

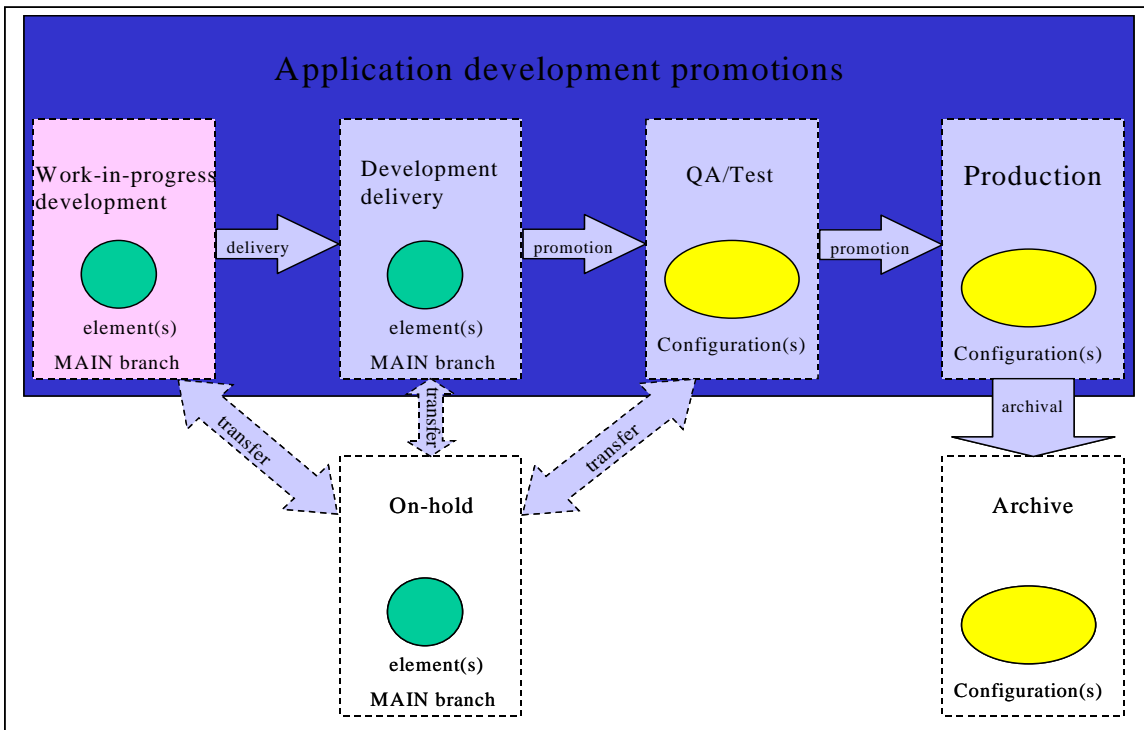
# MCS/MTSA Application and Database Migration Windows

This document attempts to describe the new Software Configuration Management (SCM) strategy being developed by the Ministry of Community Services (MCS) ISB Dev/Web group and its interaction with the deployment of applications and databases. This process is evolving and the following information is subject to revision.

## PROMOTION MODEL for DATA and APPLICATION Related Deliverables

### PROMOTION Levels

This promotion model can (at a high level) deal exclusively with DATA and APPLICATION related metadata. The MCS Designer 10g repository is currently set up to provide promotion of applications (database components) through various states, from development through to production and archiving. The management and promotion of source code and its integration with Designer 10g is being addressed in another project. The following diagram outlines the promotion model.



**Figure 1: Promotion Levels**

Application systems produced during systems development and maintenance advance through the horizontal promotion lines until reaching production.

Occasionally, projects may be put on-hold. In these situations, applications will be transferred to a holding area (represented by the “On-hold” box) until the project resumes activities.

Applications that have reached the end of their useful life will be removed from the production environment, and will be placed in an Archive environment. They will stay in this environment for a period of time and may eventually be removed from the repository and be exported to an archive file.

Following is a description of the application development promotion states:

**Development:** all development, bug fixes, analysis work, etc, are conducted in this environment. Developers will connect remotely to the repository and use this workarea to modify the repository elements. When an application or application version is ready to be delivered, the elements to be delivered are bundled into a user defined set. The Repository Manager will then be notified via e-mail as per Release Windows scheduling procedures outlined within this document.

