

| Administrative Polices and Procedures                              |                |                               |                 |
|--|----------------|-------------------------------|-----------------|
| <b>SUBJECT: Technology Change Management Policy and Procedures</b> |                |                               | <b>IS 13.12</b> |
| Effective Date:  | Revision Date: | Revision #:                   | Page: 1 of 1    |
|  |                | Information Systems Director: |                 |
| Revises Policy:  |                |                               |                 |

## ***Executive Summary – Technology Change Management Policy and Procedures***

Ensuring effective change management within the Town’s production technology environment is extremely important in ensuring quality delivery of technology services. The intent of Change Management Policy and Procedures is to ensure the effective management of changes while reducing risk. Key components to the Town’s Change Management program include:

- **Accurate Documentation** – Identify the information relevant to a specific change that needs to be collected throughout the change management process.
- **Continuous Oversight** –The CAB (Change Administration Board) is tasked with balancing the need for change with the need to minimize risks.
- **Formal, Defined Approval Process** – All changes will follow the established multiple level approval process to ensure routine changes are completed with minimum restrictions while complex, high impact changes receive the oversight necessary to guarantee success.
- **Scope** – Establish the specific areas that this policy will cover. Examples include Customer Applications, E-Commerce Applications, Systems Engineering Changes, Hardware, Communications, and Facilities Infrastructure changes. Also included are all changes associated with the Systems Development Life Cycle (SDLC) program, hardware and software changes (network, client server, AS400, and telecommunications systems).

### **Key Objectives**

- Establish clearly defined best practice processes for technology change implementations
- Improve the efficiency and success rate of change implementations
- Improve communications throughout the organization of proposed and implemented changes
- Ensure proper levels of approval
- Reduce risk associated with implementing changes
- Reduce the impact of changes on the organization

## Technology Change Management Defined

Technology Change Management (Change Management) is the process that ensures the prompt and efficient handling of all changes to the information technology (IT) infrastructure. This is accomplished through the use of standardized methods and procedures that draw upon industry best practices.

The main goal of Change Management is to accomplish changes in the most efficient manner while minimizing the business impact, costs, and risks.

## The Change Management Process

The Town's Change Management process consists of three stages: 1) Change Initiation, 2) Implementation, and 3) Closure.

### Change Initiation

During initiation the justification for the change is developed through preliminary planning and assessment. This planning and assessment provides the input necessary for the Initial Approval of the change.

#### *Work Flow Tasks for Change Initiation:*

- **Request for Change (RFC):** RFC's are initiated through the Town's JWorks application. A request for change can be initiated from a Service Call, Request for Service, or Incident. The change may be initiated by a customer or IS staff member. The Change Request Form is created by the lead IS Staff member for the change. The Change Request is determined to be either In Scope or Out of Scope<sup>1</sup> for Change Management at this time. If it is within scope, change initiation continues through the process.
- **Preliminary Planning and Requirements Analysis:** Preliminary information regarding the change is gathered. This includes describing the change and its objectives, identifying the benefits to the customer, and identifying the systems and the type of change<sup>2</sup>.
- **Impact Analysis and Risk Assessment:** An initial impact and risk analysis is conducted to determine who and what may be affected and the degree of impact. An assessment of impact for not doing the change is also included. Alternatives to doing this change are also identified as part of the initial assessment.
- **Review and Approval:** The change request is reviewed by the staff members, project team, and/or supervisor(s), depending upon the impact classification and scope of the change. Approval is granted/denied by the immediate supervisor and/or the Assistant I.S. Director.

### Implementation

This process includes developing the technical requirements, reviewing the specific implementation steps, submitting the change for review and scheduling, and then completing the change in a manner that will minimize impact on the infrastructure and customers.

#### *Work Flow Tasks for Implementation:*

- **Design and Implementation Requirements:** After Initial Approval specific requirements for the change to be successfully implemented are completed. The Design and Implementation process includes a complete Impact Analysis and Risk Assessment. The Change is classified as High, Medium, or Low impact<sup>3</sup>. To arrive at this assessment you identify who and what will be potentially affected by the change including Department(s), systems, configuration items, procedures, costs, schedules, and resources. The Implementation Procedure and Schedule requirements are also documented at this stage.
- **Test Plan Development:** This phase focuses on developing the plan for conducting testing and quality assurance to ensure reliability and performance of all components of the organization's technology infrastructure. The

---

<sup>1</sup> Appendix A: Scope

<sup>2</sup> Appendix B: Change Types

<sup>3</sup> Appendix C: Impact Classification

## IS 13.12 Technology Change Management Policy and Procedures

---

Customer Acceptance Test Plan is developed to identify the extent and details of testing that will be completed post-implementation in order to determine if the change was successful or not.

