**Title: Test approach for GDD MDM**

**GDD MDM**

**Project Clarity ID: 44717**

**Test Phases and Responsibilities**

**Testing includes the below scopes:**

1. EBX5-User Interface Testing
2. Data Migration Testing
3. System Integration Testing

The table below gives an overview of the applicable test phases including on which system environment those tests will be performed as well as the responsibilities for the different test phases.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Test Phase** | **Environment** | | | **Responsible** |
| **DEV** | **Test / QA** | **PROD** |
| Functional/Integration Testing (OQ) | X (Informal) | X (Formal) |  | Testing Factory team |
| Data Migration testing | X (Informal) | X (Formal) |  | Testing Factory team |
| User Acceptance Testing (UAT) |  | X |  | BA / Business Lead |

# Test Strategy

**EBX5-User Interface Testing**

The verification of the system functionality in EBX5 UI as outlined in “GDD\_R1\_Functional\_Specification” will be covered as part of this scope

1. **Data model validation** – Each table and its fields will be displayed in the UI. Each table fields and properties displayed will be validated against the properties defined in “GDD - R1 - Detailed Business Glossary” with admin access. or properties file will be shared by Dev team and this will be validated against “GDD - R1 - Detailed Business Glossary”
2. **Work flow validations** – Approach is to Create, update, deactivate and reactivate existing / newly created data through EBX5 and validate all the work flows as mentioned in the functional specifications. Validation of audit trial will be done as per the functionality mentioned in FS for all CRUD operations
3. **Import and Export validations** – Approach is to validate all kinds of formats for import by creating different sets of data for each import. Export feature is validated against mentioned format in FS.

**Assumptions:**

* + - DB access will not be provided to testing team
    - Dev team will share extract of properties file to validate data model
    - Assuming that Initial load will happen before UI testing phase. Hence there is a plan to leverage on existing data for few tests

**Test Data:** New test data will be created through UI for validations and same test data will be updated and deactivated for few test cases. Existing data will be used for modifications for few other validations

*Environment: Dev for informal testing and QA for formal testing*

**Data Migration:** The verification of the Data Conversion Migration Plan for the GDD MDM as outlined in “GDD MDM Platform\_MGPLN” will be covered as part of this scope

**Testing Scope:**

**In Scope-**

1. Upload of data to GDD MDM System
2. Verification of data import : data correctness & completion
3. P reparation of Export File(s) with Global ID information to be shared with IMPACT system

**Out of Scope –**

1. Connectivity between all the components of application is checked
2. Performance testing is to ensure that migration to new system/software has not degraded the performance of the system.
3. Load and stress tests to ensure the system stability.
4. Audit information for the transformation of the data.

Ex: In the legacy system, the currency is mentioned as per the source country and in new system if the currency needs to be updated in unique code.

1. Functionality related tests with a variety of data samples (different age group, users from different region etc.,)

**Pre Migration Testing:**

1. Validation of number of columns in all the provided excel files.

* Verify all the provided excel files columns against the data model “Novartis – GDD – R1 Data Model”

1. Validation of Primary key in values in all the provided excel files

* Verify all the Primary key values to make sure there is no null and duplicate values

1. Validation of all the LOV values in all the provided excel files

* Verify all the LOV column records to make sure there is no values other than LOV values.

1. Validation of referential integrity.

* Verify the referential integrity of all the records to make sure there is only child records without parent record.

1. Validation of mandatory fields.

* Verify all the mandatory fields to make sure there is no empty records.

**Post Migration Testing:**

1. Validation of count of records imported vs count of records processed.

* Verify the count of the records imported and count of the records processed to make sure both the counts are same.

1. Validation of triggered workflows.

* Verify the triggered workflows after importing excel files into EBX5.

1. Validation of bulk approval of imported records.

* Verify the bulk approval process to make sure reviewer is able to approve all the records at once.

1. Validation of data in all the respective landed tables.

* Verify all the records in respective tables to make sure all the records are landed properly.