**Delivery:** this promotion level is where the bundling of elements into releases happens. From here, releases can be promoted to the next promotion levels. For more information see the Oracle Designer SCM Guide – section 7.4.1 Overview.

**Quality assurance/test:** this promotion level contains elements going through quality reviews. Ministry staff will move the configuration from the Delivery environment to this environment when the application is ready for testing. It is up to each individual project to determine how often this promotion level is populated.

**Production:** Once the code has been tested and is ready to be put into production, the configuration is moved to this environment at the same time the application is implemented in production. The intent of this environment is to document the current state of the applications that are in production.

**Archive:** this environment hosts the applications that are no longer in use by the ministry. It provides a temporary staging area before actual archive of the application to an Oracle export file. The objects stored in this environment can either be individual versions of an application, in which case a configuration would be placed here, or an entire application, where the application container would be placed here. An entire application would only be archived if there are going to be no more version of that application.

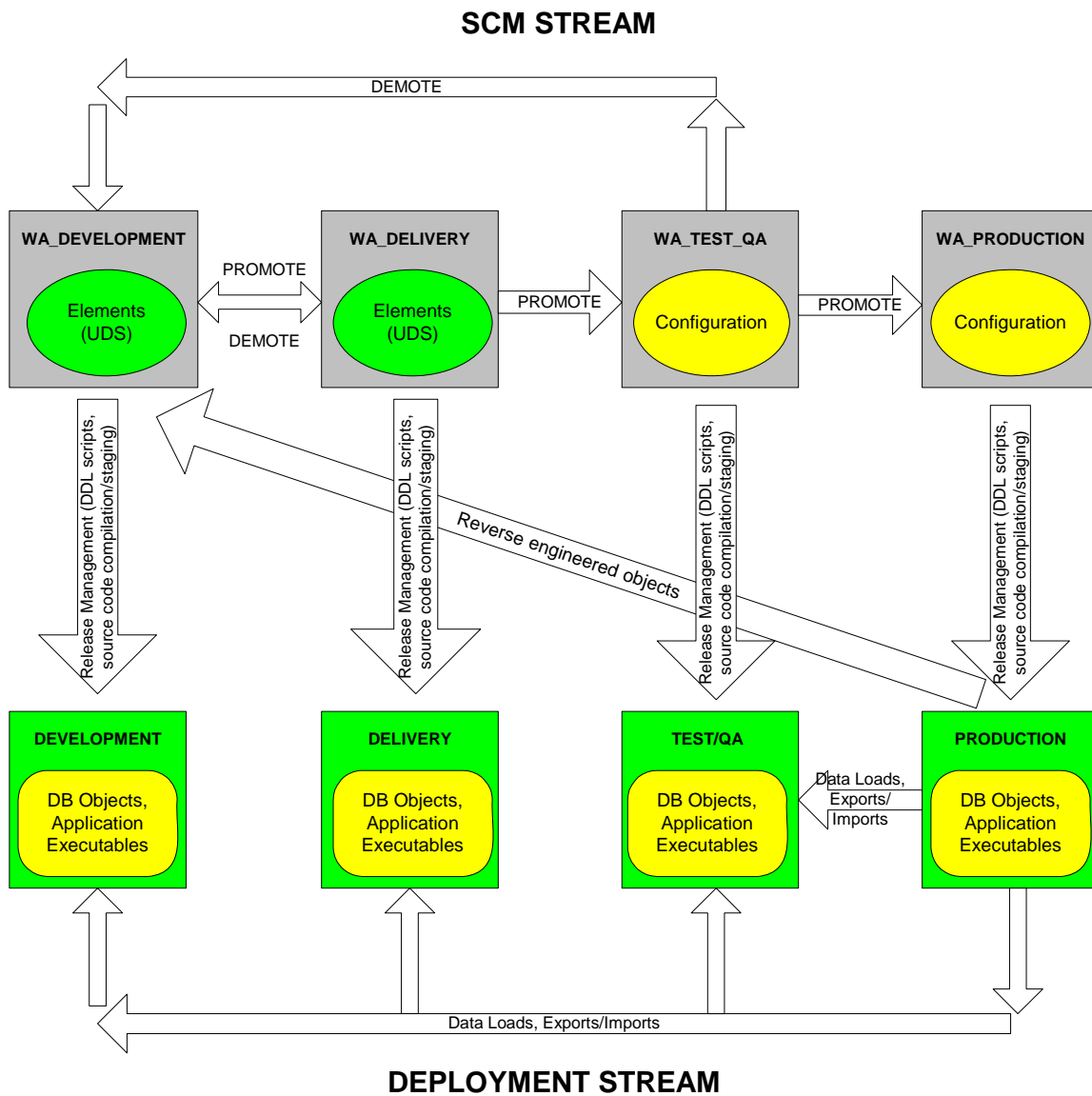
**On-hold:** this environment provides a temporary holding area for applications that are put on-hold during a development or maintenance release project. They will stay in this area until the project resumes activities. The objects stored in this environment can either be individual versions of an application, in which case a configuration would be placed here, or an entire application, where the application container would be placed here.