- **Fall Back Plan:** Development of the fall back (back-out) plan is essential to ensuring effective recovery in the event of a failed change. The fall back plan is primarily based on the technical impact analysis and the implementation plan.
- **Test Results:** Test Results are documented to ensure that the results of the testing have provided input to the Design and implementation Requirements as needed to facilitate a successful implementation.
- **Change Request Review:** The Change Administration Board<sup>4</sup> makes a decision on whether the change should be implemented based on the information supplied in the RFC.

The above processes are intended to provide enough information to evaluate and validate the technical feasibility, risk and effect a change will have on the production environment and customer productivity.

- **Completion of Change Implementation:** Once a Change Request is approved, it moves into the Implementation Phase. This phase is concerned with the steps necessary to successfully implement the change:
  - Complete final planning
  - Establish the schedule and complete required notifications
  - Complete the change implementation
  - Test, validate and accept the change

### Closure

A post-implementation review is conducted to determine whether the change has achieved the desired goals. Post-implementation actions include assessing the implementation process, validating success, identifying lessons learned, and finalizing the change documentation.

#### *Work Flow Tasks for Closure:*

- **Complete Documentation:** Post implementation documentation consists of providing sufficient information to determine the effectiveness of the change. This should consist of testing and monitoring results, whether the goals of the change were met, the identification of any lessons learned, whether the change stayed within schedule and budget, and documentation of fall back execution.
- **Post Implementation Review:** The Post implementation review is held at the next Change Management meeting after implementation. In addition to making a success or failure decision on the change implementation, the review will also consider how the change was deployed, and whether it was implemented on time and within budget. This exercise may result in additional documentation of lessons learned from the change.
- **Finalize All Documentation:** Once the change has undergone final review all associated documentation should be filed with the appropriate ticket and the ticket closed.

---

<sup>4</sup> Appendix D: Change Administration Board

## Appendix A

### Scope

#### Scope

Because the Change Management Process deals with the management of changes in the production environment, it is imperative that both customers and IS Staff understand the events that are considered within the scope of the process. In this section, the scope is described and includes areas which are both within and outside of the change management process scope.

#### In Scope

The intended scope of the Change Management Process is to cover all of the Town's computing systems and platforms. The primary functional components covered in the Change Management process include

- SDLC – Changes handled through the formal or informal software development life cycle.
- Hardware – Installation, modification, removal or relocation of computing equipment of medium or high.
- Software – Installation, patching, upgrade or removal of software products including operating systems, access methods, commercial off-the-shelf (COTS) packages, internally developed packages and utilities.
- Database – Changes to databases or files such as additions, reorganizations and major maintenance.
- Application – Application changes being moved to production as well as the integration of new application systems and the removal of obsolete elements.
- MACs - Moves, Adds, Changes and Deletes to system configuration.
- Schedule Changes - Requests for creation, deletion, or revision to job schedules, back-up schedules or other regularly scheduled jobs managed by the I.S. Department.
- Telephony – Installation, modification, de-installation, or relocation of PBX equipment and services.
- Desktop – Any medium or high impact modification or relocation of desktop equipment and services.
- Generic and Miscellaneous Changes – Any medium or high impact changes that are required to complete tasks associated with normal job requirements, i.e. cabling, environmental changes, etc.

#### Out of Scope

There are many IT tasks performed at the company, either by the I.S. Department or by the end users that do not fall under the policies and procedures of Change Management. Tasks that require an operational process, but are outside the initial scope of the Town's Change Management process includes:

- Contingency/Disaster Recovery
- Changes to non-production elements or resources
- Changes made within the daily administrative process. Examples of daily administrative tasks are:
  - Password resets
  - User adds/deletes
  - User modifications
  - Adding, deleting or revising security groups
  - Rebooting workstations when there is no change to the configuration of the system
  - File permission changes
  - Desktop telephony moves, adds, changes

The Change Administration Board (CAB) may modify the scope periodically to include items in the scope of the Town's overall Change Management process.

## Appendix B

### Change Types

*Following are examples of candidates for Change Management.*

**Hardware changes:**

Additions, deletions, reconfigurations, relocations, or preventative or emergency maintenance.

