

ITS Change Management Practice

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Version History

Date	Revision Number	Name	Reason
2/25/2002	1.00	Authors	Original Document
5/29/2002	1.01	Aaron Goff	Updated Change Notification Form
7/5/2004	1.02	Joe Flanigan	Updated CM forms; allow notification on routine changes
11/22/2005	1.03	Joe Flanigan	Changed Policy to Procedure; modified process to add approval step; removed references to Outlook forms, Excel log; added example Magic Change Request form, calendar
March 13, 2006	1.04	Mary Weitzel	Revised to update terminology related to County Policies.

1. Purpose

This practice is intended to define standard practices and communications for maintenance and troubleshooting of the County's Information Technology environment, to decrease unplanned outages and to improve the level of service provided to the County by the Information Technology Services Department.

2. Scope

This practice applies to the Information Technology Services Department. Change management practices apply to any application, network server, system or device that is necessary to provide a service or application to a department or employee within the County.

3. Definitions

- 3.1. **Back-Out Plan** – an established plan for backing out of a change when unexpected problems arise that prevent completion of the project
- 3.2. **Change** – any modification or addition to a production application or underlying hardware
- 3.3. **Change Calendar** – calendar within Magic that displays scheduled changes
- 3.4. **Change Coordinator** – designated individual bearing overall responsibility for a particular change
- 3.5. **Change Request** – change that has been entered in Magic
- 3.6. **Impact** – the degree to which a given action will interrupt service to an internal or external customer
- 3.7. **Lead-Time** – the amount of time allotted between the notification of an impending change and the actual change implementation
- 3.8. **Magic** – the Magic Service Desk software used within ITS for creating/tracking Incidents, Work Orders, Problems and Change Requests.
- 3.9. **Roll Out Plan** – the implementation plan for the change
- 3.10. **Triage** – the process of assessing, troubleshooting, diagnosing and correcting an outage or problem with a production application or hardware system

4. Roles and Responsibilities

ITS employees are responsible for determining what actions constitute a risk to the availability of applications or network services and are thus subject to this procedure. Employees should make this determination **conservatively**, keeping in mind that one system or device may affect other systems in ways that are difficult to predict.

It is the responsibility of the ITS staff to promote and adhere to this procedure whenever maintenance, upgrades or configuration changes are being considered. ITS employees should review all change notifications and identify conflicts and potential risks.

The Change Coordinator should discuss any impending High, Medium or Urgent category changes with his/her direct supervisor. In the event that the direct supervisor is unavailable, any other member of ITS management can fill the Manager role as defined in the procedure below.

ITS Management is responsible for working with the Change Coordinator to determine impact, ensuring adherence to the procedure and reviewing results of the change.

