THE UNIVERSITY OF WAIKATO
Te Whare Wānanga o Waikato

ICT Change Management Process & Procedure

The document provides a step by step guide for staff that are required to implement technical change across all ICT Services within the Waikato University.

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Prepared for	Information Technology Services Staff, Contractors and Third Parties
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1 Introduction

1.1 Overview

The purpose of this document is to provide the process and steps required to successfully log and implement technical change across the University of Waikato's ICT environment.

For each change type there is a defined;

- Process Flow Diagram for each change category
- Action Step Table which includes task level procedural information

1.2 In Scope

The following changes:

- Minor Change – changes that impact more than 10 people but not a whole department/faculty, do not require an outage, can be implemented during business hours or as agreed with affected users.
- Standard Change – changes that are routine and happen regularly (eg; monthly) that follow the same technical deployment process, and are well documented. If a Standard Change requires an outage it should be scheduled in the agreed outage window of the following week.
- Major Change – changes that impact a department, faculty and/or are university wide, may or may not cause an outage and may or may not be complex in nature, but if unsuccessful has wide impact. Major Changes include project releases or BAU handovers. All Major Changes must be presented to CAB for approval, communications planning and scheduled release.
- Emergency Change – changes requiring immediate implementation to remediate or resolve and incident from occurring and or impacting business as usual production environments. Under special arrangement large system go-lives that require immediate remediation to resolve incidents from occurring can also utilize the emergency change process.

1.3 Out of Scope

The following services are deemed out of scope of the ICT change management process, and should be completed via Service Request, or part of BAU operations:

- Move, Add and Changes for service requests which will impact less than 10 users
- Standard support tasks that have no technical change requirements
- Incident Management and Problem Management
- Changes to production systems where there is no potential for business impact if change fails or is unsuccessful.

1.4 Standard Lead Times and Notification Requirements:

Change Category	Standard lead time required prior to implementation start post approval	Approval Required
Minor	1 day	Peer Review
Standard	2 weeks (routine/planned changes)	Peer Review Technical Manager
Major	1 week + 5 business days minimum	Peer Review Technical Manager CAB
Emergency (Business Hours)	30 minutes for outage Immediate to remediate potential issue	Technical Manager CAB Representative
Emergency (After hours)	Immediate resolution	Email notification must be sent post change completion to confirm and system(s) impacted and action taken. Send to: • System Owner • Service Support Owner • its-cab@waikato.co.nz
	If Emergency change not resolved and system outage occurs, trigger text notification, these must be sent to both: • Associate Director Service Operations: 027 674 9510 • Service Manager : 021 151 4977 Confirming outage, system(s) impacted, who is working on the issue, and any expected impact within next business day.	

