ECTU Central Office SOP ECTU_IT_03: Feature Release

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Authorship and Approval			
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Document Revision History		
Version No.	Effective Date	Summary of Revisions
1.0	14 Mar 2012	Initial creation
2.0	10 Jun 2016	Reflect process changes. Changed title from System Change Management
3.0	05 Jul 2024	Document moved to v3 template. Minor wording changes to section 1 and 2. Included section 4.3 on Data Comparison Process. Minor numbering and format changes throughout the document. Added reference to IT003 System Release Document template.
4.0	07 Jan 2026	Some minor wording changes in sections 1 and 2 as well as updating section 3. Adding additional sections to include, IS support, web application release and schedule task release (sections 4.2, 4.4, 4.5).Minor formatting changes

1.0 PURPOSE

This Standard Operating Procedure (SOP) describes the process for including a feature in a live version of an ECTU developed bespoke web application and database.

2.0 SCOPE

This SOP applies to all University of Edinburgh staff employed within ECTU who are responsible for developing a bespoke web application and database and applies to both initial feature release and all subsequent maintenance and update releases.

3.0 RESPONSIBILITIES

The Software Developer or designee is responsible for:

- Ensuring relevant IS support is available in case of emergency
- Making required database changes
- Making required web application changes
- Making required changes to additional applications (scheduled tasks)
- Update audit trail triggers
- Update the System Release Document

4.0 PROCEDURE

4.1 The Software Developer should confirm the feature is validated and has approval as per ECTU Central Office SOP ECTU_IT_02 Feature Development.

4.1.1 For requested minor operational changes such as temporary suspension of sites or randomisation which do not require a full release, an entry should be made in the IT003 System Release Document noting the date and nature of the changes.

4.2 Ensuring relevant IS support is available

4.2.1 Ensure before the release that support from Information services or person with relevant server privileges to carry out any recovery processes should an issue occur during the release. This should reduce any potential downtime caused to a minimum.

4.3 Ensure any approved changes in the training database are in the live database as well.

4.2.1 Use a database comparison tool to confirm that the training and live databases match structurally, as detailed in the following process. In exceptional urgent or time-critical cases, some minor data changes may be applied directly to the live database. In this instance, the corresponding database change script will be created and tested after the event.

4.4 Database Comparison Process

4.4.1 Database development occurs on the dev database (which may be named with a suffix "_training" or "_dev")

4.4.1.1 Local development environment points to the dev database
4.4.1.2 Maintain copies of scripts used for any database changes in ECTU Unit\ Data Management\Webdev within study specific folders. The script names should indicate ordering where required.

The validation occurs on the dev database, and may have several iterations

4.3.2 After validation, in order to confirm that the database change scripts are correct, the following process should be followed-
4.3.3.1 Use a local copy of the live database (live-copy)
4.3.3.2 Apply any database change scripts to the local live-copy, paying attention to any dependencies / ordering constraints.
4.3.3.3 Perform a schema comparison between the updated live-copy and the dev database.
- Use database comparison tool in Visual Studio (Tools->SQL Server->New Schema Comparison).
- If differences are detected, address/fix database change scripts, then repeat the process from the fresh live-copy.

4.3.3.4 Perform a data comparison between master lists on live-copy and training.
- Use data comparison tool in Visual Studio (Tools->SQL Server->New Data Comparison).
- If differences are detected, address/fix database change scripts, then repeat process from the fresh live-copy.

Once it is concluded that the scripts reproduce the validated dev database, the scripts can be applied to the live database as part of the normal release process.

4.3.3 If any tables or table columns were added, ensure the audit trail triggers are rebuilt and re-applied to the live database.

4.4 Web Application Release

4.4.1 Confirm that before releasing a published version of the application code that any feature changes that have not been signed off for release are not included. Any working copy changes that have not been validated must be shelved and the code base prior to publish should only contain feature changes that have been validated and signed off for this release.

4.4.2 Prior to publishing, update the Web.config file connection string for the database has been set to the **Live** database and not to any test or development databases. Additionally update any application settings contained within the Web.config to remove any “Training” background for the application.

4.4.3 Publish the application to a relevant folder confirming that this was successful. Once published, create a backup copy of the current Live application files on the eCRF web application and clear the folder before copying the newly published version into the Live folder.

4.4.4 Validate that the release was successful. Confirm that the eCRF is accessible and that the expected feature updates appear as expected.

4.5 Release of additional Applications/Scheduled Tasks

4.5.2 If there is any scheduled task or other such application reliant on web application libraries or the database, carry out a release of a new version of this after the web application. This procedure should follow the same steps as the web application. With the additional step of confirming that the scheduled task is directed to the newly released .exe file or equivalent.

4.6 Add a row to the System Release document (based on IT003 System Release Template, see Section 5) to contain the following:

- The overall System Version and date of release. This is not the individual feature version.
- The date of release.
- A list of the feature versions introduced or updated in this release. This should include both the major and minor component of the feature version.
- A list of the numbers of the additional requirements addressed in this release.
- Confirmation of whether or not the database triggers were re-built and re-applied.
- Confirmation that any database changes are in place in the production database.
- Include who was notified of the system update, when they were notified and what their role is in the project.
- Confirmation that for studies that implement the use of questionnaires which contribute to end points, source code has been included that will notify the trial inbox that questionnaires have been sent to participants

4.7 The document must be signed and dated by the Software Developer, saved within the TMF, Section 9\ 2 Database for Full service and section 3 for Partial service studies, and where applicable printed and filed in the Projects Documentation folder.

5.0 RELEVANT DOCUMENTS AND REFERENCES

On the ECTU website

- ECTU Central Office SOP ECTU_IT_02 Feature Development

On ECTU Shared Drive (ECT Unit\SOPs\Finalised SOP and WPD\IT\Supporting Documents and Templates\Current)

- IT003 System Release Template

ECTU_SOP_IT_02 Feature Development v4.0

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