

# Validation & Testing and Release & Deployment Policy

## Version Control

VERSION	REVIEWED	APPROVED BY	APPROVAL DATE
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## Relationship with Change Management

Change Management and Release Management are different but related functions. At a high level, Change activities relate to the process of requesting changes, assessing changes, authorising changes and reviewing changes. Release activities include planning, designing, configuration, rollout planning, testing communication and deployment. The Release Management function provides the schedule and execution whilst the Change Approval Board authorizes the change to controlled environments.

## Release & Deployment Policy

The purpose of the release and deployment management process is to plan, schedule and control the build, test and deployment of releases, and to deliver new functionality required by the business while protecting the integrity of existing services.

- Each release will be designed and governed by a request for change raised via the change management process to ensure effective control and traceability.
- Releases are planned and designed to be built, tested, delivered, distributed and deployed into the live environment in a manner that provides the agreed levels of traceability, in a cost effective and efficient way.
- All releases follow a pre-agreed route through appropriate environments. This may require use of a Development, Test, UAT and Pre-production before being released into the production environment. Major releases must be fully tested under a realistic load before they are deployed.
- Resources will be coordinated during release and deployment management.
- Emergency releases are managed in line with the emergency change procedure and are reported to management as appropriate.
- Records are kept of planned release and deployment dates and deliverables with references to related change requests and problems. They will be used to record and manage deviations, risks and issues related to the new or changed service.
- The risks of remediating a failed release will be assessed and managed.
- All release packages must be tracked, installed, tested, verified and/or uninstalled or backed. Exceptions will require approval.
- Ensure that a new or changed service and its enabling systems, technology and organisation are capable of delivering the agreed utility and warranty.
- It should be ensured that there is knowledge transfer to enable the customers and users to optimise their use of the service to support their business activities.
- Skills and knowledge should be transferred to service operation functions to enable them to effectively and efficiently deliver, support and maintain the service according to required warranties and service levels.

## Validation & Testing

The underlying concept to which service validation and testing contributes is quality assurance – establishing that the service design and releases will deliver a new or changed service is fit for purpose and fit for use.

The key benefits that formal IT service testing and validation brings to the University are:

- Confidence that a new or changed service will deliver the value and outcomes required
- A clear communication and understanding of the risks associated with implementing the change.

### Testing

Successful testing depends on all parties understanding guarantees cannot be given but a measured degree of confidence provided. The required degree of confidence varies depending on the need for stability versus the urgency for the changes to be carried out.

- All tests must be carried out by people who have not been directly involved in the development and build activities.
- Test pass/fail criteria must be documented before the start of any testing.
- Every test environment must be restored to a known state before testing is started.
- Create, catalogue and maintain a library of test models, test cases, test scripts and test data that can be re-used.
- Adopt a risk-based testing approach aimed at reducing risk to the IT service and the University.
- Engage with customers, stakeholders, users and service teams throughout the testing process to enhance their testing skills and capture feedback on the quality of services and service assets.
- Establish test measurements and monitoring systems to improve the efficiency and effectiveness of service validation and testing.
- Automate using automated testing tools and systems, particularly where:
  - Complex systems and services are involved, large-scale infrastructures and business critical applications.
  - Time to change is critical, e.g. if there are tight deadlines and testing windows.

### Validation

According to the Capability Maturity Model, validation is the process of evaluating software during or at the end of the development cycle to establish whether requirements have been met.

Where testing can identify software defects, validation exists for the purpose of assuring that business requirements are delivered.

- Before Validation testing is undertaken it assumes that the Business requirements have been sufficiently detailed / documented to build an appropriate product to be tested.
- All phases of the test cycle should be designed to provide validation of business requirements being met.
- Validation and Acceptance should be documented and approved through a Testing Framework that is appropriate to the business criticality and tier of the Business Application.