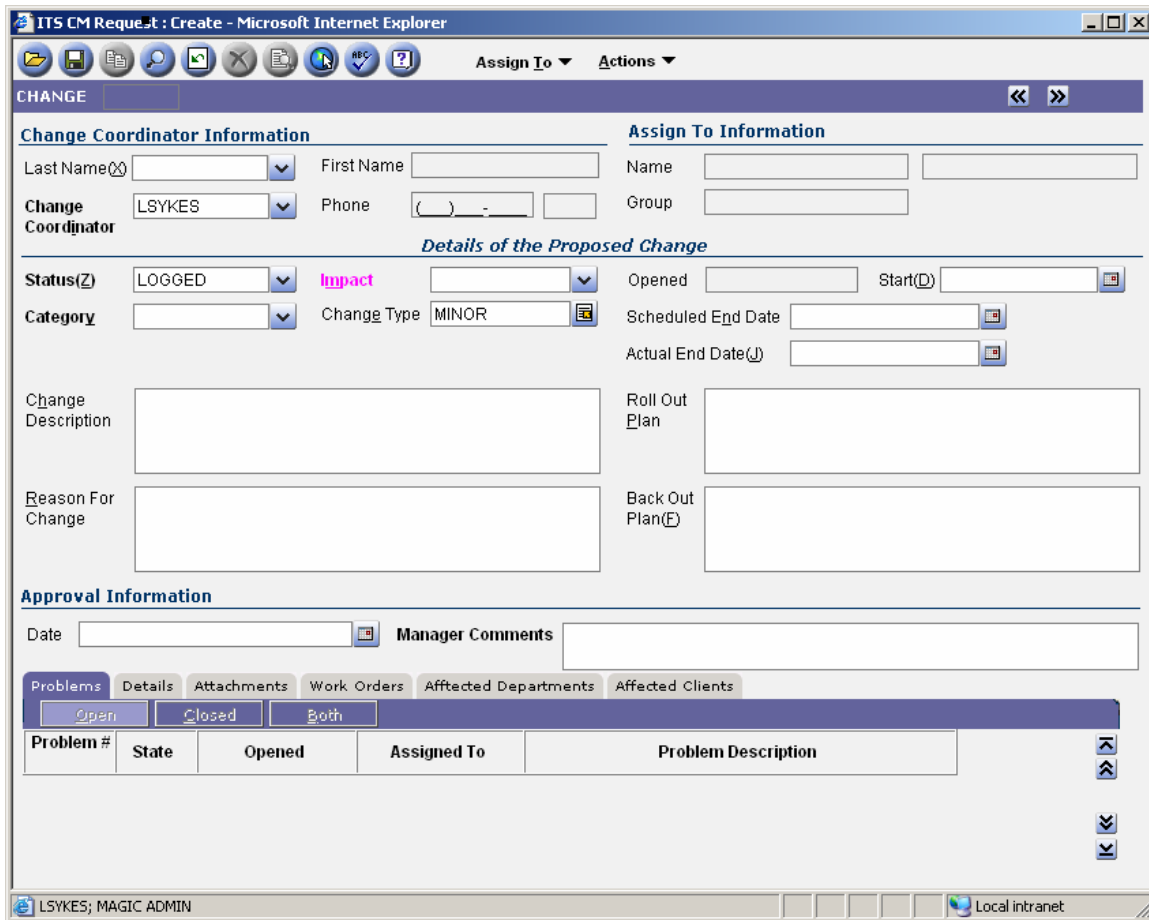
5. Procedure

For each proposed change, a Change Coordinator will be designated. That individual will be the primary contact for the change process. The change process will include the following steps:

- The Change Coordinator will create the Change Request (see Figure 1). Required fields include Category, Impact, Start and Scheduled End Dates, Change Description, Reason for Change, Roll Out Plan and Back Out Plan. On the Problem tab, link any associated Problems that will be resolved with this Change Request. If any existing Work Orders should be associated with this Change Request, enter the Change Request number (generated when the Change Request is saved) on each individual Work Order.
- The Change Coordinator will check the Change Calendar to verify there are no conflicts with other scheduled changes or known blackout periods (see section 7). The Change Coordinator will also verify the proposed schedule with the affected departments and/or clients.
- The Change Coordinator will ensure that a roll out plan is created, testing and verification procedures are established and followed and a back-out plan is prepared.
- The Change Coordinator then assigns the Change Request to the Manager for approval.
- The Manager will review the Change Request for impact of the change and adherence to the procedure. If the Manager approves the Change Request, he/she enters the Approval Date and Manager Comments, assigns the Change Request to the Change Coordinator and saves the modified Change Request. The Manager has the discretion to make minor grammar/spelling corrections or edit the Change Description for clarity. This can be done as part of the approval process instead of rejecting the Change Request and reassigning to the Change Coordinator. If the Manager rejects the Change Request, he/she enters appropriate comments in the Manager Comments field, removes the Start date and Scheduled End Date from the form (thus clearing the Change Request from the Change Calendar), reassigns the Change Request to the Change Coordinator and saves the modified Change Request.
- Upon approval, the Change Coordinator updates the Change Request with the list of affected departments (always include ITS) and the list of affected clients to be notified. When departments and clients are added, Magic will automatically generate the notifications based on the Lead Times for the Impact Categories listed in section 6.
- The Change Coordinator then coordinates the actual change process as scheduled.
- If any problems occur during implementation, the Change Coordinator will send status updates to the on-call Help Desk person.
- When the change is completed, the Change Coordinator enters the Actual End Date.

Figure

1



6. Impact

The impact guidelines are provided as criteria by which the impact of a particular change may be ascertained. Many changes will have characteristics of multiple impact levels. It is the responsibility of the Change Coordinator to consider these criteria and determine the “best fit” impact level for a given change.

Impact	Potential Impact Guidelines	Lead-Time
1 – High	May impact >50 users High visibility/critical systems Complex or lengthy back-out Lengthy installation Untried change	10 business days
2 – Medium	May impact 5-50 users Moderate visibility/criticality Moderate back-out Moderate installation window Change performed before	5 business days
3 – Low	May impact < 5 users Low visibility/criticality Simple back-out	24 hours
4 – Routine	Low visibility/criticality Simple or instant back-out Change is performed and tested regularly with no negative impact	User notification optional
U – Urgent	Change must be performed to restore service or function Business need outweighs risk to environment	Notification at time of change

7. Maintenance Window

High and medium impact maintenance activities, upgrades, application installations and configuration changes that **may** affect the availability of applications or network services should **not** occur during regular business hours (Monday through Friday, 7:00 AM to 5:30 PM) unless technical or logistical considerations require otherwise.

- Changes that impact the infrastructure cannot be scheduled during defined blackout periods. The current blackout periods include Wednesday evenings [cannot impact BOCC board meetings], the twenty day advanced voting period for Elections and the two week period prior to posting Land Records values (Nov. 1 and March 1).
- Routine, Low or Urgent category changes may be made during regular business hours if needed. Changes should be scheduled in such a way to allow for the largest reasonable amount of time to resolve unforeseen complications.