**Software:**

PTF's, product releases, versions, table changes, tuning, alterations to libraries, catalogs, monitors, traps, or changes to priority mechanisms, service packs, security patches, configuration changes, and new installations.

**Environmental:**

Power, UPS system, generators, air conditioning, chilled water, electrical work, facility maintenance, security systems, fire control systems.

**Network Systems:**

Additions, modifications, lines, modems routers, network access, controllers, servers, protocol converters. Software components either distributed or centralized, bitnet tables, router software, servers.

**Operating Procedures:**

Changes in equipment downtime schedules, planned system outages, changes in delivering services, or changes to service levels.

**Workstations and Public Clusters:**

Changes in hours of availability, hardware configurations, operating systems, utilities, applications including release levels or versions, installations or de-installations of systems, servers.

## Appendix C

### Impact Classifications

**Low:**

Required Level of Initial Approval: Supervisor

For routine categories, the technical impact default is low. If the evaluation of the technical impact corresponds with the criteria below, the technical impact will be designated as "low." The technical impact criteria include:

- Involves IS resources from one workgroup
- Low complexity - No technical coordination required
- Low risk to system availability (system/service outage affecting customers during Non-Primetime)
- Easy implementation and back-out
- No impacts to service level agreements

**Medium:**

Required Level of Initial Approval: Supervisor and Assistant I.S. Director

The components of a medium technical impact include:

- Involves IS resources from more than one workgroup
- Significant complexity - Technical coordination required from one or more functional groups
- Moderate risk to system availability (system/service outage exposure during Prime/Peak Times, outage primarily expected during Non-Prime Time)
- Some complexity to implementation and back-out plans, back-out not expected to extend the window timeframe
- Affects application, data or server security
- Impacts service level agreements (e.g. Business Non-Prime Time) and internal support required

**High:**

Required Level of Initial Approval: Supervisor and Assistant I.S. Director

A technical impact is considered to be classified as high if the following criteria apply to the change:

- Involves IS resources from more than two workgroups
- High complexity – complex technical coordination required with one or more functional groups
- High risk to system availability (system/service outage expected during Prime/Peak Times)
- Complex implementation and back-out plans, back-out likely to extend the window timeframe
- Affects security of data on infrastructure
- Impacts service level agreements (e.g. Business Prime/Peak Time)
- Outside vendor support is typically required

**Emergency:**

Required Level of Initial Approval: Supervisor and Assistant I.S. Director and I.S. Director

## **Appendix D:**

# **Change Administration Board**

### **Purpose**

The CAB is a cross-functional group set up to evaluate change requests for business need, priority, cost/benefit, and potential impacts to other systems or processes. Typically the CAB will make recommendations for implementation, further analysis, deferment, or cancellation.

### **Membership**

The CAB is made up of individuals with stakeholder interest in the IT production environment. Since RFCs can impact any part of I.S. and any organizational group, the makeup of the CAB reflects the focus of the particular RFC being reviewed. In general, the CAB is composed of individuals who have a wide range of expertise and are familiar with business requirements, the user community, and system technology. It's important to note that additional CAB members may be required according to the RFCs being considered and if necessary may include input from security, services, vendors and customer groups.

Change Manager: The Change Manager is responsible for managing the activities of the change management. This individual focuses on the process as a whole more than on any individual change. However, the Change Manager is involved in every step of the process – from receipt of an RFC to the implementation of the change in the IT environment. The Change Manager's responsibilities include:

- Receiving RFCs and ensuring that they are properly recorded.
- Selecting CAB members and facilitating CAB meetings.
- Preparing CAB meeting agendas and providing all necessary review information to the CAB members prior to the meetings.
- If necessary, assigning teams to conduct RFC impact analyses and risk assessments.
- Analyzing and prioritizing RFCs.
- Categorizing and scheduling RFCs, subject to approval by the CAB.
- Approving requests for minor changes or assigning approval authority to others.
- Providing change notification to the Change Initiator and other affected parties.
- Monitoring the successful completion of all RFCs, including the change development project phases and ensuring that these processes follow the change schedule.
- Reviewing and evaluating the change process.