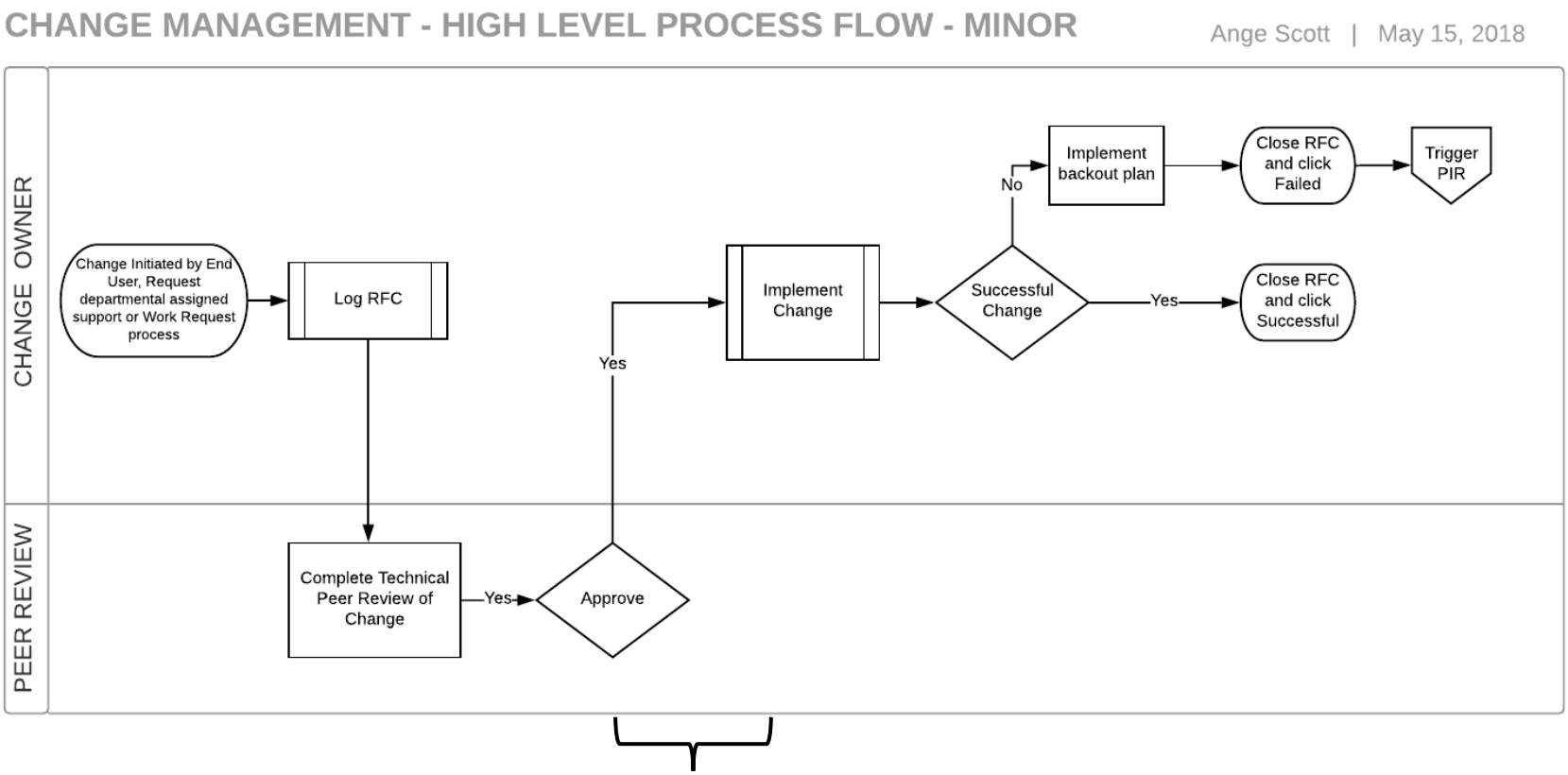
1.5 Technology and Change Categories further defined

The following is a list of defined change categories for technical team members to reference to assist with select the required change type and process to follow.

Change Category	Infrastructure / Systems	Network	Application
Minor	• Application deployments (to groups like labs, teaching rooms, etc) • Simple software upgrade (non-central system) • Simple update/upgrade of central system where clustering/load balancing/redundancy • Firmware upgrade on single system • Software/firmware upgrade on redundant system (e.g. node of a cluster) • Small changes to prod web environments which can be done quickly and reverted quickly on tested changes • Update ADFS trust relationship (if risk of downtime)	• Access switch replacement, upgrade • Changes of one VLAN interface in the network core • Changes/Upgrades on Access switch uplinks • Configuration changes applied to one AP group associated with one Building • Reboot of voice gateway that are associated with more than 10 staff • AP replacement, upgrade, reboot, NAC Implementation.	• Patches or plug-ins that do not require an outage • Error messaging updates • Application page text or warnings • Database corrections not directly affecting the end user (print codes) • Application Reports (New or Updates)

