an actual signature on the form, the staff member will write “see email” on the signature line. All references to “the request” below relate to the requested item – report, query, new program, etc.

NOTE: When the term “manager” is referenced below it is referring to either the Director of EIS or the webmaster. The webmaster supervises requests related to the university web site. The Director of EIS supervises all other requests.

NOTE: All testing will be completed in the test account, unless it is determined to be infeasible. If testing in the test account is infeasible, testing will be completed in the production account. Testing completed in the production account must not modify or update production data. The steps outlined below assume the request will be tested in the test account.

Submission of a Change Request

1. The requestor must fill out Part I of the Programming Development/Maintenance/Enhancement Request form located at: <http://www.nsu.edu/forms/#OIT>. This form must then be submitted to the appropriate manager by fax, email, inter-office mail, or in person. If sent by fax or inter-office mail, it is recommended that the requestor follow up via phone or email to ensure receipt of the request.

2. The manager will evaluate the request, and **if** it is determined to be valid assign it to the appropriate EIS staff member (typically by email). The manager must complete the Assignment Date and signature on the Request Form (Part II). An email from the manager to the staff member may be used instead of a signature on the Request Form and “see email” would be written on the form.
 - a. If the request is determined to be invalid, the requestor will be notified & given the reason for the rejection. The requestor will have the opportunity to revise their request & resubmit it for approval.
3. The assigned staff member will notify the requestor that they have been assigned to the request, and conduct necessary communication to determine specifications. The staff member will determine the category as outlined above. If required, a formal test plan will be completed.
4. The assigned staff member will complete the request. When development is completed, the staff member will conduct preliminary testing. When preliminary testing has been completed, the requestor will be notified (typically by email) that they may begin testing in the test account. The assigned staff member must complete the Preliminary Testing Date and signature on the Request Form (Part II). An email from the assigned staff member to the requestor may be used instead of a signature on the Request Form and “see email” would be written on the form.
5. When testing is completed and approved by the requestor, the requestor will notify the assigned staff member (typically by email). The requestor must complete the User Acceptance Date and signature on the Request Form (Part II). An email from the requestor to the assigned staff member may be used instead of a signature on the Request Form and “see email” would be written on the form.
6. The assigned staff member will notify their manager and/or the appropriate analyst that the request has been completed, tested, and approved by the requestor. A pre-production review will take place between the manager and/or the analyst and the assigned staff member to ensure that the appropriate documentation exists as outlined in steps 1-5 above, and that the request is ready to be moved from test to production. The manager and/or analyst will notify the assigned staff member (typically by email) that the request and documentation have been reviewed, and the request may be moved from test to production. The manager and/or analyst must complete the Pre-production Review Date and signature on the Request Form (Part II). An email from the manager and/or analyst to the assigned staff member may be used instead of a signature on the Request Form and “see email” would be written on the form.
7. The assigned staff member will then move the request from test to production. The assigned staff member will notify the requestor that the request has been moved to production (typically by email). The staff member must complete the Move to Production Date and signature on the Request Form (Part II). An email from the assigned staff member to the requestor may be used instead of a signature on the Request Form and “see email” would be written on the form.
8. If the completed request required new development or a significant change to an existing process, the staff member will complete formal documentation

outlining the process, detailed steps taken to perform the process, and sample input and/or output.