1. Validation of Export files

* Verify whether the system is able to export all the stored records into excel files.

1. Validation of business rule applied records in exported files data.

* Verify all the feasible business rule applied records against “GDD- R1 Detailed Business Glossary” for the complete(100% data)
* The data will be validated for the feasible business rules using excel techniques.

**Assumptions:**

* + As per the data model, MDM team will receive below number of files with subset of records from the IMPACT team

**Clinical Site** – 8 Different excel files for 8 different tables.

**Clinical Personnel** – 7 Different excel files for 7 different tables

* + Exported files will be having all the fields to validate business rules
  + Subset count will be less than 5k
  + Files will be imported using technical admin

*Environment: Dev for informal testing and QA for formal testing*

**Integration Testing:**

The verification of the system integration functionality as outlined in “IMPACT\_MDM\_INT Functional Specification-Inbound” will be covered as part of this scope

**Testing Scope:**

1. Validation of data flow from external source (Mysite) to MDM
2. Validation of data flow from MDM to Dell Boomi and JBoss MQ
3. Validation of data flow from Impact to MDM
4. End to End validation ( Mysite – MDM – Impact – MDM)

**Test Approach:**

1. **Validation of data flow from external source (Mysite) to MDM:**
   * Create/Update investigator request will be triggered using SOAP UI with appropriate parameters.
   * Upon Success, verify the workflow for the desired record in EBX5
   * Once workflow is completed, verify the landing table in EBX5 to make sure

Table has anticipated record

1. **Validation of data flow from MDM to Dell Boomi and JBoss MQ**
   * CRUD operations on investigator and site using EBX5 UI with appropriate values
   * Upon workflow is completed, verify MDM data push to Boomi
   * Boomi team will help in providing JBoss MQ and Boomi log files to verify the data against the records which has created or updated and pushed from MDM
2. **Validation of data flow from Impact to MDM**
   * Create/Update request to Remote Keys table will be triggered using SOAP UI with appropriate parameters
   * “Remote keys” table will be verified to make sure the table has desired “Global and Consumer IDs”
3. **End to End validation**
   * Create and Update operations for Investigator will be performed using Soap UI
   * Upon Success, verify the workflow for the desired record in EBX5
   * Once workflow is completed, verify the landing table in EBX5 to make sure

table has anticipated record.

* + Verify MDM push record to Boomi.
  + Boomi team will provide the JBoss MQ and Boomi log files that has the data written to it
  + Verify the log files against the data, which has created and pushed from MDM.
  + Create/Update request to Remote Keys table will be triggered using SOAP UI with appropriate parameters
  + “Remote keys” table will be verified to make sure the table has desired “Global and Consumer IDs”

**Assumptions:**

* + Dependency on Boomi Team to verify log files. Assuming availability of Dev team throughout Dry run and Formal run testing
  + Relevant WSDL and input parameters for each integration point will be provided by Dev team
  + Integration to impact is out of scope for this release

**Test Data:** Create / update test data through external source and MDM UI for validations and verify the same test data flow at each integration point. Use existing data for modifications in few tests

*Environment: Dev for informal testing and QA for formal testing*

The OQ & UAT test specifications shall be created, reviewed and approved before execution in PROTON test management tool and the execution shall be performed/approved & results shall be stored within PROTON.

For this project, all test specifications will be documented in the Proton tool.

User requirements as well as functional requirements will also be loaded in the tool.

Tests will be executed and the results documented in the Proton Tool itself.

All defect/deviation will also be logged and tracked in the tool itself.

After completing the execution of the testing, all evidences will reside in the Proton tool, from test specification, to test execution, to defect lists and even traceability matrix.

All team members involved in the testing, in Proton shall be trained on the tool.

Informal testing will be done in the development environment.

All teams need to agree on the usage of the test data in that any testing will naturally alter the test data files therefore coordination is essential.

All documented testing will be done in the QA environment.