Change Category	Infrastructure	Network	Application
Standard	• Operating system update • Security Updates • Generator test	• Avotus reboot • Voicemail server reboot	• SSL Certificate renewal • Word press security updates
Major	• Migrate central service/data to new system • Simple/complex Upgrade on Central System requiring service outage • Complex software upgrade to a non central system	• Firewall replacement, upgrade, reboot. • Firewall interface changes • Edge router replacement, upgrade, reboot • Edge router uplink or downlink changes • Edge switch replacement, upgrade, reboot • Distribution switch replacement, upgrade, reboot • Changes/ Upgrades on Distribution switch uplinks • Collaboration system upgrade or reboot • Global configuration changes on the network core • Data centre switch replacement, upgrade, reboot • Data centre switch uplink or downlink changes • Wireless controller replacement upgrade, reboot • Wireless controller HA Failure • Configuration changes applied to one AP Group associated with Multiple buildings • Configuration changes on SIP Trunks	• Any upgrade, patch or plug-in that requires an application or service outage • Changes to integration points or views • Software as a Service ISP changes • Oracle security updates • Moodle releases • Small project go-live

2 Minor Change – Process Flow Diagram



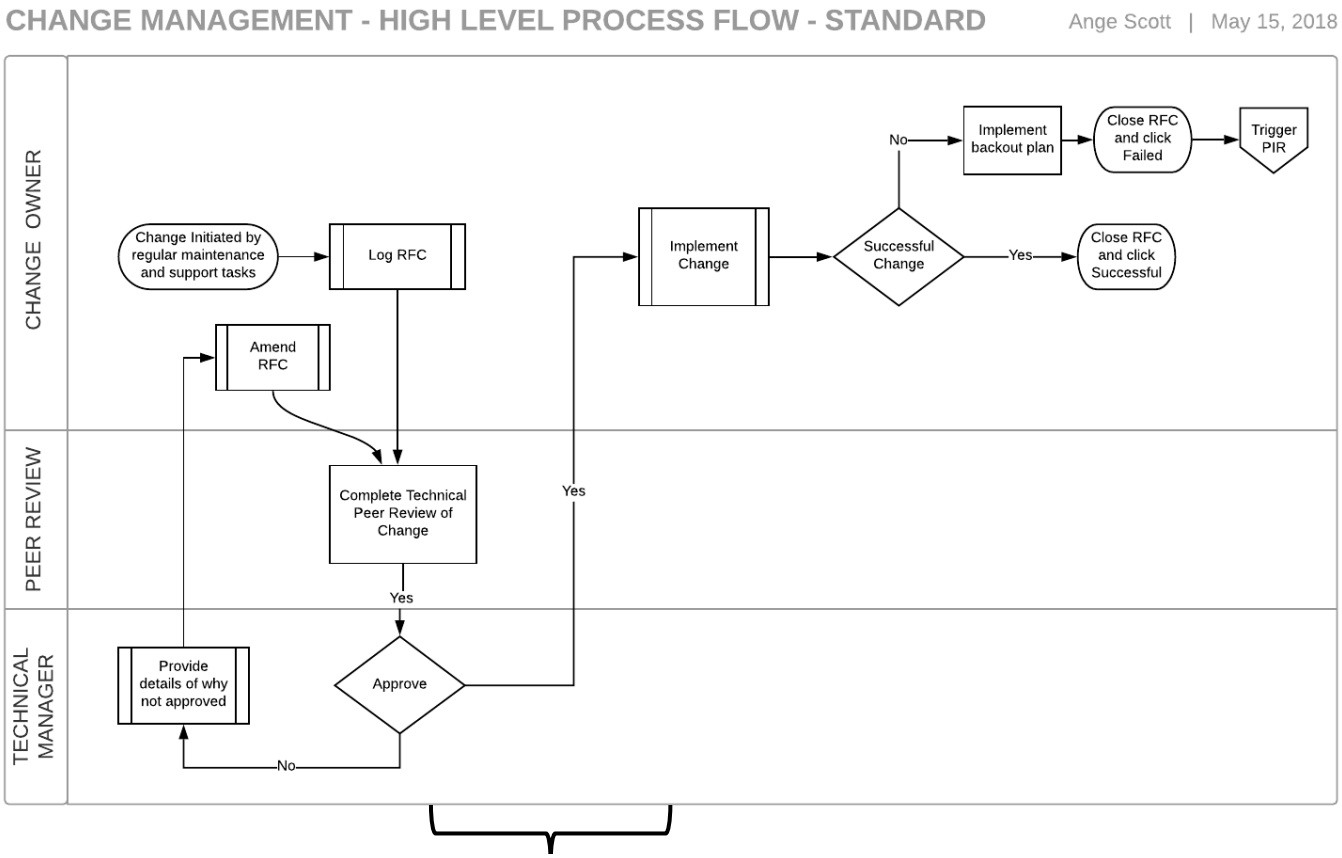
8 hours lead time from approval to implementation