The workareas that represent each promotion level and their description are:

# DEPLOYMENT MODEL for DATA and APPLICATION Related Deliverables

## DEPLOYMENT Levels

The deployment model can (at a high level) deal exclusively with DATABASE and APPLICATION related objects and their build characteristics. The MCS application deployment environment is setup to provide suitable database and application services for relative stages of the Promotion model. At a minimum every application will have a deployment environment for Delivery, Testing/UAT and Production. The case may be made for providing a Development database and application environment for applications that are fully managed in-house, however at this time the Development environment is considered to be the responsibility of the vendor developing/maintaining the application. The following diagram outlines the deployment model:



## Figure 2: Deployment Levels

Application systems produced during systems development and maintenance advance through the vertical release management lines until reaching production.

Following is a description of the application development deployment states:

**Development:** All development, bug fixes, analysis work, etc, are conducted in this environment. Developers will manage the build of development database objects and the staging of application components for unit testing and internal quality assurance testing. In special circumstances this environment may be managed in-house by the MCS ISB Dev/Web group.

**Delivery:** This deployment level is where the implementation of elements into pre-UAT releases happens and the application is tested by the development team to ensure it “hangs” together as expected. From here, releases can be promoted to the next promotion levels. This deployment level is controlled by the development team and is refreshed as necessary.

**Quality assurance/test:** This deployment level contains database objects and application components going through quality reviews. ISB Dev/Web group staff will download the database DDL from the Designer 10g WA\_TEST\_QA workarea configuration and build the database objects in the QA environment. ISB Dev/Web group staff will also be responsible for staging the application components to the staging area for testing.

**Production:** This deployment level contains database objects and application components that are ready to be put into production. ISB Dev/Web group staff will download the database DDL from the Designer 10g WA\_PRODUCTION workarea configuration and build the database objects in the Production environment. ISB Dev/Web group staff will be responsible for staging the application components to the production staging area.

## EMERGENCY FIXES

An Emergency Fix is defined as an application bug which causes **CRITICAL** loss of functionality in a Production application system. Emergency fixes will be given priority in terms of resolution and releases over normal Development to Test and Test to Production release cycles. An Emergency Fix must be defined by a formal Change Request process before action can be taken. The ISB Dev/Web group does NOT maintain a separate E-Fix environment for applications at this time. Therefore E-Fixes will have to be released through the normal release management cycle in terms of the Promotion Model, however testing in the QA/Test environment may be skipped at the discretion of the client and the risk of introducing the fix to Production.

A new change process is currently being reviewed to better support the E-FIX requirements, but is unavailable at the time of the publishing of this document.

## MCS RELEASE WINDOWS

The intent of these change windows is to allow effective scheduling of the Dev/Web group resources (and/or contracted backups) responsible for the implementation of a database and/or application release. There are two formal Del→Test and Test→Prod release windows on each business day. The process for scheduling a release is outlined in the following section.