8. Lead-Times

Adequate lead-times are needed for high, medium and low risk changes as indicated in section 6. Larger, more complex changes will require more lead-time than smaller, simpler changes. Advanced notification of any change that **may** affect the availability of applications or network services should be directed to all affected users, as well as internally within ITS, to eliminate conflicting changes and to minimize the number and duration of service interruptions. Always include ITS in the list of affected departments on the Change Request.

The Change Coordinator should communicate the implementation plans to the ITS Department and all affected users and should make every effort to coordinate service interruptions with users to minimize disruption of business services.

When performing maintenance activities, upgrades or configuration changes that **may** affect the availability of applications or network services for a particular group or department, observe the lead-time rules outlined in section 6.

9. Notification

When communicating outages, the Change Coordinator planning the change will identify all processes or business functions that will be affected and will be responsible for notifying the proper individuals and departments. For Routine changes, notification is optional. For Urgent and Low Risk changes, a single notification may be sent to ITS and other potentially affected users. For Medium and High Risk changes, the following notification cycle should be followed:

First Notification

The Change Coordinator will update the Change Request with the list of affected departments (including ITS) and the list of affected clients to be notified (including LANDAC where appropriate). Magic will generate an email according to the lead times listed in the impact table above (see example below).

Reminder Notification

Magic will send the reminder email to the affected departments and affected individuals listed on the Change Request.

10. Change Calendar

The Change Calendar is available from the Magic application (see Figure 2). The calendar will display changes scheduled for the month, with each change colored-coded based on the impact.

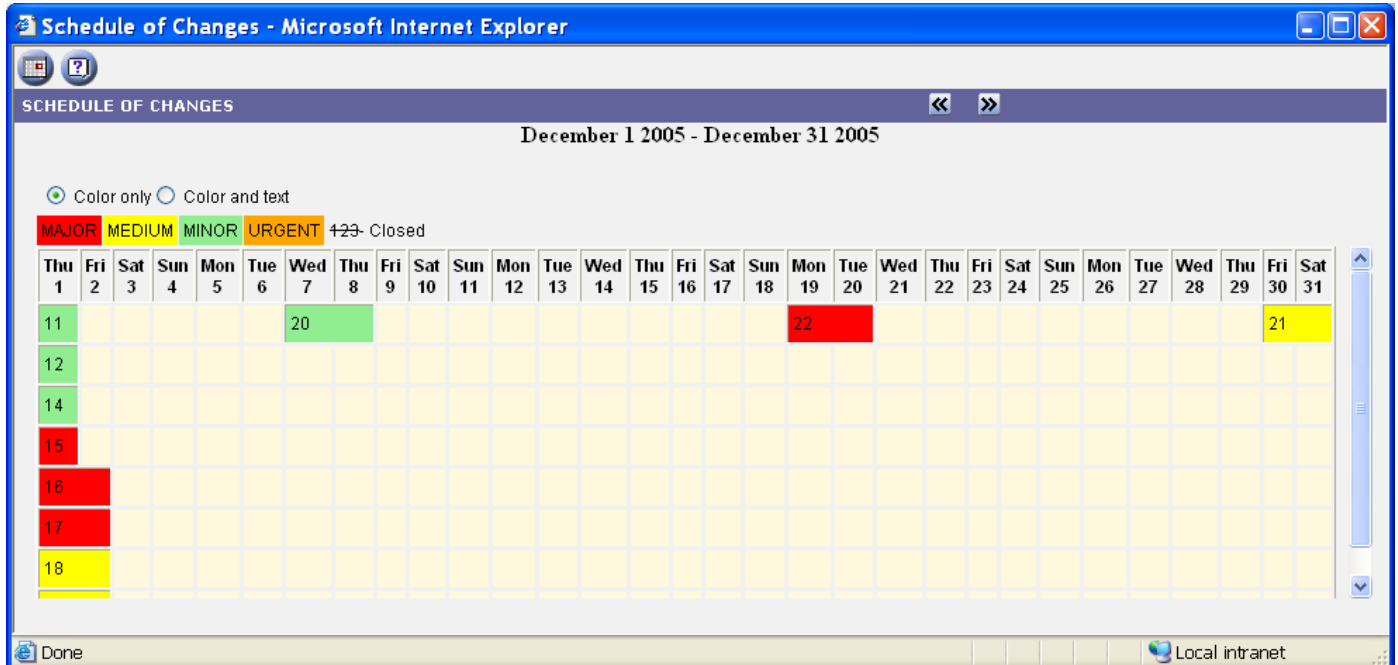


Figure 2

11. Testing Procedures

Testing procedures should be identified and conducted prior to any change whenever possible. Testing should accurately replicate the production environment as much as possible. Thorough testing procedures should also be identified and conducted after changes are made to ensure that every

affected system is working properly. The Change Coordinator is responsible for coordinating all testing prior to the change, as well as the verification performed after the change.

12. *Back-Out Procedure*

A back-out procedure should be developed prior to each change in case the change is unsuccessful. The Change Coordinator is responsible for ensuring that a back-out plan exists prior to the change implementation.