3 Minor Change - Action Step Table

The following table further outlines the tasks required in the above process flow diagram and is a guide to ensure all staff understand their roles and responsibilities within each defined step.

Step	Action	Responsibility
1	Trigger via: Service Request from End User, Project based request, or planned maintenance/release.	
2	**Refer to the** LANDesk RFC and Guide. Log RFC in LANDesk, populate all the required change template fields and select the "Minor Change" category. Check the forward schedule of change for any potential conflicts and adjust timing of change if there is a clash. There must be a scheduled start time greater than 24 hours from logging the RFC. Assign to Peer Reviewer	Change Owner
3	Complete Technical Peer Review – suitably qualified engineer complete a review of the technical implementation/work plan, back out plan, scheduled time for completion. Technical steps and back out plan are fully documented and listed according to the action being taken. Ensure the 24 hour rule for implementation start is met. Once satisfied that this is correct and accurate provide approval to the Change Request and send communications: Submit (which signals approval and sends system email) Assign to Change Owner	Peer Reviewer
4	Progress to implement the scheduled change as per implementation plan.	Change Owner
5	On completion of change confirm success or failure by updating the LANDesk Change Record "Closure" status. If change is unsuccessful: Implement back out/contingency plan and send out Change Completion Notification of change failure and that the back out was invoked and change will be rescheduled. Trigger PIR Process and complete a PIR template and send to its-cab@waikato.ac.nz for review and presenting at next scheduled CAB Meeting.	Change Owner

4 Standard Change - Process Flow Diagram



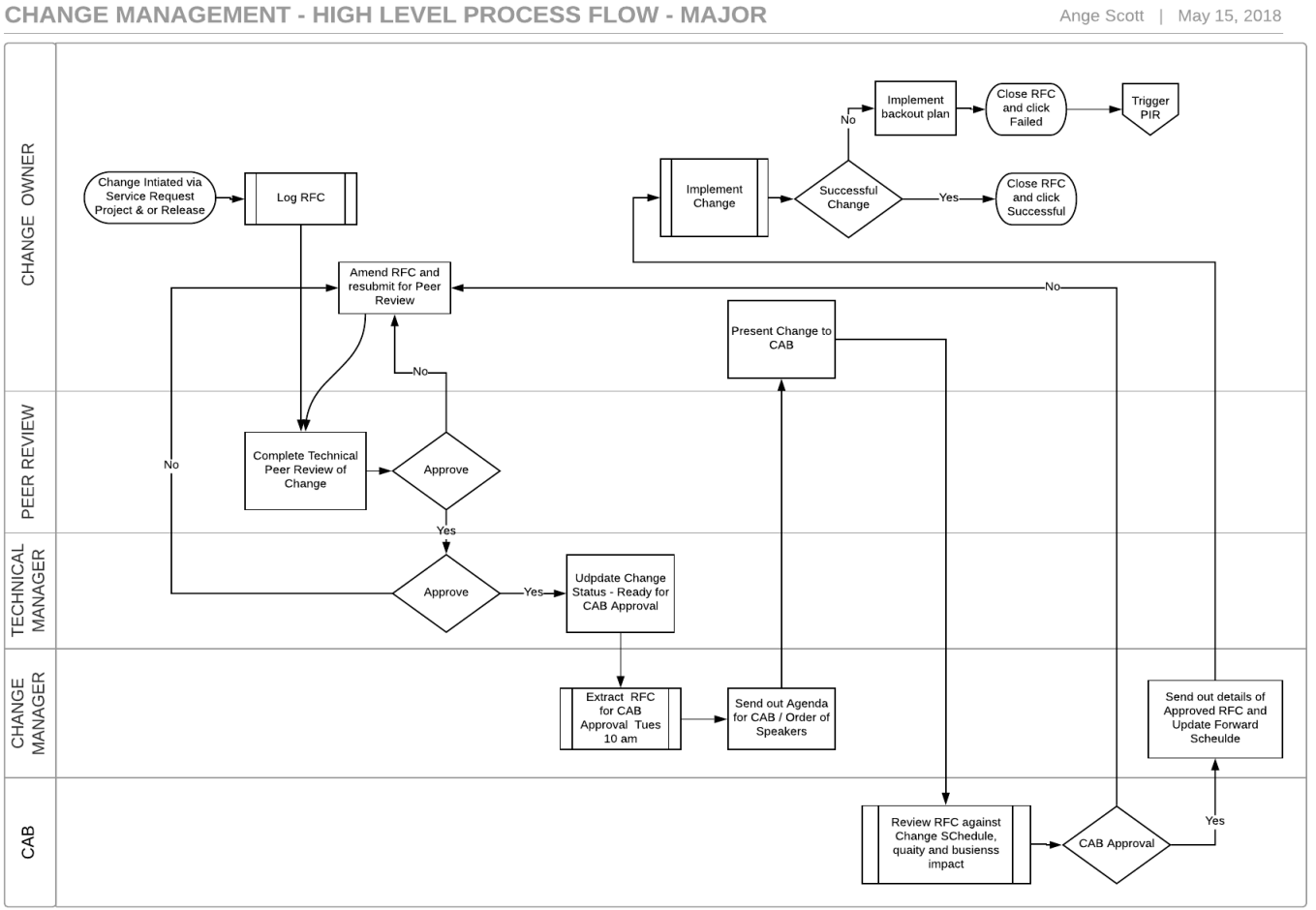
2 weeks lead time from approval to implementation

