



**KUOK (SINGAPORE) LIMITED**

## Release and Deployment Management Policy

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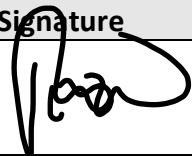
## Document Review

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## 1 Introduction

The purpose of this document is to set out in detail Kuok Singapore Limited's policy in the area of release and deployment management.

As such, this document will represent an initial design for the enhancement of existing release and deployment management processes and will be updated on at least an annual basis thereafter as Kuok Singapore Limited and its needs develop.

Release and deployment management contributes to the reliability of the IT environment by:

- Minimising impact on production for releases and changes
- Providing control in situations where rate of change is significant
- Ensuring that a complete record of all releases and their implementation is captured
- Ensuring releases operate correctly after they have been implemented
- Allowing recovery actions to quickly take place in a controlled and planned manner
- Fostering better alignment of IT services to business requirements
- Improving risk assessment for multiple changes

## 2 Release Policy

This release policy applies to both packaged and bespoke applications in use within Kuok Singapore Limited. For each of these two types of application a different policy is followed.

### 2.1 Packaged Applications

In order to speed up the development process, Kuok Singapore Limited uses packaged applications from Best of Breed vendors. This allows complex functionality to be delivered to the business quickly and effectively.

The major packaged applications in use are listed in the following table.

Software	Vendor	Function
SAP HEC	SAP	ERM
Agresso	NA	Maritime management
Compas	TBA	Maritime management
WinSDS	TBA	Maritime management

Each supplier of these major applications releases upgrades on a regular basis, but with varying frequencies. For many applications a major upgrade is only released every year (or longer in some cases), with interim maintenance releases.

Vendors support particular releases of their applications for a time they deem to be reasonable, and announce the withdrawal of such support service once that time is past.

There are also considerations regarding the version of the database management system (DBMS) underlying the business application. The vendors will also stipulate the DBMS versions that they will support their application running on.

The version of the operating system that is running on the system also needs to be considered, as again there are dependencies between that and the versions of both the DBMS and applications supported.

Accordingly, Kuok Singapore Limited has adopted the following policy with respect to timing of the implementation of package upgrades:

- Packages, DBMSs and operating systems will always be on a supported release level
- Where possible, a reasonable delay will be allowed before a new release is implemented within Kuok Singapore Limited in order to allow for any initial problems with the release to be sorted out by the supplier through experience at other customers

Through the supplier management process, Kuok Singapore Limited will ensure that regular communications are in place with each of the vendors, according to their criticality to the business and that the frequency and importance of releases is understood.

## 2.2 Bespoke Applications

Kuok Singapore Limited also creates bespoke software in-house using its team of developers. This allows us to tailor the delivered functionality exactly to our requirements.

**March 2020 Update: KSL currently do not support bespoke in-house software.**

The major bespoke applications in use are listed in the following table.

Application	Function	Release Frequency
NA	NA	NA

Kuok Singapore Limited deploys releases for each of these major bespoke applications on a regular basis, as shown in the table above. The frequency of release is driven by business need and is subject to regular agreement as part of the annual service management review process. The types of releases used within Kuok Singapore Limited are:

- **Full** – major enhancements to the application, including significant new functionality
- **Delta** – Mainly fixes to existing code, but with some limited new functionality also from time to time

There is also a process for emergency releases where multiple changes must be introduced in order to fix a problem affecting service (see document reference ISMS18012).

## 3 Testing and Deployment Policy

A separate test environment will be maintained for each major business application, and new releases will be applied to that test environment first. Ample time will be allowed between upgrading the test environment and upgrading the live environment for adequate user testing to be carried out.

An user acceptance test plan will be created, agreed and used as the basis of testing, with results being recorded on the test plan. These plans and results will be retained at least until after the following upgrade.

Errors encountered during testing will be documented and forwarded to the vendor or development team for review. Once testing is completed, a meeting will be held between the Kuok Singapore Limited and the Business Unit(s) affected to decide whether or not to proceed with the upgrade to live. These activities will be governed by the requirements of the change management process, including correct risk and impact analysis and authorisation.

## 4 Definitive Media Library

All media provided by packaged application vendors will be catalogued and stored in the Definitive Media Library (DML). The catalogue will be held online and all uses of the media recorded, including the date and time booked out and back in, the name of the person using it and the purpose.

For those media which are in regular use, copies may be taken in order to ensure the integrity and condition of the master copies.

Software to be kept in the DML will include (but not be limited to):

- Release media of applications
- Fix media (e.g. Microsoft Service Packs)

The contents of the DML will be audited at least annually, with a check being made that all media that is listed in the catalogue exists in the DML and that it is in good condition. Any discrepancies will be investigated and if possible corrected.

## 5 Integration with Change and Configuration Management

The process of putting a new release into the live environment will be controlled via the change management process. This will involve the raising of a change request which will include details of the testing carried out, an assessment of the risk and impact of the new release and proposed implementation schedule. This change request will then be assessed via the change management process (including consideration by the Change Advisory Board) and if appropriate, approved for implementation.

At each stage, the Configuration Management Database (CMDB) will be updated so that it reflects an accurate picture of the status of the release and its related configuration items (such as release documentation). As the new release becomes live, the status of the previous release must also be updated to indicate that it is no longer live.

For bespoke applications this will be achieved via the use of IT service management tools which will group the changes into a release and associate them with the relevant configuration items.

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