Change Coordinator: The Change Coordinator is responsible for planning and coordinating all of the phases of the change. The Change Coordinator will routinely provide project status feedback to the Change Manager and identify any problems as they arise. The Change Coordinator must work with the Change Initiator to ensure that the change meets the Change Initiator's requirements and that it successfully corrects any problems or provides the correct system enhancements intended by the RFC. After implementing the change, the Change Coordinator assists the Change Manager in evaluating the change process as it applies to the particular change. The Change Coordinator also coordinates and presents the post-implementation review analysis to the CAB.

Standing Technical Members: These members are permanent of the CAB and will review all RFC's.

Change Manager: I.S. Director

Change Coordinator: Assistant I.S. Director

Technical Subject Matter Experts: Systems Analyst, Network Administrator, Help Desk Specialist

Ad Hoc Members: Ad Hoc Members may be required according to the RFC being considered.

Change Requestor

Other Vendors, customers, or technical staff required for the change.

Change Requestor : The Change Requestor (normally someone within the IT Business Unit) originates changes by submitting a Request for Change (RFC). Everyone is authorized to initiate an RFC. The Change Requestor is responsible for providing sufficient information on the change that the Change Manager can complete the new change form within the company's selected technology platform. This person is notified whether the change was approved and is kept up-to-date on the status of the RFC throughout the change process. The Change Requestor assists the Change Manager and CAB in determining the RFC priority and, at the conclusion of the change, participates in the post-implementation review.

## **Responsibilities**

### Schedule RFC's for review by the CAB

Once an RFC has been received by the Change Manager, the RFC is scheduled for review by the CAB. The Change Manager distributes appropriate documentation to the CAB for review prior to the meeting.

### Review RFC's

The following criteria will be considered while reviewing any change:

- Evaluate the change plans to gauge the impact and effect of the change during and immediately following the change implementation.
- Review the technical completeness of the change plan, including anticipated assets changed, impact on start-up or shut down of systems, impact on disaster recovery plans, back-up requirements, storage requirements, and operating system requirements.
- Evaluate the technical feasibility of the change and the whole impact of the change in terms of:
  - Performance
  - Capacity
  - Security
  - Operability
- Validate technical aspects, feasibility, and plan.
- Evaluate the impact of both doing and not doing the change.
- Analyze the change scheduling so conflicts may be resolved to minimize impact.
- Ensure the Communications Plan is sufficient to notify all affected parties of the impending change and that they understand the potential impacts.

### Conduct Post Implementation Review

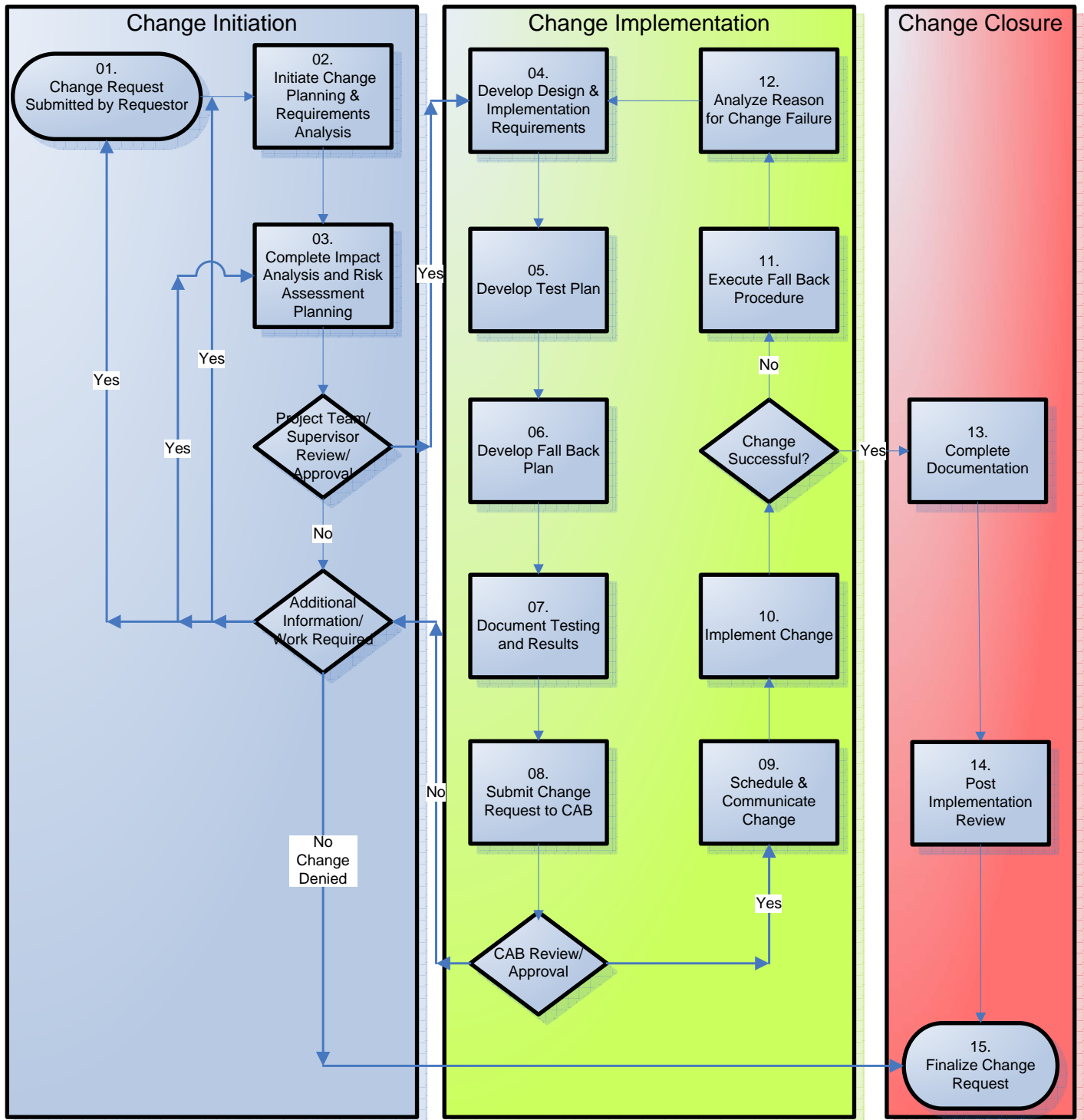
The Post-Implementation Review is intended to ensure that the objective and requirements for implementing the change are met and that appropriate procedures and documentation have taken place.