5 Standard Change - Action Step Table

The following table further outlines the tasks required in the above process flow diagram and is a guide to ensure all staff understand their roles and responsibilities within each defined step.

Step	Action	Responsibility
1	Trigger via: Planned scheduled maintenance/release.	
2	**Refer to the** LANDesk RFC and Guide. Log RFC in LANDesk, populate all the required change template fields and select the "Standard Change" category. Check the forward schedule of change for any potential conflicts and adjust timing of change if there is a clash. Assign to Peer Reviewer	Change Owner
3	Complete Technical Peer Review – suitably qualified engineer complete a review of the technical implementation/work plan, back out plan, scheduled time for completion. Technical steps and back out plan are fully documented and listed according to the action being taken. Once satisfied that this is correct and accurate provide approval to the Change Request and escalate for Technical Review: Assign to Technical Manager	Peer Reviewer
4	Complete Technical Management Review – suitably qualified engineer ensure all required details are included and processes have been followed. Check the forward schedule of change for potential conflicts. Once satisfied that this is correct and accurate provide approval to the Change Request and send communications: Submit (which signals approval and sends system email) Assign to Change Owner	Technical Manager
5	Progress to implement the scheduled change as per implementation plan.	Change Owner
6	On completion of change confirm success or failure by updating the LANDesk Change Record "Closure" status. If change is unsuccessful: Implement back out/contingency plan and send out Change Completion Notification of change failure and that the back out was invoked and change will be rescheduled. Trigger PIR Process and complete a PIR template and send to its-cab@waikato.ac.nz for review and presenting at next scheduled CAB Meeting.	Change Owner