### **Scheduling Policies & Procedures:**

1. General scheduling process:
  - a. The Business Analyst of record for the application will send an email to the CS Release Manager or appointed backup resource, requesting a timeslot for their release. The request should include the following:
    - i. If a Refresh of the Environment is required.
    - ii. List of DWS/MCS Operations/CITS Resources that will be required.
    - iii. The Release Number.
  - b. The CS Release Manager will inform the DWS and Operation resources required for the QA and staging of the release package components, ensure their availability and book the timeslot in the release calendar.
  - c. If the project is in Harvest it will be necessary for all approvals on the RFC Packages in the Package Group to have been completed prior to scheduling.
  - d. The meeting request must be sent at least 1 business day (24 hours) prior to the intended release window. If a Refresh to the Delivery/Test Environment is required then notification of such must occur at least 24 hours prior to the intended release window. Once again if the project is in Harvest all necessary approvals will have to be completed first.
  - e. It is the responsibility of the Business Analyst to inform the Application's clients affected by the Release
  - f. The DBA will inform the Business Analyst via email of the completion of any Release.
2. Conflicts:

If there is a conflict between two or more Business Analysts requesting the same window this conflict will have to be mitigated through a Change Review Board or an informal mechanism, such as consultation with the other Business Analysts who may want to use the same release window.
3. Release package delivery timeframes:

The release packages (Application and/or Designer database) moving from a Development/Delivery to Test state must be ready for QA by the ministry at least 1 business day (24 hours) prior to the release window. Packages normally will not require further review when moving from Test to Production (note – indicate request to refresh as noted in section 1.d above).

4. **Managing fallback windows:**  
In cases where more than one window is scheduled to provide fallback in case a target window is not met, it is the responsibility of the Business Analyst to notify the CS Release Manager if the fallback window will still be required. If no notification is received, the CS Release Manager will assume the original target window was utilized and the fallback window is no longer needed.
5. **E-fixes:**  
True E-fixes will be given priority over previously scheduled releases if deemed necessary by the Business Analysts acting as the Change Review Board.
6. **Flex days:**  
Release windows that fall on regularly scheduled flex days (Monday/Friday) will be booked by the Release Manager only with assurances that a DWS resource will be available on the required day to fulfill the release requirements. This will be the responsibility of the Release Manager to confirm with the Business Analyst.
7. **Booking status:**  
All scheduled release windows will be deemed booked/confirmed unless the Business Analyst indicates otherwise.
8. **Rescheduling or Canceling Release Windows:**
  - a. If the release package is deemed to be late or incomplete the window may be rescheduled to the next available window at the discretion of the ministry release manager if DWS resources are available and there are no conflicts with previously scheduled releases.
  - b. If a scheduled window is no longer required, the Business Analyst must, at a minimum, send an email notification to the CS Release Manager and the applicable DWS resources. If there is any doubt whether the communication will be received in time (e.g. cancellation happens the night before a 9:00 am Production release), it is the responsibility of the Business Analyst to ensure that all parties have received notice of the cancellation.
  - c. When a TEST to PROD Primary is successful the scheduled Backup Window will automatically be cancelled.

## **SCHEDULE**

<b>DAY</b>	<b>DEV→DEL &amp; DEL →TEST</b>	<b>TEST→PROD</b>
Monday	<b>10:30am-11:30am 2:30pm-3:30pm</b>	<b>9:00am-10:00am 3:30pm-4:30pm</b>
Tuesday	<b>10:30am-11:30am 2:30pm-3:30pm</b>	<b>9:00am-10:00am 3:30pm-4:30pm</b>
Wednesday	<b>10:30am-11:30am 2:30pm-3:30pm</b>	<b>9:00am-10:00am 3:30pm-4:30pm</b>
Thursday	<b>10:30am-11:30am</b>	<b>9:00am-10:00am</b>

	<b>2:30pm-3:30pm</b>	<b>3:30pm-4:30pm</b>
Friday	<b>10:30am-11:30am</b> <b>2:30pm-3:30pm</b>	<b>9:00am-10:00am</b> <b>3:30pm-4:30pm</b>

### **Migration Window Booking Procedures:**

1. Check for available timeslots:
  - a. Open your Outlook Calendar.
  - b. Go to File | Open | Other User's Folder...
  - c. Type in "CS Release Manager" and click OK.

The Release calendar will be displayed with available Dev->Del, Del->Test and Test->Prod times indicated. Note the available date/timeslot that best fits your implementation schedule.

2. Send an email to "CS Release Manager" (CS Release Manager, CS:EX) requesting the timeslot.  
The Release Manager will confirm that the required DWS resources are available and, if applicable, that any Harvest release components are in place.
3. The CS Release Manager will book the requested window with meeting notifications going to the BA and applicable DWS resources. The application's name & release will be added to the meeting description for that timeslot. When all have accepted, the "tentative" status will be removed from the meeting.