### Produce the Following Reports:

- CAB Agenda
- Calendar of all pending changes
- Change Status Report including number of RFC's, number approved/denied, number of successful/failed changes, number by change type.
- Report of Failed Changes
- Incident Report: Number of Incidents traced to a change and the reasons
- and implemented since last CAB meeting

## Appendix E

### Change Management Process



**INFORMATION SYSTEMS  
CHANGE REQUEST FORM**

---

JWorks Ticket Number:

Change Proposal Title:

Date:

Originator:

Dept.:

Description of Proposed Change

Implementation Date of Proposed Change:

Implementation Time of Proposed Change:

What is the benefit to the customer of the proposed change?

System/Server  
Name(s):

Change  
Type:

Hardware

Outage  
Required?

Yes  
 No

If yes, anticipated  
duration:

HH:mm

Impact/Risk Analysis Summary:

Include the impact of not doing the change as well as identifying risks associated with this change.

Alternatives:

Initial Review:

By: D. Burgess Date: Approved?  Yes  No  Additional Information/Follow-up Required

Reason:

## INFORMATION SYSTEMS CHANGE REQUEST FORM

### Impact Analysis Detail Section:

Classification:  High     Medium     Low

Departments Affected:

Systems/Configuration Items Affected:

Cost Impact:

Schedule Impact:

Resources Impact:

### Implementation Procedures/Schedule:

### Testing Summary:

Test Plan

Testing Completed?  Yes     No

Test Results:

### Fall Back Plan:

Fall Back Procedures:

What is the impact on customers if a fall back is necessary?

### Communications Plan:

| Notifications | Date | Notification Method   |
|---------------|------|---|
|               |      | <input type="checkbox"/> Email <input type="checkbox"/> Phone <input type="checkbox"/> Meeting <input type="checkbox"/> Other |
|               |      | <input type="checkbox"/> Email <input type="checkbox"/> Phone <input type="checkbox"/> Meeting <input type="checkbox"/> Other |
|               |      | <input type="checkbox"/> Email <input type="checkbox"/> Phone <input type="checkbox"/> Meeting <input type="checkbox"/> Other |
|               |      | <input type="checkbox"/> Email <input type="checkbox"/> Phone <input type="checkbox"/> Meeting <input type="checkbox"/> Other |
|               |      | <input type="checkbox"/> Email <input type="checkbox"/> Phone <input type="checkbox"/> Meeting <input type="checkbox"/> Other |

Was feedback provided by the customer regarding the change, impact, scheduling, etc?