6 Major Change - Process Flow Diagram



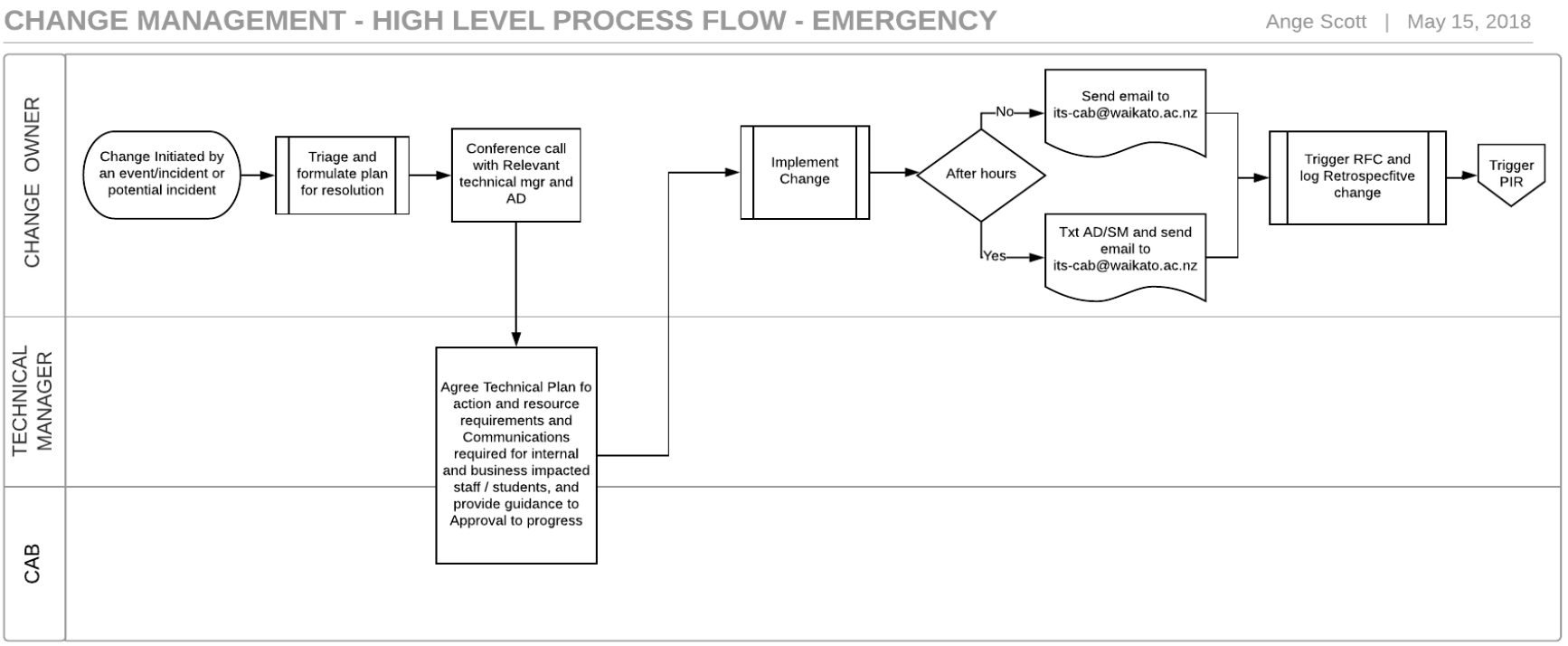
7 Major Change - Action Step Table

The following table further outlines the tasks required in the above process flow diagram and is a guide to ensure all staff understand their roles and responsibilities within each defined step.

Step	Action	Responsibility
1	Trigger via: Project, Service Request, Problem Management, Technical maintenance	
2	**Refer to the** LANDesk RFC and Guide. Log RFC in LANDesk, populate all the required change template fields and select the "Major Change" category. Check the forward schedule of change for any potential conflicts and adjust timing of change if there is a clash. Assign to Peer Reviewer	Change Owner
3	Complete Technical Peer Review – suitably qualified engineer complete a review of the technical implementation/work plan, back out plan, scheduled time for completion. Technical steps and back out plan are fully documented and listed according to the action being taken. Once satisfied that this is correct and accurate provide approval to the Change Request and escalate for Technical Review: . Assign to Technical Manager	Peer Reviewer
4	Complete Technical Management Review – suitably qualified engineer ensure all required details are included and processes have been followed. Check the forward schedule of change for potential conflicts. Once satisfied that this is correct and accurate provide approval to the Change Request and escalate for CAB Approval: Assign to CAB By providing approval this will indicate and meet the criteria to allow for the Change Record to be selected to be presented to CAB.	Technical Manager
5	CAB Agenda preparation - Tuesday morning: 1. Extract all Change Records that are categorised as Major that have Technical Manager Approval. 2. Extract all Change Records that have a status of "failed".	Change Manager
6	CAB Agenda creation and circulation - CAB members and presenters: 1. Assign 5-10 minute time slot for Change Owner to present change. 2. List any failed changes for review.	Change Manager
7	CAB Quorum - Minimum 3 CAB members present.	CAB

8	Present Change to CAB - confirm implementation plan, back out plan, timing and business benefit/need to implement, and risk/impact if change fails.	Change Owner
9	CAB Approval assessment - check schedule, details of implementation plan, type of change, potential business impact, communications/ notifications plan or action.	CAB
10	CAB Approval - complete required CAB approval in LANDesk by selecting CAB and placing name of Change Manager as approval. Gain agreement of communications/notification requirements. Submit (which signals approval and sends system email) Assign to Change Owner	Change Manager
11	CAB Completion - at end of CAB send notification of CAB Approved Changes to be progressed during the next period, update forward schedule of change. Send external communications.	Change Manager
13	Progress to implement the scheduled change as per implementation plan.	Change Owner
14	On completion of change confirm success or failure by updating the LANDesk Change Record "Closure" status. If change is unsuccessful: Implement back out/contingency plan and send out Change Completion Notification of change failure and that the back out was invoked and change will be rescheduled. Trigger PIR Process and complete a PIR template and send to its-cab@waikato.ac.nz for review and presenting at next scheduled CAB Meeting.	Change Owner

8 Emergency Change – Process Flow Diagram



Emergency Changes
Are changes requiring implementation to either mitigate a high severity incident from occurring or to remediate an issue that is causing an incident to occur, these could be during or after hours and require immediate action.

9 Emergency Change - Action Step Table

Emergency changes are technical changes requiring implementation to either mitigate a high severity incident from occurring or to remediate an issue that is causing an incident to occur. These could be during business hours or after hours and require immediate action.

The following table further outlines the tasks required in the above process flow diagram and is a guide to ensure all staff understand their roles and responsibilities within each defined step.

Step	Action	Responsibility
1	Trigger via; event management, monitoring tool, high severity incident or hardware failure	
2	Complete technical assessment of issue and contact Technical Manager and Associate Director to discuss the required plan for action, urgency to resolve and any other required involvement/resource to remediate.	Change Owner
3	Business Hours - Provide Verbal Approval to progress required Change and confirm communication plan and action to progress implementation/resolution.	Technical Manager CAB Representative
4	During business hours: Change Manager to trigger ITS Internal and CME (email, etext, staff / student landing pages as appropriate) communications at least 30 minutes prior to change implementation. After hours: Change Owner progress to resolve as required with no required lead time to implement. If an incident or high severity incident occurs text ITS Service Manager and Associate Director Service Operations to confirm action and business impact.	Change Manager Change Owner
5	Progress to implement the required change.	Change Owner
6	After hours: Text ITS Service Manager and Associate Director Service Operations and send email to its-cab@waikato.ac.nz to confirm action and business impact.	Change Owner
7	Complete a Retrospective Change Record in LANDesk to document the action taken. This must be completed within 24 hours of the completion of the change.	Change Owner
8	Trigger Incident/Event/Change PIR to understand why the change was required. This should be triggered within 24 hours of the completion of the change and resolution of the issue and presented at the following weeks CAB Meeting for lessons learnt and agreed actions. Send completed PIR to its-cab@waikato.ac.nz.	Change Manager

Appendix – Related Documents and Processes

These documents and processes should be considered and/or referenced:

Process/ Reference Documentation
Change Management Terms of Reference (to follow)
LANDesk RFC and Guide
Change Management Quick Reference Guide
Quick Reference Guide for Infrastructure/Systems Changes
Quick Reference Guide for Network Changes
Quick Reference Guide for Application Changes